Embracing Diversity

Introduction

Teachers have a professional obligation to respond to a range of educational needs on a daily basis. Students present with a diversity of personal characteristics and experiences attributable to physical, personal health or wellbeing, intellectual, psychological, religious, cultural, socio-economic or life experiences that may impact on their access to and participation in learning. A thorough background knowledge and understanding of the conditions that impact on learning is fundamental to managing the diversity within classrooms.

The information resource package; ‘Embracing Diversity: Responding to learning difference’ is intended to empower educators with the knowledge and understanding required to cater for the diverse learning needs of all students. It aims to promote inclusive practices. The concept of electronic access to the resource through the school intranet recognises the centrality of the classroom teacher and the emphasis of a whole school approach to the provision of inclusive educational practices.

Reference to definitions and features of conditions is not intended to label or classify students but rather provide relevant background information to support teachers address the unique characteristics and specific individual needs of students in their classes.

The suggested adjustments to classroom management and teaching strategies may represent effective practice for all students; however they are essential for those students experiencing learning differences. Without specialised instruction and implementation of specific strategies, students with disabilities and learning differences will not effectively move forward and attain their full learning potential. The notion of teachers and classroom aides empowering students to become increasingly independent through the acquisition of a repertoire of strategies and metacognitive processes specific to their own learning profile is another aim of the resource package.

The occurrence of overlap of information and strategies across areas is addressed through the inclusion of links within the document as well as to additional reading and resources. Referencing to sources of information is provided at the end of each area.

The concept of an electronic knowledge base such as this represents an evolving, ongoing project. Schools can tailor the resource to suit their specific context. Conditions and learning differences specific to individual students in the school cohort can be added through using the template provided.

Invitations for feedback, suggestions and contributions for inclusion will be valued and most welcome. If you are interested in receiving emails of future updates to this resource, please submit your details to the following contact:

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Acquired Brain Injury

Definition
Acquired brain injury is a complex and individual disability resulting from trauma to the brain as the result of an open or closed head injury, brain tumors or infections or deterioration of the brain tissue for unknown reasons.

Features

Physical
- Reduced physical co-ordination
- Slowing of motor function and response time
- Lowered endurance and fatigue
- Speech, vision, hearing and other sensory impairments
- Headaches
- Muscle spasticity
- Paralysis
- Seizure disorders
- Problems with sleep
- Dysphagia (disorder of swallowing)
- Dysarthria (disorder of articulation and the muscular/motor control of speech)

Cognitive Changes
- Short and long term memory deficits - ability to retain or process new information. Students will lose books and equipment, forget appointments and arrangements, ask the same questions again and again, or forget which classroom they are supposed to be in.
- Slowness of thinking - slow to answer questions or to perform tasks and they may have difficulty keeping up in conversation. Their capacity to respond quickly in an emergency may also be lost.
- Difficulty maintaining attention and concentration - tendency to lose concentration or be distracted easily from what they are doing; may have a short concentration span, which means they might jump from one thing to the next.
- Communication -a broad range of social skills may be affected by an acquired brain injury including the ability to start or take turns in conversation, interpret and respond to social cues, show interest in others, use humour appropriately, shift between topics of conversation and regulate the volume and tone of voice. A person with brain injury often loses their listening skills, and may talk excessively. Accompanying memory problems may mean that they often repeat topics as well.
- Poor planning and problem-solving - difficulty solving problems and planning and organising things they have to do. They may encounter trouble with open-ended decision-making.
• **Lack of motivation or inability to initiate activities** – due to the lack of initiative, in spite of all good intentions, someone with a brain injury may sit around at home all day long and watch TV. If the problem is severe they may need prompting to do basic grooming and hygiene routines.

• **Lack of insight** – great difficulty seeing and accepting changes to their thinking and behaviour.

• **Inflexibility** – can be very inflexible in their thinking. They can’t always change their train of thought, so they may tend to repeat themselves or have trouble seeing other peoples’ points of view. They may not cope very well with sudden changes in routine.

• **Problems with reading and writing skills**

• **Impairments of perception, sequencing, reasoning, and judgement**

**Behavioural Changes**

• **Depression and/or anxiety** – a very common emotional consequence that usually comes some time after the injury. Signs of depression include lack of motivation, loss of sexual drive, sleep disturbance and tearfulness.

• **Impulsivity** – can often do things on impulse because they may have lost the filtering system or control that makes them stop and think before jumping in. This can lead to a wide range of behavioural issues and problems with relationships and finances.

• **Emotional liability** – Just as people with a brain injury have difficulty controlling their behaviour, they may also have difficulty in controlling their emotions. They may cry too much or too often or laugh at inappropriate times, or they may suffer rapid mood changes, crying one minute and laughing the next.

• **Stress, frustration and anger** – a common trigger to personal stress is the feeling of helplessness or being trapped in a situation over which we have no control.

• **Confusion / inability to cope / difficulty accepting change** – normally, people use their planning and organising skills to work their way through confusion and change. However, because acquired brain injury often results in some loss of these skills, it may be difficult for a student with an acquired brain injury to deal with change and confusion. Confusion usually comes about through:
  - Unrealistic self-expectations e.g. The student may have a memory of achievement that is inconsistent
  - Others having too high an expectation of the student
  - The student attempting to achieve too much at once
  - Interruptions, noise, clutter or visual distractions around the student
  - Too many instructions being given to the student at the one time

• **Socially inappropriate behaviour** – may have difficulty judging how to behave in social situations. They may walk up to strangers and start telling them about their accident, they may be over familiar with therapists or they may make inappropriate sexual advances.

• **Inability to self monitor, inappropriate social responses**

• **Difficulty relating to others**

• **Self-centredness** – will often appear to be self-centred, and may be very demanding and fail to see other people’s point of view. One of the possible consequences of self-centredness
is a tendency for the person with a brain injury to become very dependent on others. The person may not like being left alone, and constantly demand attention or affection.

- **Irritability and/or anger** - tend to have a low tolerance for frustration and can lose their temper easily. If kept waiting for an appointment they may become agitated and walk out. They may become unreasonably suspicious and paranoid.

- Abrupt and unexpected acts of violence
- Delusions, paranoia, mania
- Lowered self esteem

**Adjustments**

**Classroom Management**

An acquired brain injury is potentially one the most devastating disabilities, with a huge range of effects due to the complexity of the brain. The number and severity of problems resulting from a brain injury will differ from person to person because each individual's brain injury varies in the extent and location of damage. The extent of some of these changes may only become apparent as time progresses.

**Teaching Strategies**

Develop compensatory strategies and thereby minimise the impact of memory problems. Common memory aids include:

- A diary to note all class times, appointments and instructions
- A notebook to list common times and protocols
- A map of the school showing classrooms, toilets, offices, bus stop etc.
- Clearly marked exercise books and equipment
- Thong necklace for keys
- Wristwatch with an alarm

Students with poor memory will need to become familiar with using memory aids and will need constant reinforcement. Other helpful aids are clocks, calendars, blackboards, whiteboards, signs, notices, photos, post-it notes, or anything that provides compensation to memory deficits.

- Students need assistance in how to do a task as planning and organisational skills and knowing how to start are often affected.
- Use a step-by-step approach (task analysis)
- Complex tasks need to be broken down into a step-by-step fashion
  - Sort out a list of steps in the order they are to be achieved
  - Treat each step as a self-contained goal and tackle each one at a time
  - As each step is completed, reinforce it as the achievement of success
  - Create a distinct break between each step
  - Review each preceding step before moving on to the next
- Make sure that things are kept simple and take it slowly. If a student is becoming confused or frustrated it may be necessary to take time out.
• Allow more time to respond and to complete tasks. An understanding employer may be willing to modify the work situation. It is also vital that we avoid letting the person get into situations where they may be at risk by virtue of their slowed responses.

• Provide frequent, clear and simple explanations about why a problem is being treated or why the person is unable to do something.

• Offering students a number of options to choose from will support a feeling of empowerment when stressed and frustrated. Relaxation and meditation can act as good insurance policies. Time out may also provide the opportunity to restore balance and perspective as long as it is not seen as punishment.

Strategies to assist acceptance to change include:

• Discussing anticipated changes with students before the event to prepare the students for what lies ahead and encourage them to ‘own’ the decision to change.

• Not forcing the change upon the students too quickly.

• Offering advice, help and reassurance prior to and during the process of change.

• If students appear unable to cope, offering them understanding about their situation.

• Replace the undesirable behaviour with an agreed alternative, negotiated directly with the student. It is also helpful to agree on a signal that the teacher can give as a sign for the student to stop and think about what they are doing.

Links

http://braininjury.org.au

Sources of Information

www.biaq.com.au

Sterling, L (1994) *Students with acquired brain injuries in primary and secondary schools*: A project by the Head Injury Council of Australia, funded by the Commonwealth Department of Employment, Education and Training.
Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder

Definition

Attention Deficit Disorder (ADD) can be described as inattention and the inability to concentrate or stay on task. In addition it may also include hyperactivity and/or impulsive behaviour, which is known as Attention Deficit Disorder Hyperactivity Disorder (ADHD).

A medical or psychological diagnosis, following the DSMIV protocol is required. The essential feature of ADHD is a persistent pattern of inattention and/or hyperactivity-impulsivity which is more frequent and severe than is typical for the individual's age or stage of development, with some symptoms present before age 7 years, evidenced consistently in two or more settings, and with clear evidence of clinically significant impairment in social, academic or occupational functioning. The disorder may manifest as a combination of inattention and hyperactivity-impulsivity, as predominantly inattention, or as predominantly hyperactivity-impulsivity.

Essentially ADD/ADHD is a biological condition. It is not merely "naughty" behaviour. It is a neurological disorder that affects the neurotransmitters in the brain. The two most common neurotransmitters believed to be involved with ADHD are Norepinephrine and Dopamine. Although Serotonin may also be involved, it is not as strongly indicated. These neurotransmitters can either stimulate an area of brain cells or repress an area of brain cells. For someone to be focused and able to pay attention, the brain cells must be stimulated. For someone to be in control of impulsivity the activity in an area of brain cells must be repressed. Current studies show that the ADHD brain may have only 10-25% of the levels of these neurotransmitters compared to the 'typical' brain. It is believed that a reduced amount of Norepinephrine is responsible for inability to focus attention. When attention can not be focused on one particular event or task, all activities, sounds and visual input are given equal importance, resulting in trivial or unrelated events seeming just as important as the task currently at hand. Dopamine is the neurotransmitter that seems to 'repress' the impulse actions. Stimulant medications increase the levels of both Norepinephrine and Dopamine, thus facilitating increased brain activity of the frontal lobe for better concentration and reduced impulsive behaviour.

Who is affected by ADD/ADHD?

About 5% of all children are affected. Many will continue to have the condition as adults. The diagnosis of ADHD is more common in boys that in girls, although more girls than realised may have ADD.

What causes ADD/ADHD?

Research indicates that this is often a genetic condition. It is due to an imbalance of chemical messengers in one or more parts of the brain. It is not due to bad parenting.

What cures ADD/ADHD?

There is no cure for this condition, it is a lifelong disorder. However, a combination of medication and appropriate behavioural management and compensatory strategies can assist people with ADD/ADHD to function well.
Features

Symptoms of ADD/ADHD

Inattention: poor concentration, distractibility, failure to finish tasks, poor organizational skills, poor listening skills and forgetfulness.

Hyperactivity: fidgeting, squirming while sitting down, excessive talking and/or noises, excessive activity and the inability to play quietly.

Impulsivity: inability to wait their turn, blurting out answers to questions which have not been completed, acting without considering the consequences (dangerous behaviour), taking inappropriate risks and inappropriate intrusion on the activities of others.

Because of the issues above, students with ADD may have conflicts with others leading to poor self-esteem, depression and aggression within the family. They often find it difficult to make and sustain friendships.

Diagnosis

There is no one reliable test currently available. Diagnosis is made on a person's history according to accepted professional criteria. Information is gathered from parents, schools and other sources. Questionnaires and rating scales as well as psychometric assessment may also assist. People involved in making the diagnosis include G.P.'s, Paediatricians, Psychiatrists, Clinical Psychologists and Education Professionals.

Conditions Occurring Concurrently with ADD/ADHD

Many young people with ADD/ADHD have one or more of these co-existing conditions; which explains why not all students present as the same.

- Anxiety Disorder 20-30%
- Conduct Disorder (anti-social delinquency or personality disorder) 35%
- Learning Disability 90%
- Oppositional Defiant Disorder 40%
- Socialisation Disorder 40-60%
- Pervasive Development Disorder (eg Asperger Syndrome)
- Psychosomatic Illnesses, depression, mood disorders, thought disorder
- Tics and Tourette’s Syndrome

Disruptive Behavior Disorders (Oppositional-Defiant Disorder and Conduct Disorder)

About 40 percent of individuals with AD/HD have oppositional defiant disorder (ODD). Among individuals with AD/HD, conduct disorder (CD) is also common, occurring in 25 percent of children, 45-50 percent of adolescents and 20-25 percent of adults. ODD involves a pattern of arguing with multiple adults, losing one’s temper, refusing to follow rules, blaming others, deliberately annoying others, and being angry, resentful, spiteful, and vindictive.

Mood Disorders

Some children, in addition to being hyperactive, impulsive, and/or inattentive, may also seem to always be in a bad mood. They may cry daily, out of the blue, for no reason, and they may frequently be irritable with others for no apparent reason. Both sad, depressive moods and persisting elevated or irritable moods (mania) occur with ADHD more than would be expected by chance.
Depression

The most careful studies suggest that between 10-30 percent of children with AD/HD, and 47 percent of adults with AD/HD, also have depression. Typically, AD/HD occurs first and depression occurs later. While all children have bad days where they feel down, depressed children may be down or irritable most days. Children with AD/HD and depression may also withdraw from others, stop doing things they once enjoyed, have trouble sleeping or sleep the day away, lose their appetite, criticize themselves excessively (“I never do anything right!”), and talk about dying (“wish I were dead”).

Mania Bipolar Disorder

Up to 20 percent of individuals with AD/HD also may manifest bipolar disorder. This condition involves periods of abnormally elevated mood contrasted by episodes of clinical depression. Adults with mania may have long (days to weeks) episodes of being ridiculously happy, and even believe they have special powers or receive messages from God, the radio, or celebrities. With this expansive mood, they may also talk incessantly and rapidly, go days without sleeping, and engage in tasks that ultimately get them into trouble. In younger people, mania may show up differently. Children may have moods that change very rapidly, seemingly for no reason, be pervasively irritable, exhibit unpremeditated aggression, and sometimes hear voices or see things the rest of us don’t.

Anxiety

Up to 30 percent of children and 25-40 percent of adults with AD/HD will also have an anxiety disorder. Anxiety disorders are often not apparent, and research has shown that half of the children who describe prominent anxiety symptoms are not described by their parents as anxious. People with anxiety disorders often worry excessively about a number of things (school, work, etc.), and may feel edgy, stressed out or tired, tense, and have trouble getting restful sleep. A small number of people may report brief episodes of severe anxiety (panic attacks) which intensify over about 10 minutes with complaints of pounding heart, sweating, shaking, choking, difficulty breathing, nausea or stomach pain, dizziness, and fears of going crazy or dying. These episodes may occur for no reason, and sometimes awaken people during sleep.

Tics and Tourette’s Syndrome

Only about seven percent of those with AD/HD have tics or Tourette's syndrome, but 60 percent of those with Tourette's syndrome have AD/HD. Tics (sudden, rapid, recurrent, nonrhythmic movements or vocalizations) or Tourette's Syndrome (both movements and vocalizations) can occur with ADHD in two ways. First, mannerisms or movements such as excessive eye blinking or throat clearing often occur between the ages of 10-12 years. These transient tics usually go away gradually over one-to-two years, and are just as likely to happen in children with AD/HD as others. Tourette’s is a much rarer, but more severe tic disorder, where people may make noises (e.g., barking a word or sound) and movements (e.g., repetitive flinching or eye blinking) on an almost daily basis for years.

Learning Disabilities

Individuals with AD/HD frequently have difficulty learning in school. Depending on how learning disorders are defined, up to 90 percent of children with AD/HD have a coexisting learning disorder. They may have a specific problem reading or calculating, but they are not less intelligent than their peers.

Substance Abuse

Recent work suggests that youth with AD/HD are at increased risk for very early cigarette use, followed by alcohol and then drug abuse. Cigarette smoking is more common in adolescents with AD/HD, and adults with AD/HD have elevated rates of smoking and report particular difficulty in...
Youth with AD/HD are twice as likely to become addicted to nicotine as individuals without AD/HD.

Contrary to popular belief, cocaine and stimulant abuse is not more common among individuals with AD/HD who have been previously treated with stimulants: growing up taking stimulant medicines does not lead to substance abuse as these children become teenagers and adults. Indeed, those adolescents prescribed stimulant medication are less likely to subsequently use illegal drugs than are those not prescribed medication.

Co-morbidity problems tend to increase as children move into adolescence. It is important that all the co-morbid disorders are treated along with the ADD.

Other secondary emotional behaviours that are typically displayed and are not technically Co-morbid Disorders include: Poor motivation, Low self-esteem, Frustration, Rejection, Emotional upset and Lack of drive.

Other Issues
Like everyone else, people with ADD/ADHD are individuals with differing personalities. They are often imaginative people who are generous but can be rigid or inflexible in the way they live. This can be interpreted as being insensitive to others and this may be a source of conflict at home, school or work. This constant conflict in relationships may lead to low self-esteem, depression and aggression within the family. A person with ADD/ADHD often has problems making and sustaining friendships.

Adjustments

Classroom Management
It is usual for this to include:

- Medical management including medication
- Behavioural and Educational management both at home and at school
- Psychological counseling for adults, parents, children and adolescents
- Speech Therapy, Physiotherapy, Occupation Therapy and Educational Support as needed by the individual

Above all, a team approach is required with good communication between the professionals, the family and the individual to optimize the outcome.

Behaviour Management
The aim is to assist the child or adult to better manage their behaviour through:

- Using positive reinforcement rather than punishment
- Building self-esteem
- Setting clear limits and expectations
- Using simple and repeated instructions
- Consistency and regular routines at home and at school
- Developing techniques to deal with specific problems
- Open communication between home and school
Medical Management
Medications have been shown to be an effective treatment. Commonly used medications are Ritalin and Dexamphetamine. Others used include Tofranil, Aurorix and Catapres. The dosage varies from person to person and needs to be adjusted and monitored closely for best results. Medications appear to assist individuals in their primary problem areas i.e. concentrating on tasks and inhibiting inappropriate activity. On medication, people with ADD/ADHD are often able to stay on task, achieve more and to organise themselves better.

Teaching Strategies
Young people with ADD / ADHD often have serious problems in school. Inattention, impulsiveness, hyperactivity, disorganisation and other difficulties can lead to unfinished assignment, careless errors, and behaviour which is disruptive to one's self and others. Through the implementation of relatively simple and straightforward accommodations to the classroom environment or teaching style, teachers can adapt to the strengths and weaknesses of students with ADD. Small changes in how a teacher approaches the student with ADD or in what the teacher expects can turn a losing year into a winning one for the child.

Examples of accommodations which teachers can make to adapt to the needs of students with ADD are grouped below according to areas of difficulty.

Inattention
- Seat student in quiet area
- Seat student near good role model
- Seat student near 'study buddy'
- Increase distance between desks
- Allow extra time to complete assigned tasks
- Shorten assignments or work periods to coincide with span of attention; use timer to keep on-task
- Break long assignments into smaller parts so student can see end to work
- Assist student in setting short-term goals
- Give assignments one at a time to avoid work overload
- Reduce quantity of responses for class tasks
- Reduce amount of homework
- Instruct student in self-monitoring using cues
- Pair written instructions with oral instructions
- Provide peer assistance in note-taking
- Give clear, concise instructions
- Seek to involve student in lesson preparation and negotiation of tasks
- Organize a cue / private signal for student to stay on task

Following Instructions
- Gain the student's attention
- Give one instruction at a time initially, then add to it
- Acknowledge success with first instruction
• Give short, concrete instructions
• Break the task into little steps- one instruction at a time
• Provide examples (visual, verbal, tactile)
• Use visual cues e.g. Instructions on card, wall, steps to follow
• Have student repeat instructions back to you
• Team child with peer who understands the directions- uses natural supports
• Encourage student to ask questions of self, peer, teacher if they need help
• Reward success in small, specific, concrete steps
• Phrase instructions positively- "hands down in your lap" rather than "don't touch"

**Starting an Activity**
• Reward starting as well as finishing
• Use timers to indicate starting and finishing times
• When finished set task, take to teacher, reward and set next task to do
• Signal when work is to begin
• Present work in small amounts
• Provide immediate feedback and encouragement

**Memory Improvement**
• Mnemonics: use of internal strategies to encode, store, and/or retrieve information is dependent on;
• Increased attention to the relevant information (name, phone number, list)
• Material to be memorised is organised in a way to make it more meaningful and to reduce the number of new elements "to organise is to memorise"
• Visual imagery- for remembering a name, pick a feature on the person, form a concrete image of the name, associate the feature with the image, rehearse the link
• Encoding strategies- multiple sensory input (reading, writing, hearing) increases number of associations. See, say, visualise.
• Rehearsal- review it mentally ___________ short term memory
• Repetition- repeat aloud and then internally
• Use songs, poems, and chants to enhance recall
• Rhymes- thirty days has September.....
• Chunking- arrange into meaningful portions, phone numbers, auto-mo-bile
• Acronyms- make a work dr abc, danger, response, airway, breathing, circulation
• Acrostics- first letter of a poem- each letter serves as a cue to memory – mova
  o M meaningfulness (chunking)
  o O organise (outline/categories)
  o V visualise (make mental map)
  o A associate (new things with old information)
• Associate- form associations between old and new knowledge
- Visualise - make mental maps, imagine items
- Self-cueing - retrace your steps visually

**External Strategies**
- Don’t waste time/valuable energy on other things- use diaries, electronic organisers, alarms
- Environmental - signs posts, colour codes, noticeboards, arrows, labeled drawers
- Personal - diaries, timetables, alarms, notebooks
- Audiotape material and play it back to take notes, review
- Teach note taking skills - helps to organise information to learn
- Teach use of highlighter pens
- Teach how to number/alphabetise information
- Teach how to group like facts together for learning
- Provide typed outline of discussion, leave room for students to write notes in
- Use webbing and mapping formats

**Impulsiveness**
- Ignore minor inappropriate behaviour
- Increase immediacy of rewards & consequences
- Use time-out procedures for misbehaviour
- Supervise closely during transition times
- Use ‘prudent reprimands for misbehaviour (i.e. avoid lecturing or criticism)
- Attend to positive behaviour with compliments, etc.
- Acknowledge positive behaviour of nearby student
- Seat student near good role model or near teacher
- Set up behaviour contract
- Instruct student in self-monitoring of behaviour eg. Hand raising, calling out etc.
- Call on only when hand is up appropriately
- Praise student when hand raised to answer question
- Catch student working, listening, waiting, and reinforce
- Provide opportunities for small group work
- Use "stop, think, do". Show student hand held as if to stop/wait

**Motor Activity**
- Allow student to stand at times while working
- Provide opportunity for ‘seat breaks’ eg. Run errands etc.
- Provide short break between assignments
- Remind student to check over work product if performance is rushed and careless
- Give extra time to complete tasks (especially for students with slow motor tempo)
**Organisation Planning**

- Ask for parental help to encourage organisation
- Provide organisation rules
- Encourage student to have notebook with dividers and folders for work
- Provide student with homework assignment book
- Supervise writing down of homework assignments
- Communicate regularly with family re: progress, assessment etc.
- Regular check of desk and notebook for neatness
- Encourage neatness rather than penalise untidiness
- Allow student to have extra books at home
- Give assignments one at a time
- Assist student in completing a task analysis for assessment tasks - setting short term goals
- Do not penalise for poor handwriting if visual/motor deficits are present

**Mood**

- Provide reassurance and encouragement
- Frequently compliment positive behaviour and work product
- Speak softly in non-threatening manner if student shows nervousness
- Review instructions when giving new assignments to make sure student comprehends directions
- Look for opportunities for student to display leadership role in class
- Conference frequently with parents to learn about student's interest & achievements outside of school
- Write positive comments in diary
- Encourage social interactions with classmates if student is withdrawn or excessively shy
- Reinforce frequently when signs of frustration are noticed
- Look for signs of stress build up and provide encouragement or reduced work load to alleviate pressure and avoid temper outbursts
- Spend more time talking to students who seem pent up or display anger easily
- Provide brief training in anger control: encourage student to walk away; use calming strategies, tell nearby adult if getting angry

**Academic Skills**

- If reading is weak: provide additional reading time; use ‘previewing’ strategies; select text with less on a page; shorten amount of required reading; avoid oral reading
- If oral expression is weak: accept all oral responses; substitute display / demonstration for oral report; encourage student to tell about new ideas or experiences; pick topics easy for student to talk about
- If written language is weak: accept non-written forms for reports eg. Displays, orals, projects; accept use work processor, tape recorder; do not assign large quantity of written work; test with multiple choice or fill in questions
• If maths is weak: allow use of calculator; use graph paper to space numbers; provide additional math time; provide immediate correctness feedback and instruction via modelling of the correct computational procedure

Socialisation
• Praise appropriate behaviour
• Monitor social interactions
• Set up social behaviour goals with student and implement a reward program
• Prompt appropriate social behaviour either verbally or with private signal
• Encourage co-operative learning tasks with other students
• Provide small group social skills training
• Praise student frequently
• Assign special responsibilities to student in presence of peer group so others observe student in a positive light

Compliance
• Praise compliant behaviour
• Provide immediate feedback
• Ignore minor misbehaviour
• Use teacher attention to reinforce positive behaviour
• Set up behaviour contract

Tips on Avoiding Confrontation
Students with ADD/ADHD deliberately annoy and frustrate. Do not fall into their trap. They love an argument; delight in upsetting teachers as this is seen as a victory. Teachers may be feeding the problem by directing too much attention to the student when trying to reason, discuss /argue. Speak less and more concisely, and act more quickly! The more you appear to be in control, the better your chance of success.

• Avoid long-winded reasoning conversations
• Don't get into arguments or debates
• Talk less / listen- they will run out of things to say!
• Speak softly, and in a non-threatening manner
• Student won't like this because you are not going to get into a fight
• Don't react to muttering under the breath
• They are looking for a victory or to divert the argument. By buying into the argument you provide the opportunity to escape the real conflict.
• When they say "I don't care", play along with it. They really do!
• Be aware of your body language - standing front on suggests an aggressive manner- they like that, that's what they want!
• Remain calm, detached and off-hand
• Don't use the word "I". Say "We can work this out!"
• Get something else into the discussion / introduce options
• Help them to see that they have choice - their choice that will lead to a consequence. Slip in a bit of immediate praise - “That was a good choice”
• Forget the past / work for the future

Links
www.addaq.org.au
www.add.org
www.help4adhd.org
www.additudemag.com
www.chadd.org
www.addforums.com
www.addmtc.com

Sources of Information
Attention Deficit Disorder Information and Support Services ADDISS
PO Box 1661 Milton Q 4064 Telephone: (07) 3368 3977

Children and Adults with Attention -Deficit/Hyperactivity Disorder
CHADD - Fact Sheets - ADHD and Co-Existing Disorders
http://www.chadd.org

http://www.ldonline.org/article/Identifying_and_Treating_Attention_Deficit_Disorder%3A_A_Resource_for_School_and_Home

Linda Houston, Special Education Teacher at the Centre Education Program – Flexible Learning Centre

Linda was awarded a Churchill Fellowship to study programs and projects that were providing services for children with ADHD (or problematic behaviours).

The seven-week research project took place from January 17th till March 6th, 2001. It involved the study and observation of a number of schools, programs and research centres throughout the United States that were targeting young people with ADHD and/or antisocial/delinquent behaviour.

Linda’s report provided for the Churchill Fellowship is available online at the following address:

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Anxiety Disorder

Definition
All students feel anxious at times. Many young students, for example, show great distress when separated from their parents. Young students are often frightened of strangers, thunderstorms, or the dark. These are normal and usually short-lived anxieties. But some students suffer from anxieties severe enough to interfere with the daily activities of childhood or adolescence.

Students with anxiety may lose friends and be left out of social activities. They often experience academic failure and low self-esteem. Because many students with this disorder are quiet and compliant, the signs are often missed. Teachers and parents should be aware of the signs of a possible anxiety disorder so that appropriate referrals can be made.

Features
Signs of anxiety may present differently in children and adolescents than in adults. Common signs can include:

- Excessive and persistent worry
- Restlessness and irritability
- Crying or losing temper easily or frequently
- Avoidance and procrastination
- Disruption to sleep and eating patterns
- Decline in academic performance
- Truancy and school refusal
- Increased use of alcohol or other drugs
- Withdrawal from social, class or school activities
- Tiredness and fatigue

Tell tale signs may include:

- Excessive absence, school refusal, truancy or illness related to the anxiety
- Anxiety or fear about particular school activities (would vary according to the type and level of anxiety)
- Difficulty keeping scheduled appointments (secondary students)
- Difficulty beginning or completing activities or assessments
- Inability to think and act (high anxiety can paralyse these functions)
- Physical responses such as becoming ill or highly agitated
- Physical responses that inhibit learning (material is not absorbed and/or the material is not recalled)
- Responding to perceived stressful situations with either anger, aggression or withdrawal
• Difficulty participating fully in curriculum activities due to fatigue from being hyper-aware of their surroundings. It is important to remember that emotional energy can be as draining as physical exertion.

There are several types of anxiety disorders. The list below describes those most common to children.

**Generalized Anxiety Disorder**

Children with generalized anxiety disorder (GAD) have recurring fears and worries that they find difficult to control. They worry about almost everything—school, sports, being on time, even natural disasters. They may be restless, irritable, tense, or easily tired, and they may have trouble concentrating or sleeping. Students with GAD are usually eager to please others and may be “perfectionists”, dissatisfied with their own less-than-perfect performance.

**Separation Anxiety Disorder**

Students with separation anxiety disorder have intense anxiety about being away from home or caregivers that affects their ability to function socially and in school. These students may have a great need to stay at home or be close to their parents. Students with this disorder may worry excessively about their parents when they are apart from them. When they are together, the student may cling to parents, refuse to go to school, or be afraid to sleep alone. Repeated nightmares about separation and physical symptoms such as stomach-aches and headaches are also common in students with separation anxiety disorder.

**Social Phobia**

Social phobia usually emerges in the mid-teens and typically does not affect young students. Adolescents with this disorder have a constant fear of social or performance situations such as speaking in class or eating in public. This fear is often accompanied by physical symptoms such as sweating, blushing, heart palpitations, shortness of breath, or muscle tenseness. Adolescents with this disorder typically respond to these feelings by avoiding the feared situation. For example, they may stay home from school or avoid parties. Young people with social phobia are often overly sensitive to criticism, have trouble being assertive, and suffer from low self-esteem. Social phobia can be limited to specific situations, so the adolescent may fear dating and recreational events but be confident in academic and work situations.

**Obsessive-Compulsive Disorder**

Obsessive-compulsive disorder (OCD) typically begins in early childhood or adolescence. Children with OCD have frequent and uncontrollable thoughts (called “obsessions”) and may perform routines or rituals (called “compulsions”) in an attempt to eliminate the thoughts. Those with the disorder often repeat behaviours to avoid some imagined consequence. For example, a compulsion common to people with OCD is excessive hand washing due to a fear of germs. Other common compulsions include counting, repeating words silently, and rechecking completed tasks. In the case of OCD, these obsessions and compulsions take up so much time that they interfere with daily living and cause a young person a great deal of anxiety.

**Post Traumatic Stress Disorder**

Post-Traumatic Stress Disorder (PTSD) refers to an ongoing reaction to trauma, and is commonly associated with reactions to experiences of war. However, PTSD is more common in children than frequently thought. The trauma may have occurred in an isolated event (e.g. the child being in a car accident) or through ongoing events (e.g. ongoing child abuse).

Children and young people who are experiencing PTSD may be experiencing:

• Intense fear, helplessness or horror
• Agitation or disorganisation
• Inability to complete age-appropriate tasks
• Flashbacks (using any of the senses)
• Avoidance of trauma-related objects or activities
• Hyper-attentiveness, or an increase in alertness, with decreased attention-focusing ability

Students with PTSD are often confused with students with Attention Deficit Hyperactivity Disorder (ADHD) because of their difficulty concentrating and seemingly unpredictable behaviour. It is important to note that the experiences of PTSD can occur immediately following trauma, or the child may have a delayed reaction, and not have these experiences until many months after the trauma, or even a year after. It often appears that children delay their reaction until their parents or other adults have regained their composure and appear strong enough to help the child cope with their own reaction.

Adjustments

Educational adjustments are designed to meet individual student needs on a case-by-case basis. Possible adjustments include:

Adolescence
• Preferential seating
• Pre-arranged breaks
• Exit plan - permitting students to leave the classroom if anxiety becomes unmanageable (with a pre-arranged safe place in the school, where they will be supervised by an adult)
• Work with the parents/carers and the clinical care provider to understand how the disorder manifests for this student.
• Clear behaviour management plans
• Providing explicit guidelines for assignments
• Identifying any changes to routine well in advance
• Exemption or alternative arrangements (refer to QSA Policy on Special Provisions)
• Recognising small achievements using positive reinforcement, communication strategies and feedback
• Extended time for tests and exams
• Use of memory aids during exams
• Alternative evaluation/assessment procedures (e.g. substitute assessment- many students experience anxiety with oral presentations; provision of alternative formats to demonstrate knowledge e.g. narrative tape instead of written journal, oral presentation to the teacher and a few close friends rather than the whole class)
• Reduced subject load
• Negotiated attendance
• Programs with strategies tailored to manage anxiety e.g. RAP - Resourceful Adolescent Program
• Access to external agency support (Child and Youth Mental Health Services)
• Regular access to a guidance officer or school based youth health nurse
Early and Middle Childhood

- Identifying high risk activities and times, and developing strategies accordingly e.g. handover or transition at the beginning of the day
- Work with the parents/carers and the clinical care provider to understand how the disorder manifests for this student
- Develop strategies to reinforce attendance at school, e.g. providing preferred activities on arrival and a reward schedule
- Desensitising strategies to focus on anxiety related behaviours e.g. remaining in class
- Modifying curriculum where necessary by shortening task lengths, alternatives to oral presentations or other assessments which may cause anxiety
- Recognising small achievements (initially may require recognising very small achievements, such as writing the date or a name at the top of the page, saying hello to someone on arrival at school, or even the fact that the student arrived at school in the first place)
- Scaffolding, setting limits of work, particularly around any subjects or topics that cause extreme anxiety
- Conducting a Functional Behavioural Assessment (FBA) to identify triggers/antecedents, as well as maintaining consequences to anxiety and developing strategies to manage resulting behaviour
- Safe corner in room to go to, chill out space
- Exit plan (chill-out card)
- Providing structured time-out
- Assigning buddies to support unstructured time such as lunch breaks
- Structured classroom routine with preferred activities on arrival
- Reward schedules
- Explicit teaching of stress management skills such as relaxation and problem solving skills
- Programs with strategies tailored to manage anxiety e.g. FRIENDS Program
- Access to external agency support (Child and Youth Mental Health Services)
- Regular access to a guidance officer or school based youth health nurse

Classroom Management

Because students with anxiety disorders are easily frustrated, they may have difficulty completing their work. They may worry so much about getting everything right that they take much longer to finish than other students. Or they may simply refuse to begin out of fear that they won’t be able to do anything properly. Their fears of being embarrassed, humiliated, or failing may result in school avoidance. Getting behind in their work due to numerous absences often creates a cycle of fear of failure, increased anxiety, and avoidance, which leads to more absences.

Students experiencing PTSD may have difficulty concentrating on work, as they are focused on the traumatic event and ensuring that they can avoid it in the future. Students may also be distracted frequently by reminders of the trauma triggering ‘flashbacks’, leading to an inability to complete work. Students’ reactions may be out of context given the current situation as they react to their perception of events, or reminders of past events. Reminders may come from any of the senses, and may seem innocuous to others (e.g. a smell of a vehicle, the rustle of leaves, the touch of a friend, or the use of a certain word). Emotional reactions may take the form of fear, horror, anger or hopelessness, without an obvious trigger.
Younger students are not likely to identify anxious feelings, which may make it difficult for educators to fully understand the reason behind poor school performance.

Links
Refer also to: Obsessive Compulsive Disorder, Post Traumatic Stress Disorder, Tourettes Syndrome

www.beyondblue.org.au
www.betterhealth.vic.gov.au
www.sane.org

Sources of Information
Information Sheet: Anxiety - Student Services Department of Education Training and the Arts

Australian Government – National Mental Health Strategy (Brochures available from Mental Health and Workforce Division of the Australian Government Department of Health and Ageing:
GPO Box 9848
Canberra ACT 2601


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Aphasia

Definition

Aphasia is a communication disorder that results from damage to portions of the brain that are responsible for language. For most people, these are areas on the left side (hemisphere) of the brain. Aphasia usually occurs suddenly, often as the result of a stroke or head injury, but it may also develop slowly, as in the case of a brain tumor, an infection, or dementia.

Features

Areas of the brain affected by Broca's and Wernicke's aphasia:

The disorder impairs the expression and understanding of language as well as reading and writing. Aphasia may co-occur with speech disorders such as dysarthria or apraxia of speech, which also result from brain damage.

Fluent (Wernicke's Aphasia) - Damage to the temporal lobe (the side portion) of the brain.

People with Wernicke's aphasia may speak in long sentences that have no meaning, add unnecessary words, and even create made-up words, making it difficult to follow what the person is trying to say. They usually have great difficulty understanding speech, and they are often unaware of their mistakes. There is usually no body weakness because their brain injury is not near the parts of the brain that control movement.

Non-fluent (Broca's Aphasia) - Damage to the frontal lobe of the brain.

People with Broca’s frequently speak in short phrases that make sense but are produced with great effort. They often omit small words such as "is," "and," and "the." They typically understand the speech of others fairly well; and so are often aware of their difficulties and can become easily frustrated. People with Broca's aphasia often have right-sided weakness or paralysis of the arm and leg because the frontal lobe is also important for motor movements.

Another type of non-fluent aphasia, global aphasia, results from damage to extensive portions of the language areas of the brain. Individuals with global aphasia have severe communication difficulties and may be extremely limited in their ability to speak or comprehend language.

There are other types of aphasia, each of which results from damage to different language areas in the brain. Some people may have difficulty repeating words and sentences even though they can speak and they understand the meaning of the word or sentence. Others may have difficulty naming objects even though they know what the object is and what it may be used for.
Adjustments

Classroom Management

Students with Aphasia will most probably be attending Speech Language Pathologists therapy sessions that target their communication difficulties and assist them in strategies to compensate for language problems. Be guided by plans developed by people with expertise.

Teaching Strategies

- Simplify language by using short, uncomplicated sentences
- Repeat the content words or write down key words to clarify meaning as needed
- Maintain a natural conversational manner appropriate for an adult
- Minimize distractions, such as a loud radio or TV, whenever possible
- Include the person with aphasia in conversations
- Ask for and value the opinion of the person with aphasia
- Encourage any type of communication, whether it is speech, gesture, pointing, or drawing
- Avoid correcting the person's speech
- Allow the person plenty of time to talk

Links

National Institute on Deafness and Other Communication Disorders.  
http://www.nidcd.nih.gov/health/voice/aphasia.htm

Sources of Information

National Institute on Deafness and Other Communication Disorders.  
http://www.nidcd.nih.gov/health/voice/aphasia.htm

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Asperger Syndrome

Definition

Autism is a complex neurodevelopmental disorder that typically appears during the first three years of life; occurring in as many as 1 in 500 individuals and four times more prevalent in boys than girls.

Significant changes to the criteria and categories of Autism Spectrum Disorder were made in the revised Diagnostic and Statistical Manual- Fifth Edition (DSM-5), which was released in 2013. The previous DSM-IV identified a set of Pervasive Developmental Disorders that were considered “autism spectrum disorders” (ASDs). These included Autistic Disorder, Asperger’s Disorder, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). One of the most significant changes is that these separate diagnostic labels will be replaced by one umbrella term “Autism Spectrum Disorder.” The removal of the formal diagnoses of Asperger’s Disorder and PDD-NOS is a major change.

The previous criteria for the domains for Autistic Disorder included a triad of impairments in Communication, Social Interaction, and Restricted Interests and Repetitive Behaviours. In the DSM 5 the Communication and Social Interaction domains have been combined into one, titled “Social/Communication Deficits”. The second domain refers to “Restricted, repetitive patterns of behaviour, interests or activities.”

Diagnosis

As outlined in the DSM 5 (2013), the revised criteria needed to meet a diagnosis of Autism Spectrum Disorder is ALL Four of the following criteria A, B, C and D must be met:

A Deficits in social communication and social interaction as manifested by all 3 of the following:
• Deficits in social-emotional reciprocity
• Deficits in nonverbal communicative behaviours for social interaction
• Deficits in developing and maintaining relationships

B Restricted, repetitive patterns of behaviour, interests, or activities as manifested by at least 2 of following:
• Stereotyped or repetitive speech, motor movements, or use of objects
• Excessive adherence to routines/resistance to change
• Highly restricted, fixated interests
• Hyper-or hypo-reactivity to sensory input

C Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed capacities)

D Symptoms together limit and impair everyday functioning.

Further distinctions are made according to severity levels. The severity levels are based on the amount of support needed, due to challenges with social communication and restricted interests and repetitive behaviors. For example, a person might be diagnosed with Autism Spectrum Disorder, Level 1, Level 2, or Level 3.
### Features

Autism is a spectrum disorder. In other words, the symptoms and characteristics of autism can present themselves in a wide variety of combinations, from mild to severe. Although autism is defined by a certain set of behaviors, children and adults can exhibit any combination of the behaviors in any degree of severity. Individuals on the Autism Spectrum can act very differently from one another and have varying skills. Therefore, there is no standard "type" or "typical" person with autism.

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social communication</th>
<th>Restricted, repetitive behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches</td>
<td>Inflexibility of behaviour, extreme difficulty coping with change, or other restricted/repetitive behaviours markedly interferes with functioning in all spheres. Great distress/difficulty changing focus or action.</td>
</tr>
<tr>
<td>Level 2</td>
<td>Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and how has markedly odd nonverbal communication.</td>
<td>Inflexibility of behaviour, difficulty coping with change, or other restricted/repetitive behaviours appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.</td>
</tr>
<tr>
<td>Level 1</td>
<td>Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in conversation but whose to-and-fro conversation with</td>
<td>Inflexibility of behaviour causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.</td>
</tr>
</tbody>
</table>
Deficits in social-emotional reciprocity ranges from abnormal social approach and failure of normal back and forth conversation through reduced sharing of interests, emotions, and affect and response to total lack of initiation of social interaction.

Deficits in nonverbal communicative behaviours for social interaction ranges from poorly integrated- verbal and nonverbal communication, through abnormalities in eye contact and body-language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.

Deficits in developing and maintaining relationships appropriate to developmental level (beyond those with caregivers); ranges from difficulties adjusting behaviour to suit different social contexts through difficulties in sharing imaginative play and in making friends to an apparent absence of interest in people.

Restricted, repetitive patterns of behaviour, interests, or activities:

- Stereotyped or repetitive speech, motor movements, or use of objects may include simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases.
- Excessive adherence to routines, ritualized patterns of verbal or nonverbal behaviour, or excessive resistance to change may include motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes.
- Highly restricted, fixated interests that are abnormal in intensity or focus may include strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests.
- Hyper-or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment may include apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects.

The school environment is a constant cause of high anxiety and stress. Pressure to complete academic tasks; behave appropriately in all situations; interact socially with both adults and peers; process fluctuating sensory information; whilst coping with constant unpredictability, is chaos.

- The student will have an excellent rote memory and absorb facts easily, however will have difficulty with:
  - attention and distractibility
  - organisational skills
  - problem solving
  - understanding abstract thinking/concepts
  - processing constant sensory information
  - generalising learned skills and may need to re-learn procedure for new situations

- Language often appears good but may have limited content and poor social understanding; not being able to express themselves clearly or understand what is expected of them just intensifies the stress the student faces daily

- Often ways of coping with these pressures is to "shut out" the world or communicate in the best possible way they can at the time; unfortunately, these communication messages are often overlooked or simply seen as temper tantrums, or inappropriate
- Easy victims of teasing and bullying which can cause them to withdraw or react in socially inappropriate manner
- Generally anxious and unable to cope with criticism or sarcasm
- Have difficulty in asking for help when confused or frustrated
- Very inflexible and rigid; does not cope well with change; likes routine
- Doesn’t always understand jokes and will take things literally e.g. Metaphors
- The student often speaks with a monotone voice lacking tone or inflection; be too loud or soft; rarely shows facial expression; hand gestures when speaking may be absent; little or no eye contact
- Difficulties associated with limited social and communication skills often leads to low self esteem and a decreasing level of motivation; the student often wishes to interact with peers and adults but may do so in an eccentric or bizarre way; often seen as odd or eccentric
- Often the student spends lunchtimes in the library or wandering around on their own; has no desire for or has difficulty making friends
- The student is usually a loner who never quite "fits in" and is sometimes referred to as "a little professor"; often lacks empathy and misunderstands other’s feelings
- Obsessional interests and fascinations with particular topics can take up all of their time and interest
- Often appears clumsy and can have unusual gait or stance
- The student is often of above average intelligence and is very aware of being different to his peers, but has no idea as to how to improve the situation

**Adjustments**

**Classroom Management**

To ensure the best possible school environment we must first understand Asperger Syndrome and how it affects each individual, then program according to the student’s strengths and weaknesses.

Teachers need to:

- Be informed and a positive role model
- Ensure the student has a reliable and effective system of communication
- Have a structured daily timetable and prepare the student about up-coming changes
- Plan for consistent strategies to deal with inappropriate behaviours
- Accept behaviour as having a communicative intent
- Make the learning environment meaningful to the student
- Assist the student develop social skills
- Minimise sensory distractions
- Assist the student develop self control and relaxation techniques
- Encourage active participation in classroom activities by making them achievable
- Allow time for the student to do their own thing - to cope with their environment and de-stress
Teaching Strategies

When giving a task:

- Minimise sensory distractions; be aware of background noise and visual clutter and choose seating plan that reduces distraction
- Make sure students understand what is expected; it may require breaking tasks down into identifiable steps, making beginning and ending points clear
- Ensure student is focused when giving instructions
- Use visual aids
- Present new concepts in a concrete manner
- Make the connections with previous skills or knowledge explicit
- Teach students strategies to seek assistance
- Encourage active participation in the classroom activities by making them achievable
- Modify or change tasks if needed; build on their strengths

Routines and Change

- Have a structured daily timetable and prepare students for upcoming change, explaining changes
- Support students in coping with changes
- Use, implement and review daily timetable with student
- Don’t do what they can do for themselves

Behaviour

- Teach students reflective problem solving and decision making
- Plan for consistent strategies to deal with inappropriate behaviours; you may need to teach behaviour expectations and outline consequences for choosing to not follow these
- Accept behaviour has a communicative intent and give behaviour specific feedback regularly; be aware of triggers which cause high stress
- Assist student to develop social skills helping them to interpret social situations
- Assist student in developing self control and relaxation techniques
- Understand source of obsessions and rigidity and work with it using it as a teaching tool or as a reward after the student has stayed the required time at an activity or task

Language

- Listen to the students pattern of language use and alert to difficulties in interpretation
- Ensure the student has a reliable and effective system of communication
- Keep language short and simple
- Support verbal information with visual cues
- Allow time for auditory processing
- Be explicit when giving instructions and don’t assume that the context will make the meaning clear
- Make sure they have understood information
• Talk through new tasks
• Ask direct questions rather than open ended questions

Links
Refer also to: Autism Spectrum Disorder

www.aspergers.com
www.autismsupport.org.au
www.asperger.asn.au
www.tonyattwood.com.au

Articles to download from: Minds & Hearts, Asperger Syndrome and Autism Clinic
http://www.mindsandhearts.net/

What is Asperger’s Syndrome? (Download the article in pdf-format here)
How to prevent bullying in schools (Download the article in pdf-format here)
Explaining the diagnosis of Asperger’s syndrome (Download the article in pdf-format here)
How to manage when someone on the Autism spectrum is experiencing a meltdown (Download the article in pdf-format here)

Sources of Information
http://www.dsm5.org/Pages/Default.aspx


Positive Partnerships: Supporting school aged students on the Autism Spectrum Module 1 Professional Development for teachers and other school staff.
www.autismtraining.com.au

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Attention Difficulties

**Definition**
The ability to remain focused and attending is essentially a neurological process. For someone to be focused and able to pay attention, the brain cells must be stimulated. The most common neurotransmitter responsible for stimulating the area of brain cells believed to be involved with the skill of focusing attention is Norepinephrine, and it is believed that a reduced amount of Norepinephrine is responsible for inability to focus attention. When attention cannot be focused on one particular event or task, all activities, sounds and visual input are given equal importance, resulting in trivial or unrelated events seeming just as important as the task currently at hand.

**Features**
Checklist of characteristics:

- Fails to pay close attention to details or makes careless mistakes in class work tasks
- Has difficulty sustaining attention in work tasks
- Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace
- Has difficulty organizing tasks and activities
- Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort; e.g. Completing homework and organizing work tasks
- Loses things consistently that are necessary for tasks/activities; e.g. Equipment, books etc.
- Is easily distracted by outside influences
- Is forgetful in daily/routine activities

**Adjustments**

**Classroom Management**
Stimulant medications increase the levels of both Norepinephrine and Dopamine, thus facilitating increased brain activity of the frontal lobe for better concentration.

**Teaching Strategies**

- Provide a quiet place free of distractions (no television or radio) away from windows where the child can do his/her homework
- Keep desk clear of unwanted equipment
- Seating the child close to the teacher enables monitoring of behaviour and the provision of frequent feedback and encouragement to stay on task
- Ensure distractions are kept to a minimum in the classroom by seating the child in clear view of the teacher and the board, away from windows, doors and routes around the room. Avoid tables with groups of students. Use rows for seating and place the child near positive role models. Make use of desk dividers or study carrels. Remove bulletin boards and displays from the child’s view
• Working in silence for short periods for specific tasks may be beneficial
• Headphones can be used to block auditory distractions
• When presenting a large volume of information on the board, use coloured chalk to emphasise the key words or information
• Teach the child to take notes in class
• Use a window cut in a card, or a frame, to direct the student's attention to a specific problem or line of print
• When providing work sheets keep page format simple. Include no extraneous pictures or visual distractions that are unrelated to the problems to be solved
• Photocopy text, when appropriate, and teach the child to use a highlighter pen to extract main points
• Organise and divide complex tasks into smaller segments. It is highly desirable that tasks and assignments be kept short. Lengthy projects should be broken down into bite size pieces
• Instructions are best given one at a time. Check that the child has heard and understands what is required. Instructions are more likely to be followed if they are clear and are given in combined vernal and written forms, are unambiguous, concise and to the point. Be prepared to give instructions more than once
• Preface instructions with the child's name. When giving verbal instructions to the child maintain constant eye contact and, if you're not sure they're listening, ask them to repeat your instructions aloud
• Try to keep a structured daily routine. Any changes or alterations to the timetable need to be anticipated as far as possible in order to prepare the child. Some children respond best working in the same place every day as well
• Alternate intensive and monotonous tasks which require sustained attention with activities that are of more interest to the child and with physical activity
• Have a regular place for keeping books, notes, homework etc

Links
Refer also to: Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder

http://www.ldonline.org/article/Checklists_for_Teachers

http://www.ldonline.org/article/Motivating_the_Child_with_Attention_Deficit_Disorder

www.livingwithADHD.com.au

Sources of Information
Qld Centre for Learning & Behaviour Disorders
69 Sherwood Road Toowong Q 4066 Tel: (07) 3217 7066 Fax: (07) 3217 8810

Dr Leslie Ah Yui M.B.B.Ch., FCP, FRACP / Dr Judith Taylor M.B., B.S (Qld)

Attention Deficit Disorder Information and Support Services ADDISS
PO Box 1661 Milton Q 4064 Telephone: (07) 3368 3977

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Auditory Learning Differences

Definition
Auditory skills are very important in developmental learning processes. It is through this ability that babies learn to understand and associate the noises around them. Later they begin to associate meaning with the words and sentences that parents speak, and eventually, begin to use those words in their own speech.

Auditory Learning Differences interfere with an individual's ability to analyze or make sense of information taken in through the ears. Difficulties with auditory processing do not affect what is heard by the ear, but do affect how this information is interpreted, or processed by the brain.

Features
There are two basic types of auditory problems that can occur in children.

- An actual physiological hearing impairment - either congenital (from birth) or acquired (from disease or accident)
- Infinitely more difficult to identify, is an auditory perception or processing difficulty. Within this category, there are a number of different perceptual problems

People with auditory learning differences have normal hearing but can experience difficulties such as:

Auditory Attention
Maintaining focus on what they are hearing

Auditory Reception or Auditory Decoding
Understanding the spoken word

Auditory Figure-ground
Separating a voice from background noise

Auditory Discrimination
Hearing and recognizing the difference between sounds (phonemes)

Auditory Blending
Putting together phonemes to form words. For example, the individual phonemes "c", "a", and "t" are blended to from the word, "cat"

Auditory Closure
Making meaning from an incomplete word when all the individual sounds have not been heard

Auditory Association or Auditory - Vocal Association
Relate spoken words in a meaningful way
Auditory Integration
Interpreting and organizing what you hear for meaning

Auditory Memory
Storing and recalling information that is given verbally. An individual with difficulties in this area may not be able to follow instructions given verbally or may have trouble recalling information from a story read aloud.

Auditory Sequencing
Remembering and reconstructing the order of items in a list, the order of sounds in a word or syllable. One example is saying or writing "ephelant" for "elephant."

Recalling and repeating a sequence of symbols or digits just heard in the correct sequence.

Phonological Awareness
Understanding that language is made up of individual sounds (phonemes), which are put together to form the words we write and speak. This is a fundamental precursor to reading. Children who have difficulty with phonological awareness will often be unable to recognize or isolate the individual sounds in a word, recognize similarities between words (as in rhyming words), or be able to identify the number of sounds in a word. These deficits can affect all areas of language including reading, writing, and understanding of spoken language.

An auditory learning difference can interfere directly with speech and language and can affect all areas of learning, especially reading and spelling. When instruction in school relies primarily on spoken language, the student may have serious difficulty understanding the lesson and directions. Children with poorly developed listening skills are often perceived as naughty and non-compliant, especially at school. In reality, they may have a genuine difficulty, which can be helped. Poor listening skills can result from difficulties with auditory short-term memory and their ability to follow commands, but a child may experience difficulty listening without necessarily having any other problems. Poor listening results in poor attention to spoken information.

Characteristics to Assist in Identifying Auditory Reception Difficulties:

- Can't answer comprehension questions about a story that has just been read aloud
- Has difficulty learning abstract words e.g. Funny, but not words with visual representation e.g. House
- Can't follow oral directions alone
- Doesn't enjoy verbal games - prefers solitary non-verbal play
- Doesn't get jokes or funny rhymes that other children generally do
- Can answer simple maths questions when written but not when spoken
- Has difficulty identifying beginning sounds - especially the difference between 'hard' and 'soft' sounds e.g. 'B' and 'p'
- Often confuses words with similar sounds e.g. Bit, bet, bat
- Doesn't enjoy listening to stories read aloud
- Inattentive in "show and tell" and other verbal activities
Characteristics to Assist in Identifying Auditory Sequential Memory

- Can’t count to 5 by memory
- Has trouble memorising days of the week, months of the year, the alphabet in the correct sequence
- Has difficulty spelling words orally
- Has difficulty answering oral maths problems
- Frequently reverses letters, numbers or words when repeating them e.g. 'The brown, small dog' for 'the small, brown dog'
- Has difficulty learning poetry, songs or rhymes by rote
- Transposes sounds in some words e.g. Hostipal, pasghetti
- Can’t remember a set of directions or list of three or four items

Characteristics to Assist in Identifying Auditory Association Difficulties:

- Doesn't like riddles or guessing games
- Gives silly or inappropriate answers to questions
- Can’t understand rules of simple games e.g. Simon says or follow the leader
- Doesn't know simple opposites e.g. In – out
- Tells incoherent, fragmented stories
- Can’t tell how things or ideas he hears differ e.g. A bike and a car has little or no concept of time e.g. Confuses tomorrow and yesterday
- Doesn't play imaginary games e.g. Playing school
- Can't associate a story heard with his/her own life experiences doesn’t ask how or why - not interested in causes or relationships

Characteristics to Assist in Identifying Auditory Closure Difficulties

- Can’t understand whispering, accents, hurried speech
- Has difficulty with material on tape or radio
- Has difficulty understanding words in a song and will often substitute nonsense words
- Has difficulty with rhyming words
- Has more difficulty understanding teacher if s/he is moving around room
- Looks closely at teacher's lips when s/he is speaking
- Can’t pick up clue if teacher supplies beginning sound of an unknown word

Adjustments

Classroom Management

"Did you hear what I just said?" How often have you heard yourself saying that to a child? If you find you're saying it to the same child in your class more than a couple of times a day, you should probably spend some time checking it out. Chances are that little Johnny is just an inveterate daydreamer but there is a possibility that there could be some sort of auditory problem. The earlier this sort of problem is picked up the better. Nothing fosters learning problems more than hearing difficulties.
With the exception of a few kinaesthetic learners, the majority of children with auditory problems will turn out to be visual learners i.e. they learn most efficiently when things are presented visually. This then is the way to approach teaching these children. This child’s eyes are the keys to his/her learning.

**Teaching Strategies**

**Auditory Learning Problems:**

- Allow child always to look at what s/he must learn (don’t rely solely on oral work)
- Allow child to keep materials on desk to use as cues
- Teach child how to change what s/he hears into a visual image to aid recall
- Use multisensory (look, hear and say and write) whole word approaches to early reading
- Use experience charts to stimulate reading and writing
- De-emphasise phonics until the child has a strong sight vocabulary
- When phonics are taught, teach sound groups or families e.g. Bad, mad, sad
- With the older child, talk about learning styles and show him/her the difference
- Encourage self monitoring in the older child

**Strategies for student with hearing impairment:**

- Sit the child at the front of the class
- Give directions standing directly in front of the child
- Keep your hands away from your face when talking
- Don’t talk while writing on the blackboard
- Don’t stand in front of glary windows or spaces when talking
- Cue child (by touch on arm) to get attention before speaking
- Always check with child after giving directions to see s/he has understood
- Ensure as much teaching as possible in small groups
- Monitor for comprehension as often as possible e.g. Watch for signs like looks of puzzlement

Because you will have a variety of learning styles evident in the students in your classroom, you should be trying to vary your teaching style to include them all anyway. While children without learning differences will probably cope adequately whatever the teaching method, it is essential that those children experiencing problems get as much support as possible.

Remember that your teaching style will reflect your own learning style. So, if you’re a visual learner, you will tend to teach this way more often. Try to remain aware of this and move to styles that might not feel very natural for you.
Links
Refer also to: Auditory Closure, Auditory Discrimination, Auditory Memory, Auditory Sequential Memory, Central Auditory Processing Disorder

http://www.ldonline.org/article/Understanding_Processing_Deficits

http://www.ldonline.org/article/5821

Sources of Information

http://www.ldonline.org

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Auditory Learning Differences:

Auditory Closure

Definition
Auditory closure is the ability to complete a word when all the individual sounds have not been heard. Auditory Closure difficulties can lead to difficulties sounding out words, discriminating between sounds, attending to auditory stimuli, and filling in the gaps when they miss parts of words or conversations.

Features
Children who have auditory closure difficulties are typically described as behaving like they have a hearing problem even though there is no evidence that they have a hearing loss. These children may seem to process information in a slow and inaccurate way, thus they process information inefficiently and are constantly working harder to interpret what they hear.

Characteristics to assist in identifying Auditory Closure Difficulties
(Please note that children will not necessarily display all of these characteristics)

- Can’t understand whispering, accents, hurried speech
- Has difficulty with material on tape or radio
- Has difficulty understanding words in a song and will often substitute nonsense words
- Has difficulty with rhyming words
- Has more difficulty understanding teacher if s/he is moving around room
- Looks closely at teacher’s lips when s/he is speaking
- Can’t pick up clue if teacher supplies beginning sound of an unknown word
- Tends to say “I didn’t hear you” often
- Tends to ask for repetition
- Tends to mishear words and substitute similar sounding words for the actual word e.g. “mouth” for “mouse”
- Difficulties differentiating and analysing the differences between speech sounds
- Difficulties in situations where there is reduced redundancy:
  - Unfamiliar vocabulary
  - Insufficient contextual clues
  - Insufficient visual cues
  - Excessive noise and/or reverberation
  - Groups
- Tend to become overloaded and shows auditory fatigue - listening behaviour deteriorates over time
- Has an adverse effect on sound recognition, sound blending, reading decoding and writing skills as these children tend to have a poor acoustic representation of phonetics (sounds/letters) in their cortex (brain). This impacts on reading and spelling skills
- Weak vocabulary, syntax (plurals, verb tenses), and semantics (meanings, multiple meanings for the same word)
- Difficulties following directions
- Poor analytical skills
- Poor note taking skills
- Tend to do better with subjects which don’t require phonemic decoding e.g. Maths

**Adjustments**

**Classroom Management**

Direct intervention:

- Intervention by a Speech and Language Pathologist is strongly recommended, focusing on language skills, phonics/phonological skills as well as listening and desensitising to noise programs.
- Drill-type speech sound training to focus on subtle sound differences. Speech-to-print skills training, remedial reading activities focusing on sound/letter associations.
- Activities to enhance the use of contextual cues and to focus on listening to meaning rather than exact recall.
- Visualising and verbalising approach to spelling and reading can reinforce sound/letter associations.
- Commercial programs to help listening and sound awareness skills, For example:
  - Auditory discrimination in depth
  - Fast-For-Word
  - Hooked on Phonics
  - Earobics (can be provided through Queensland Hearing)
  - Jolly Phonics
  - THRASS (classroom programs)

**Compensation Strategies:**

- Teach your child Self-Advocacy - to be assertive and to recognise when they have missed information. To actively ask for repetition and clarification
- Encourage your child how to look and listen
- Teach your child to recognise a bad listening environment and suggest strategies for addressing this
- *Repetition and Rephrasing* can provide auditory redundancy so the child can get the context

**Teaching Strategies**

Environmental Modifications:
• Change the physical environment (carpet on the floors, curtains, pictures/sculptures on the walls, avoid open plan classrooms if possible)

• Preferential seating to optimise listening and visual cues from the teacher (e.g. Middle of the second row is best if the teacher stands predominantly at the front of the classroom)

• Repeat information only if you can say the information more clearly

• Rephrase information in another way in a sufficiently clear way so the child doesn't get confused

• Provide visual cues

• Use attention-focusing devices (you may need to gain attention by calling the child's name)

• Pre-teach new information in the classroom, particularly key vocabulary/topics

• Use clear, concise and explicit language

• Provide a copy of the instructions to tasks in writing as well as spoken instructions

• Use of a buddy system

• Modify oral tests e.g, for spelling words, use the word in a sentence to give context

• Regular breaks to avoid auditory over-load

• Use other assistive technologies - computer work, high quality tape recorders, books on tape, and note takers

• One-to-one work aids listening

• Check the child's understanding by asking questions relating to the topic

Links
Refer also to: Auditory Learning Differences


Sources of Information
Queensland Hearing- incorporating
Qld Audiological Services Pty Ltd
Qld Neuro-otology Clinic
Qld Cochlear Implant Centre

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Auditory Learning Differences:  
**Auditory Discrimination**

**Definition**
Auditory discrimination is the ability to blend individual sounds or to identify the individual sounds in a blend.

**Features**
Students who have difficulties in this area may:

- Seem to hear but not to listen
- Often seems to misunderstand trouble telling differences between similar sounds or words eg seventeen and seventy, ball and bell
- Have problems identifying speech sounds
- Have poor listening skills, especially when there is background noise
- Experience difficulty discriminating between similar words
- Experience difficulty with rhyming activities
- Have poor articulation of sounds and words

**Adjustments**

**Classroom Management**
Auditory skills are an integral part of language acquisition and form the foundation for success with future language and communication skill. Students will experience difficulty with spelling if they are unable to distinguish the individual sounds in words.

Intense intervention sessions addressing auditory analysis activities are recommended.

**Teaching Strategies**
Students may have strengths in other areas and can use these to compensate for their difficulties, e.g:

- Kinaesthetic strengths (and learn better through using concrete materials and practical experiences)
- Visual strengths (and enjoy learning through using visual materials such as charts, maps, videos, demonstrations)
- Good motor skills (and have strengths in design and technology, art, PE and games)

**Activities to Develop Auditory Discrimination Skills**

- Listening 1: listen to sounds on CD, then ask the student to: point to a picture of the object making the sound and name it; point to a real object that makes the sound and then try it out
- Listening 2 – listen to the sound of real objects with eyes closed. Children guess and name
• Sound bingo – listening to sounds on tape and covering the correct picture
• Sound walk – children drawing pictures or writing down the names of the sounds they hear on the walk
• Grouping sounds – animals, musical instruments, vehicles, etc.
• Odd one out – ask the children to identify the sound that is not part of a group of sounds, eg. dogs barking, pig grunting, cow mooing, musical instrument playing.
• Musical discrimination – discriminating between loud/quiet, high/low, fast/slow notes.
• Clapping or tapping rhythms – you can use children’s names and polysyllable words. This activity can be linked with picture-noun recognition. Students can work in pairs, using picture-noun cards – take turns to clap syllable beats and choose the picture-noun card to match the number of beats
• Same/different 1 – ask the children to listen to sets of two everyday sounds and identify those that are the same and those that are different
• Same/different 2 – ask the children to listen to sets of two words and identify those that are the same and those that are different, eg. bat/bat, bat/bet
• Same/different 3 – ask the children to listen to sets of two words and identify those that rhyme and those that don’t, eg. cat/mat, bed/bud
• Hands up 1 – ask the children to put up their hands when they hear a particular sound (sounds given one at a time)
• Hands up 2 – ask the children to put up their hands when they hear a particular sound against a background of other sounds (figure/ground auditory discrimination)
• Who is it? – choose a student to be blindfolded, then ask another student to say a short sentence. Ask the blindfolded student to identify the other student by name
• Sound bingo – discriminating between initial sounds
• Rhyme time – ask the children to listen to a word. If it rhymes with the word that they have in their hand then they can keep it - the winner is the first person to collect five rhyming words

Links
Refer also to: Auditory Learning Differences

Sources of Information
http://www.teachingexpertise.com/articles/activities-to-develop-auditory-discrimination-skills-1101

Queensland Hearing- incorporating Qld Audiological Services Pty Ltd Qld Neuro-otology Clinic Qld Cochlear Implant Centre

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Auditory Learning Differences:
Auditory Memory

Definition
The process of auditory memory is considered to be a higher level skill, basic to all tasks requiring accurate retention of auditory material, recalling the content of the information, and the sequence in which it is heard.

Short term auditory memory involves immediate repetition of the heard message. Long term auditory memory requires retention and recall of the heard message, after time has elapsed.

Features
Characteristics of a student with auditory memory difficulties may include:

- Difficulties following instructions, particularly as length of direction increases
- May only remember part of a long instruction
- Poor retention of words in songs
- Difficulty remembering sequences of information, e.g. Alphabet, days of the week, telephone numbers
- Confuses directions, particularly those not given in order of the action required

Associated characteristics:
- Takes longer to communicate due to misunderstandings
- Performs better with visual cues
- Frustration because he/she has difficulty following conversations
- Decreased attention as he/she has difficulties following verbal information

Adjustments
Classroom Management
Adjustments and accommodations to assist students with auditory memory problems organize sensory data in the classroom environment are listed below.

Teaching Strategies
- Make sure the student is seated where they can best see and hear the teacher
- Gain the student’s attention prior to giving instructions
- Experiment with different seating positions where the student will be free from excess stimulation and distractions; if it is possible, seat between two quiet students who are on task
- Explain what is being taught while you are doing it by using the blackboard, pictures and other visual aids
- Provide written information to facilitate understanding; checklists, key vocab
- Supplement verbal instructions with visual cues
- Isolate key words
- Provide short and simple oral directions
- Limit the amount of information in each instruction and ensure appropriate level of vocabulary is used
- Avoid multiple commands or directions and detailed instruction
- Provide instructions in the order to be completed eg. “shut the door before you get a drink” instead of “before you get a drink, shut the door”
- Pre-teach vocabulary so that the student understands
- Rephrase important information to provide auditory redundancy
- Repeat instructions in shorter units eg, “after you complete your activity sheet and hand it in, get out your english book” to “complete your activity sheet ...hand it in ....then get out your english book”
- Remember to watch the student for signs of lack of concentration, understanding and attention
- Allow student additional time to respond (wait time)
- Remember that when repetition does not work, rephrasing the material often does
- Ask short simple questions and have the student repeat the question as part of his/her answer
- Allow and encourage the student to repeat instructions to him/herself and encourage him/her to engage in self talk while working
- Sub-vocalisation in reading should also be allowed until he/she is capable of eliminating this behaviour
- Encourage the student to request clarification when unsure of a set of given instructions
- Use a “buddy” system, so that the student can ask for clarification
- Rhythm games, discrimination, sequencing, memory activities and singing should be stressed
- Encourage the development of note-taking skills to aid memory (e.g. Homework diary)
- Encourage the use of compensatory strategies such as chunking (segmenting auditory information) and repeating aloud

**Specific ideas for remembering an instruction:**

- Reciting: discuss with the student how messages go in the ear, then they can be recited over and over again in your head, then you follow the instruction
- Visualising - ask the student to create a picture of the words in their heads
The main words - ask the child to tell you the main words in the message, e.g. "We have finished so put your books away."

Links
Refer also to: Auditory Learning Differences
The Hear and Say Centre, Brisbane
www.hearandsaycentre.com.au

Sources of Information
http://www.ldonline.org

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Auditory Learning Differences:
Auditory Sequential Memory

Definition
Auditory sequential memory is the ability to retain and recall what is heard, in the correct sequence.

Features
Characteristics to assist in identifying Auditory Sequential Memory Difficulties:

- Can't count to 5 by memory
- Has trouble memorising days of the week, months of the year, the alphabet in the correct sequence
- Has difficulty spelling words orally
- Has difficulty answering oral maths problems
- Frequently reverses letters, numbers or words when repeating them e.g. 'The brown, small dog' for 'the small, brown dog'
- Has difficulty learning poetry, songs or rhymes by rote
- Transposes sounds in some words e.g. Hostipal, pasghetti
- Can't remember a set of directions or list of three or four items

A child with weak auditory sequential memory may experience difficulties in speech and language development and later in learning to read and spell. He may have difficulty remembering the whole of spoken instructions, or in recalling, in sequence, a story he has heard.

Adjustments
Classroom Management
Teaching Strategies

Plan activities such as the examples below, that will help a child to learn to attend to what he hears, retain the information, and recall events in a logical sequence. Activities can be carried out in an individual, small group or classroom situation.

- Recall the day's activities - in order - starting from breakfast. Make up a picture diary - especially at week-ends and if a special outing or activity occurred
- Take turns to give simple commands, e.g. "Bring me a book". Then try more complex ones - asking 2 then 3 things, e.g. "Bring me a book then shut the door". "Put a spoon on the table then sit down" etc.
- Encourage learning of rhymes, jingles and poems. Help at first by introducing each line
- Play sequential games e.g. "I went shopping and I bought .............". Each player takes a turn and repeats the whole sentence, adding another item to the sequence. Also try "For breakfast, I had .........."
Auditory Learning Differences:  
*Central Auditory Processing Disorder*

**Definition**

A Central Auditory Processing Disorder (CAPD) [also referred to as an auditory processing disorder (APD)] refers to difficulties experienced with the processing of sound despite the ear being able to detect sound at normal levels. Specifically, a CAPD refers to difficulties experienced with attending to, discriminating, recognising or understanding audible signals that cannot be attributed to either impaired hearing sensitivity or intellectual disability.

There is a breakdown in the auditory system at a point somewhere along the nerve pathways that take auditory information from the inner ear to the brain. Sounds enter our ear through the ear canal (outer ear). These sounds are amplified in the middle ear and then in the inner ear are changed into electrical impulses which are sent along the nerve pathways up to the brain. By the time the nerve impulses reach the brain, we have been able to attach meaning onto the sounds we have heard.

**Features**

Central Auditory Processing allows us to:

- Make sense of spoken instructions
- "Screen" the important auditory information (e.g., teacher giving instructions in the classroom) from the irrelevant information (e.g., traffic noise)
- Understand how spoken words can be broken up into individual sounds and the order in which sounds are organised. These skills are necessary for developing reading and spelling. Children with poor auditory processing skills often find learning to read and spell very difficult
- Have an intact auditory short-term memory. That is, the ability to keep spoken words in our memory long enough to analyse them, compare them and manipulate them

Children with CAPD can have problems in a number of listening areas, and the symptoms are often similar to those in individuals with a peripheral hearing loss (making a regular hearing test essential).

It is possible a child with CAPD will exhibit some, all, or even none of the symptoms:

**When Listening:**

- Seem to hear but not to understand what people are saying
- Difficulty determining the direction a sound is coming from
- Difficulty processing speech especially against competing background noise or speech
- Delays in processing and understanding what is said to them especially in groups
- Difficulty understanding verbal directions, or getting them confused due to poor auditory verbal memory (memory of what is said)
- Decreased ability to deal with lengthy and/or complex language input
- Have a tendency to become overloaded and stressed by complex language, rapid speech and lengthy sentences
- Difficulty identifying relevant and/or major information in spoken text
- Difficulty following directions particularly those greater than single stage
- Difficulty in ‘sentence and word closure’ – finishing off partially heard information
- Difficulties in understanding syntactic structures
- Difficulty in extracting inferred meanings and implied information – literal interpretation of messages

**When Speaking:**
- Difficulties in formulating both oral and/or written language and texts
- Difficulty pronouncing multi-syllabic words - words substitutions often occur
- Delays in forming a response to verbal requests and questions due to delays in processing
- Decreased vocabulary skills due to poor word storage and/or retention

**When Reading and/or Spelling:**
- Academic under achievement with low level reading and spelling difficulties because of auditory-phonetic confusions
- Difficulty identifying, segmenting and/or blending sounds in spoken language
- Difficulty in learning and applying the phonic alphabet
- Difficulty sounding words out – reflects in spelling and reading fluency
- Difficulty blending sounds and syllables – reflects syntax and reading aloud
- Difficulty sequencing items – from sounds through to words to ideas and narratives
- Difficulty in understanding what they have read – due to length of time taken

**When Organizing and Remembering Information:**
- Difficulties in planning and organization
- Difficulty determining relevant information and identifying main points and related points
- Difficulties in remembering information that is presented verbally
- Difficulty holding information in memory whilst performing cognitive operations such as such as drawing comparisons, decision making and problem solving
- Poor linguistic planning resulting in difficulty formulating language either orally or in writing

**In Behaviour:**
- Decreased time spans before mental fatigue and exhaustion affect performance; fatigue because of effortful processing of language
- Decreased willingness to reveal non-understanding of verbal input resulting in others assuming that they have understood
- Difficulty in forming and maintaining relationships due to poor communication; understanding and keeping up with the flow of conversation in groups
- Difficulties in maintaining concentration and/or focus; distractibility and impulsivity
- Inattentiveness and short attention span
• Decreased confidence in their ability to perform oral/ written language tasks; anxiety when required to perform language tasks such as quick processing and response, reading, presenting information, either orally or in writing; this anxiety results in even poorer ability to process information and formulate responses

• Difficulty maintaining a positive self-imagine – often believe they must be ‘dumb’ so have poor self-esteem and confidence in ability to communicate effectively and learn academically
UQPATHS Teacher Checklist for CAPD
(adapted from The Teacher Evaluation of Classroom Listening Skills (Davies, 1994) and The Pupil Rating Scale Revised (Myklebust, 1981)

Student’s Name: ……………………………….. Date ……………………..

Year / Class ………… Teacher completing checklist ………………………..

Please rate the student’s behaviour in comparison with others of similar age and background. Please tick the box that best describes the behaviours you have observed.

1. If listening in background noise, the student has difficulty hearing and understanding.
   - Seldom
   - Often
   - Consistently

2. If listening in quiet conditions, the student has difficulty hearing and understanding.
   - Seldom
   - Often
   - Consistently

3. In one-on-one ideal listening conditions, the student has difficulty hearing and understanding.
   - Seldom
   - Often
   - Consistently

4. The student has difficulty following multistage directions / commands / instructions.
   - Seldom
   - Often
   - Consistently

5. The student requires multiple repetitions of information in order to understand it.
   - Seldom
   - Often
   - Consistently

6. The student performs better when visual rather than verbal information is given.
   - Seldom
   - Often
   - Consistently

7. The student has difficulty recalling verbal information.
   - Seldom
   - Often
   - Consistently

8. The student displays a poor / immature vocabulary in written / spoken language.
   - Seldom
   - Often
   - Consistently

9. The student is inattentive and / or ‘switches off’ during group discussions.
   - Seldom
   - Often
   - Consistently

10. The student rarely completes written work and/or has difficulty in organisation of tasks.
    - Seldom
    - Often
    - Consistently

Students who score who display some these behaviours consistently may be at risk of having classroom based difficulties due to Central Auditory Processing Dysfunction, and should be referred for further investigation.

Adapted by Dr. Julie V. Marinac, Clinic for Audiology and Speech Pathology, The University of Queensland, 2003.
Checklists that could be used by classroom teachers to screen for PA (Phonological Awareness) and CAPD (Central Auditory Processing Dysfunction).
Adjustments

Classroom Management

- **Direct intervention** – eg training a child to hear differences in sounds or words, how to pick out sounds with background noise, using other cues in speech
- **Environmental modification** – minimise noise levels and make speech louder than the noise through classroom seating arrangement; shutting windows, earplugs if child is working on their own or assistive listening devices
- **Compensatory strategies** – to compensate for the auditory deficit and for coping in daily life include:
  - Develop listening skills i.e. Listen for meaning rather than exact repetition; wait until instructions are given before starting; using chunking of information, rehearsal and paraphrasing
  - Comprehension of instructions i.e. Clear, simple instructions, give information in segments, rephrase and restate instructions, ask child to repeat them, give child time to think before responding
  - Other specific strategies as below

An Audiologist is the professional who tests for Central Auditory Processing difficulties. Speech Pathologists usually see children with Central Auditory Processing difficulties due to the significant negative effects this disorder can have on a child’s listening, comprehension and reading and spelling.

Teaching Strategies

- Ensure preferential seating away from auditory and visual distractions (fans, doorways) to maximise benefits from auditory and visual cues
- Avoid open plan classroom placements and avoid extraneous noise and visual distractions
- Gain the child’s attention prior to giving instructions
- Use simple language, shorter words and sentences
- Limit the amount of information in each instruction and ensure appropriate level of vocabulary is used
- Rephrase important information to provide auditory redundancy
- Encourage the child to request clarification if unsure of an instruction
- Monitor the child’s comprehension of instructions through asking questions relating to the subject under discussion
- Teach the child listening skills including when to listen for meaning rather than exact recall
- Encourage the development of note-taking skills to aid memory (e.g. Homework diary)
- Use of external aids like diaries, mnemonics, and notebooks
- Encourage the child to use compensatory strategies such as chunking (segmenting auditory information) and repeating aloud
- Supplement verbal instructions with visual cues and aids
- Use of a "buddy system" to assist the child in keeping on task
- Pretutor the child in order to familiarise him/her with new vocabulary and concepts that are to be covered the next day in class
- Review past material before moving on
• The key vocabulary for new material can be written on the board and discussed to assist the child's comprehension of unfamiliar information
• One to one assistance will be of great help to fill in the gaps in understanding
• Be aware of fatigue and give a break from auditory demands, children with auditory processing difficulties need frequent breaks, as significant effort is expended in attending and listening
• Praise and reinforcement, encourage and support
• Have routines so child knows what to expect

Links
Refer also to: Auditory Learning Differences
http://specialchildren.about.com/od/auditoryprocessing
www.auditoryprocessing.com.au
www.tyquin.com.au
www.speld.org.au

Sources of Information

Dr. Julie V. Marinac, Clinic for Audiology and Speech Pathology, The University of Queensland

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**Autism Spectrum Disorder**

**Definition**
Autism is a complex neurodevelopmental disorder that typically appears during the first three years of life; occurring in as many as 1 in 500 individuals and four times more prevalent in boys than girls.

Significant changes to the criteria and categories of Autism Spectrum Disorder were made in the revised Diagnostic and Statistical Manual- Fifth Edition (DSM-5), which was released in 2013. The previous DSM-IV identified a set of Pervasive Developmental Disorders that were considered “autism spectrum disorders” (ASDs). These included Autistic Disorder, Asperger’s Disorder, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). One of the most significant changes is that these separate diagnostic labels will be replaced by one umbrella term “Autism Spectrum Disorder.” The removal of the formal diagnoses of Asperger’s Disorder and PDD-NOS is a major change.

The previous criteria for the domains for Autistic Disorder included a triad of impairments in Communication, Social Interaction, and Restricted Interests and Repetitive Behaviours. In the DSM 5 the Communication and Social Interaction domains have been combined into one, titled “Social/Communication Deficits”. The second domain refers to “Restricted, repetitive patterns of behaviour, interests or activities.”

**Diagnosis**
As outlined in the DSM 5 (2013), the revised criteria needed to meet a diagnosis of Autism Spectrum Disorder is **ALL Four of the following criteria A, B, C and D must be met:**

**A** Deficits in social communication and social interaction as manifested by all 3 of the following:
- Deficits in social-emotional reciprocity
- Deficits in nonverbal communicative behaviours for social interaction
- Deficits in developing and maintaining relationships

**B** Restricted, repetitive patterns of behaviour, interests, or activities as manifested by at least 2 of following:
- Stereotyped or repetitive speech, motor movements, or use of objects
- Excessive adherence to routines/resistance to change
- Highly restricted, fixated interests
- Hyper-or hypo-reactivity to sensory input

**C** Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed capacities)

**D** Symptoms together limit and impair everyday functioning.
Further distinctions are made according to severity levels. The severity levels are based on the amount of support needed, due to challenges with social communication and restricted interests and repetitive behaviors. For example, a person might be diagnosed with Autism Spectrum Disorder, Level 1, Level 2, or Level 3.

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social communication</th>
<th>Restricted, repetitive behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>Severe deficits in verbal and nonverbal social communication skills cause severe impairment in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.</td>
<td>Inflexibility of behaviour, extreme difficulty coping with change, or other restricted/repetitive behaviours markedly interferes with functioning in all spheres. Great distress/difficulty changing focus or action.</td>
</tr>
<tr>
<td>Level 2</td>
<td>Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and how has markedly odd nonverbal communication.</td>
<td>Inflexibility of behaviour, difficulty coping with change, or other restricted/repetitive behaviours appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.</td>
</tr>
<tr>
<td>Level 1</td>
<td>Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with</td>
<td>Inflexibility of behaviour causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.</td>
</tr>
</tbody>
</table>
**Features**

Autism is a spectrum disorder. In other words, the symptoms and characteristics of autism can present themselves in a wide variety of combinations, from mild to severe. Although autism is defined by a certain set of behaviors, children and adults can exhibit any combination of the behaviors in any degree of severity. Individuals on the Autism Spectrum can act very differently from one another and have varying skills. Therefore, there is no standard "type" or "typical" person with autism.

**Deficits in social-emotional reciprocity** ranges from abnormal social approach and failure of normal back and forth conversation through reduced sharing of interests, emotions, and affect and response to total lack of initiation of social interaction.

**Deficits in nonverbal communicative behaviours for social interaction** ranges from poorly integrated- verbal and nonverbal communication, through abnormalities in eye contact and body-language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.

**Deficits in developing and maintaining relationships** appropriate to developmental level (beyond those with caregivers); ranges from difficulties adjusting behaviour to suit different social contexts through difficulties in sharing imaginative play and in making friends to an apparent absence of interest in people

**Restricted, repetitive patterns of behaviour, interests, or activities:**

**Stereotyped or repetitive speech, motor movements, or use of objects** may include simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases.

**Excessive adherence to routines, ritualized patterns of verbal or nonverbal behaviour, or excessive resistance to change** may include motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes.

**Highly restricted, fixated interests that are abnormal in intensity or focus** may include strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests.

**Hyper-or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment** may include apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects.

**Cognition**

There has been a shift from the notion that language/behaviour difficulties cause problems with social interactions to an understanding that identified deficits in social skills development may underpin communication difficulties and cause many of the behavioural issues. There is growing agreement amongst researchers that there is unlikely to be a primary underlying deficit in autism, rather the observed behaviours are the result of an interaction amongst communication, social, cognitive, sensory and motor characteristics.

**Joint Attention**

This is the process of sharing one’s experience and has been a focus of recent research in this area (Dawson et al, 2004). Before infants have developed social cognition and language, they communicate and learn new information about objects and events by:

- Following the gaze and gestures of others
Using their own eye contact and gestures to show or direct the attention of the people around them

This skill is vital to social competence at all ages. As children develop they are able to use language to initiate and respond to comments or share information. It is highly likely that well researched differences in infants’ development of skills such as joint attention and reciprocity may result in many of the observed characteristics of autism. These early relating skills underpin social and communication development including the development of Theory of Mind (see below). Consequently, deficits in the development of these areas coupled with deficits in information processing may account for the behavioural profile of autism including difficulties making sense of the world around them and relating to others.

Theory of Mind

In 1985 a group of researchers (Baron-Cohen, Leslie and Frith) suggested that people with autism lacked a Theory of Mind (ToM). That is, they were unable to attribute a mental state (e.g. a belief, desire, intention or emotion) to another in order to predict or understand that person’s behaviour. Baron-Cohen went on to suggest this ‘mind blindness’ was a fundamental cognitive deficit and the cause of many of the inappropriate behaviours observed in people with autism. Individuals with autism have difficulty conceptualising that other people have mental states, intentions, needs, desires and beliefs, which may be different from their own. They tend to logically work out others’ mental states without reference to empathic or affective reactions and they use atypical strategies to decode others’ behaviour.

The impact of a Theory of Mind deficit is that children with an ASD are less able to:

- Appreciate the mental state, intentions, needs, desires and perspectives of others
- Read emotional states of others
- Monitor their own emotions and repair interpersonal situations
- Appreciate the complexity of their own and others’ feelings
- ‘read’ body language
- Predict behaviour
- Explain their own behaviour to others
- Understand the effects of their own behaviour
- Use communication/language appropriately
- Share attention and manage eye contact
- Use their imagination in fiction, role play and other activities

The implications for teaching and learning are that:

- Children may not know they need help therefore do not ask for it – so teachers may need to provide a visual reminder
- Teachers may need to structure interpersonal situations and provide the student with scripts, routines and strategies
- Teachers may need to help peers understand the interpersonal difficulties of students with an ASD
Executive Functioning

Executive functioning is defined as ‘the ability to maintain an appropriate problem-solving set for attainment of a future goal’ (Luria, 1996). Executive functioning is seen as a central deficit in autism. Neurological and psychological research suggests there is a dysfunction of the prefrontal cortex (the frontal lobes of the brain).

Russell et al. (1999) define the two main components of an executive function task. The participant has to:

1. suppress a prepotent (dominant) but incorrect response
2. retain action-relevant information while doing so

The impact of impaired executive functioning for learning is that students experience difficulties in:

- Planning and organisation
- Shifting attention, impulse control, initiation and perseveration
- Self monitoring
- Behaving flexibly
- Perceiving emotions

The person with autism also often has a very good memory but is unable to retrieve this knowledge meaningfully, largely because they focus on the detail rather than the big picture.

The implications for teaching are that students on the spectrum require assistance with:

- Perceiving/understanding emotions
- Planning and organisation – so teachers should colour-code materials and give instructions in the sequence in which activities will occur
- Starting, stopping and transitioning – so teachers need to forewarn students
- Accessing the curriculum generally
- There may be a need for a script of action and dialogue, with cues and strategies to address these cognitive deficits

Weak Central Coherence

Frith (1989) describes Central Coherence (CC) as ‘the tendency to draw together diverse information, to construct higher level meaning in context’. The person with autism is not able to make sense of situations and events according to their context and/or they find it difficult to integrate information at different levels.

The impact of weak Central Coherence for learning is that students with ASD:

- Overly focus on the detail and fail to grasp the whole picture
- Concentrate on detail and if this is changed, their understanding of the whole picture changes
- Have difficulty understanding which details are important
- Have difficulty in generalising learning to new contexts
- Have difficulty in sequencing information because they focus on specific details and do not see the relationships between them
- Fail to understand the meaning behind everyday events and how they connect to form a consistent pattern or ‘gestalt’
- Are less able to draw together diverse information to construct higher level meaning, and so fail to understand the meaning behind everyday events

Implications for teaching and learning:
- Highlight important details in text and the environment
- Help a student generalise previous learning to new situations by pointing out similarities
- Demonstrate relationships and sequences e.g. Put socks on before shoes; turn on switch to cause toy to operate
- Help students to deal with small mistakes and avoid being overly perfectionist
- Help students to move on to new material
- Use visual supports and consistent routines to enable students to focus on similarities rather than differences

**Sensory-Processing**

Many people on the autism spectrum have difficulty managing sensory input. They may over- or under-react to:
- Visual input
- Tactile input
- Auditory input
- Olfactory (smell) input
- Gustatory (taste) input
- Vestibular (equilibrium) input
- Proprioceptive (knowing where body is in space) input

Sensory-processing problems are frequently displayed by children with autism and have considerable impact on their behaviour in the home and school environment. Sometimes sensory characteristics are severe enough to reduce their ability to participate in typical life activities. It may mean they have difficulties attending to the task at hand. Some students may have such extreme patterns of sensory processing that they are unable to function without the use of external strategies throughout the day.

Despite the apparent lack of empirical evidence, as well as the fact that sensory processing was not included in the triad of impairments, there is considerable anecdotal and descriptive evidence on the impact of sensory-processing. For example descriptive studies indicate that between 42-80% of people with autism demonstrate unusual sensory processes (Heflin & Alaimo, 2007).

Implications for teaching and learning:
- As a general rule, people with ASD have good visual-processing skills relative to their auditory processing
- Some children may hear speech but are slow to process it so they do not immediately understand the meaning of what they hear (Edelson, n.d.). For these children, it is important to use minimal speech and allow some processing time
- Some students will experience distress or anxiety in certain sensory environments and may display difficult or non-compliant behaviours
Distraction is an issue for some students who find it difficult to distinguish which sensory information to focus on and which to ignore.

**Motor Functioning**

Children with autism may have problems of coordination and balance in fine and gross motor activities. Some children have a history of gross motor delay and display several motor difficulties such as hypotonia (low muscle tone), and toe-walking. They may also exhibit motor apraxia, which means they find it difficult to plan movements or use objects for their intended purpose (Ming, Brimacombe & Wagner, 2007). They may appear clumsy or find it difficult to perform actions such as dressing, riding a bike, catching and throwing. As a rule these characteristics improve with age. Children with autism generally perform more poorly on motor imitation tasks, although the reasons are complex because imitation skills are linked to other social and communicative behaviours including language and eye contact (Stone, Ousley & Littleford, 1997).

**Implications for teaching and learning:**

- Writing may be problematic for some students, with many preferring to use a keyboard rather than write by hand
- Students may also be reluctant to perform motor actions if these interfere with preferred stereotypical movements
- The use of sign language as an alternative communication mode for non-verbal students cannot be automatically assumed

**Adjustments**

**Classroom Management**

Every person with autism is an individual, and like all individuals, has a unique personality and combination of characteristics; including strengths and gifts, which can be used to compensate for and cope with their disability.

Evidence indicates that early, appropriate, and intensive educational interventions result in dramatically positive outcomes for young children with autism. Explicit instruction in the use of management strategies and coping mechanisms is the key in ensuring people with Autism learn skills to function successfully, enjoy a quality lifestyle and contribute as valuable community members.

Individuals with autism can learn when information about their unique styles of receiving and expressing information is addressed and implemented in their programs. Abilities may fluctuate from day to day due to difficulties in concentration, processing, or anxiety. The child may show evidence of learning one day, but not the next. Changes in external stimuli and anxiety can affect learning.

**Teaching Strategies**

- A highly structured, specialized education program, tailored to the individual needs
- A well designed intervention approach may include some elements of communication therapy, social skill development, sensory integration therapy and applied behavior analysis delivered by trained professionals in a consistent, comprehensive and coordinated manner
- The more severe challenges of some children with autism may be best addressed by a structured education and behaviour program which contains a one-on-one teacher to student ratio or small group environment
- Training in functional living skills at the earliest possible age to enhance independence
Opportunity for personal choice
Approach should be flexible in nature
Positive reinforcement
Re-evaluate programming on a regular basis in consultation with family and specialist expertise
Provide a smooth transition from home to school to community environments
Incorporate training and support systems for parents and caregivers
Include training in generalization of skills to all settings

Links
Articles to download from: Minds & Hearts, Asperger Syndrome and Autism Clinic

http://www.mindsandhearts.net/

What is Asperger's Syndrome? (Download the article in pdf-format here)
How to prevent bullying in schools (Download the article in pdf-format here)

Explaining the diagnosis of Asperger’s syndrome (Download the article in pdf-format here)
How to manage when someone on the Autism spectrum is experiencing a meltdown (Download the article in pdf-format here)

Autism Society of America: Information regarding autism with an American perspective.
www.autism-society.org

OASIS (On-line Asperger Syndrome Information and Support) is dedicated to Asperger syndrome. In particular, see suggestions for the teachers.
www.udel.edu/bkirby/asperger

Aspen (Asperger Syndrome Education Network) lists support groups and features articles on Asperger syndrome.
www.aspennj.org

NLD on the Web has detailed articles on Non-Verbal Learning Disabilities.
www.nldontheweb.org

TEACCH - Information on Autism offers a select series of informative articles on Autism and Asperger syndrome.
www.teacch.com

BBB Autism On-line Support covers the broader autism spectrum.
www.bbbautism.com

Autcom is an autism advocacy organisation. See especially their Red Flags page for evaluating treatment claims.
www.autcom.org

Asperger Syndrome Coalition of the US has materials on Asperger’s and related conditions.
www.cehn.org/cehn/resourcguide/ascus.htm

Tony Atwood’s website includes numerous articles and an Asperger’s rating scale.
www.tonyattwood.com.au
A Survival Guide for People with Asperger’s Syndrome, by Marc Seeger, provides insight and suggestions from an expert - someone who lived with Asperger’s. www-users.cs.york.ac.uk/~alistair/survival

Oops! Wrong Planet is an extensive listing of links on the Autism spectrum. Enjoyably and eccentrically presented. www.PlanetAutism.com

Information in multiple languages. www.AutismInfo.com

AHA/AS/PDD offers an annotated Suggested Reading list and links. www.ahany.org

Ben’s Asperger Room explains Asperger’s to children with or without the condition. http://xoomer.alice.it/marpavio/A_childrens_guide_to_Asperger_Syndrome.htm


www.aspergers.com
www.autismsupport.org.au
www.asperger.asn.au

References


Further Reading


Sources of Information


Positive Partnerships: Supporting school aged students on the Autism Spectrum Module 1 Professional Development for teachers and other school staff.

www.autismtraining.com.au

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Bipolar Disorder

Definition
Unlike many adults with bipolar disorder, whose episodes tend to be more clearly defined, students with the illness often experience very fast mood swings between depression and mania many times within a day. Children with mania are more likely to be irritable and prone to destructive tantrums than to be overly happy and elated. Mixed symptoms also are common in young adolescents with bipolar disorder. Older adolescents who develop the illness may have more classic, adult-type episodes and symptoms.

Features
Bipolar disorder in children and adolescents can be hard to tell apart from other problems that may occur in these age groups. For example, while irritability and aggressiveness can indicate bipolar disorder, they also can be symptoms of attention-deficit hyperactivity disorder, depression, anxiety, conduct disorder, oppositional defiant disorder, or other types of mental health difficulties more common among adults such as schizophrenia. Students with bipolar disorder may be prone to drug use, which can aggravate symptoms. Furthermore, drug use alone can mock many of the symptoms of bipolar disorder, making an accurate diagnosis difficult.

Adjustments

Classroom Management
Students may experience fluctuations in mood, energy, and motivation. These fluctuations may occur hourly, daily, in specific cycles, or seasonally. As a result, a student with bipolar disorder may have difficulty concentrating and remembering assignments, understanding assignments with complex directions, or reading and comprehending long, written passages of text. Students may experience episodes of overwhelming emotion such as sadness, embarrassment, or rage. They may also have poor social skills and have difficulty getting along with their peers.

Teaching Strategies
Educational adjustments are designed to meet student needs on a case-by-case basis. Possible adjustments could include:

- Arrange for a delayed start or shortened day if the student has difficulty waking up or getting to school in the morning
- Provide a flexible program to allow for changes in school performance due to the cyclical nature of the illness
- Use a daily assignment notebook
- Remind the student at the end of the day to take work home if necessary
- Provide a second set of books and materials at home if student is absent or if student often forgets to take them home
- Modify or eliminate homework assignments according to the student’s changing energy level and ability to concentrate
- Reduce/modify academic demands as appropriate
- Use books on tape
- Break assignments into manageable levels
- Allow extended time on tests to reduce anxiety
- Allow for alternate testing such as oral tests
- Check regularly on student progress so that he/she doesn’t get impossibly behind
- Excuse the student from public speaking and presentations if anxiety is an issue; allow for one-to-one presentation, videotape, etc.
- Cut down on distractions
- Provide tutoring if there are extended absences
- If the student is returning from hospitalisation or time out of school due to the illness, plan for a successful return to school by reducing stress and providing accommodations as necessary
- Allow the student to take a break if he/she is upset or if inappropriate behaviours are beginning to escalate
- Work with the parents and the therapist to understand how the disorder manifests for this student.
- Teacher aide to attend class with the student and assist in taking notes should that be required
- Allow the student to bring water into class to alleviate effects of medication
- Minimise distractions in the learning environment
- Exemption or alternative arrangements (refer to QSA Policy on Special Provisions)
- Pre-arranged breaks
- Pre-arranged cues to refocus attention
- Immediately addressing any negative behaviour by peers towards the student
- Providing copies of class teacher’s or other students’ notes to cover emergency absences where possible
- Exit plan
- Allowance of break periods as needed for rest and taking of medication
- Access to external agency support (Child and Youth Mental Health Services)
- Regular access to a guidance officer or school based youth health nurse.

Links

www.beyondblue.org.au

www.betterhealth.vic.gov.au

www.sane.org

Sources of Information

Information Sheet :Anxiety - Student Services Department of Education Training and the Arts

Australian Government – National Mental Health Strategy (Brochures available from Mental Health and Workforce Division of the Australian Government Department of Health and Ageing)
Cerebral Palsy

Definition
Cerebral palsy, also known as CP, is the name given to a condition that affects the way the brain controls the muscles of the body. This results in difficulties in movement and posture. CP is caused by injury to the parts of the brain.

_Cerebral_ means having to do with the brain. _Palsy_ means weakness or problems with using the muscles.

Features
Injury or changes to the developing brain are associated with cerebral palsy. For example, it is known the developing brain can be injured by:

- Exposure to certain infections such as Rubella (German Measles) in the early months of pregnancy
- Reduced oxygen supply to the baby during or after birth
- Exposure of an infant to severe infection shortly after birth or the first few weeks of life
- An accident in the early years of life

Often the injury happens before birth, sometimes during delivery, or, soon after being born. CP can be mild, moderate, or severe. Mild CP may mean a child is clumsy. Moderate CP may mean the child walks with a limp. He or she may need a special leg brace or a cane. More severe CP can affect all parts of a child’s physical abilities. A child with moderate or severe CP may have to use a wheelchair and other special equipment.

Sometimes children with CP can also have learning problems, problems with hearing or seeing (called sensory problems), or intellectual disability. Usually, the greater the injury to the brain, the more severe the CP.

There are three main types of CP:

- **Spastic CP** is where there is too much muscle tone or tightness. Movements are stiff, especially in the legs, arms, and/or back. Children with this form of CP move their legs awkwardly, turning in or scissoring their legs as they try to walk. This is the most common form of CP.

- **Athetoid CP** (also called dyskinetic CP) can affect movements of the entire body. Typically, this form of CP involves slow, uncontrolled body movements and low muscle tone that makes it hard for the person to sit straight and walk.

- **Mixed CP** is a combination of the symptoms listed above. A child with mixed CP has both high and low tone muscle. Some muscles are too tight, and others are too loose, creating a mix of stiffness and involuntary movements.
Specific words are used to describe the parts of the individual’s body that are affected:

**Diplegia:** Both legs and both arms are affected, but the legs are significantly more affected than the arms. Children with diplegia usually have some clumsiness with their hand movements.

**Hemiplegia:** The leg and arm on one side of the body are affected.

**Quadriplegia:** Both arms and legs are affected, sometimes including the facial muscles and Torso.

**Adjustments**

**Classroom Management**

It is important to note that cerebral palsy has different causes, and affects each person differently; therefore people with cerebral palsy have varying individual needs.

With early and ongoing treatment the effects of CP can be reduced. People with CP benefit from early intervention services, which can include Physiotherapy, Occupational Therapy and Speech Language Pathology. In addition to therapy services and special equipment, children with CP may need what is known as assistive technology such as alternative communication devices, which can range from the simple to the sophisticated. Communication boards, for example, have pictures, symbols, letters, or words attached. The child communicates by pointing to or gazing at the pictures or symbols. Alternative Augmentative communication devices are more sophisticated.

**Teaching Strategies**

Teachers work collaboratively with the relevant specialists in accordance with the particular needs of individual students.

Commercial suppliers of assistive technology are best suited to advise on effective, relevant communication devices.

Additional strategies may be found in the sections relating to more specific disabilities.

It is important to respect the individual dignity of people with disabilities. The use of people first language; ie person with Cerebral Palsy, not ‘Cerebral Palsy sufferer’. When supporting or assisting with tasks, ask permission, alert the person as to what you are doing, offer choice.

**Links**

Refer also to:
Spectronics; Inclusive Learning Technologies
www.spectronicsinoz.com
Information on assistive technology for people with disabilities

**Sources of Information**

Cerebral Palsy League of Queensland
Head Office:
55 Oxlade Drive
New Farm Qld 4005


National Information Center for Children and Youth with Disabilities
Chiari Malformation

Definition
Chiari malformations (CMs) are structural defects in the cerebellum, the part of the brain that controls balance. It mainly involves the lower brainstem and lowermost portion of the cerebellum, but the anatomy of the whole brain is affected. Part of the cerebellum and brainstem are pushed down into the upper spinal canal.

The brainstem is the origin of many of the nerves that control the heart, breathing, blood pressure and help control swallowing, sneezing and coughing.

The cerebellum controls the maintenance of posture and coordination of muscle action, to produce precise, coordinated movements.

When the Chiari Malformation is present, the brainstem is elongated, and displaced into the opening of the base of the skull and top of the spinal canal. It is often kinked. The brainstem, cranial nerves and the lower portion of the cerebellum may be stretched or compressed. Therefore, any of the functions controlled by these areas may be affected.

Features
There are four classes of CM depending on the severity of the disorder. Some may be asymptomatic and do not interfere with a person’s activities of daily living.

Common features include:

- Neck pain
- Balance problems
- Muscle weakness
- Numbness
- Dizziness
- Vision problems
- Ringing, buzzing or hearing loss in the ears
- Vomiting
- Insomnia
- Depression
- Headaches
- Affected hand-eye and fine motor skills

Adjustments

Classroom Management

Be aware of symptoms the child may have as it differs between individuals and adjust classroom management accordingly. Children may need to avoid contact sports.
Sources of Information

www.ninds.nih.gov/disorders/chiari/detail_chiar.htm

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Communication Difficulties

Definition

Speech Disorders: include problems with the actual production of sounds.

Examples include conditions relating to:

- **Articulation** - difficulties producing sounds. This person may be difficult to understand, for example says ‘tat’ for ‘cat’
- **Fluency** - stuttering
- **Resonance or voice** - hoarse, raspy or weak voice

Language Disorders: refers to the difficulties understanding spoken or written language; difficulties expressing words to communicate ideas effectively

They include:

- **Receptive** – difficulties understanding the meaning of words; what is being said (such as following directions and conversations); what is being read
- **Expressive** - difficulties using words to express meaning such as putting words together, limited vocabulary, word finding difficulties

Phonological Awareness Disorders: refer to delays or difficulties in learning to identify the number of sounds in words. This skill is required for the development of reading and spelling. You need to be able to hear each sound in order to link the particular letter to the sound eg writing ‘sreng’ for string; reading ‘ban’ as ‘bun’

Pragmatic Disorders: refer to difficulties understanding the rules of language use in social situations. It is the ability to use language in a socially appropriate way such as taking turns, interrupting, asking questions, greeting people

Auditory Processing Disorders: refer to what we do with what we hear. People with auditory processing difficulties have normal hearing but may present with difficulties such as:

- Maintaining focus on what they are hearing (auditory attention)
- Separating a voice from background noise (auditory figure-ground)
- Hearing the difference between sounds (auditory discrimination)
- Making meaning from an incomplete word (auditory closure)
- Remembering what you hear or sequencing it correctly (auditory memory, auditory sequencing memory)
- Interpreting and organizing what you hear for meaning (auditory integration)
Features

General Information
- 2/3 adolescent who are seen in CYMH have communication difficulties
- Difficulties with understanding are strongly linked to poor social skills and literacy and increased mental health difficulties
- An ability to talk in sentences and presenting as a bright student DOES NOT rule out understanding difficulties

Masking Features
- Often seem easy to talk to
- Are verbal
- Use good eye contact
- Use limited feeling words and rarely acknowledge feelings of others
- Able to use some complex sentences (eg use before, after, because); not always used in context and often limited to only 2 variations

What To Look For
- Limited feeling words or difficulty talking about feelings
- Are the complex sentences more learnt form?
- Difficulty telling own ideas, tell very little about what they think or feel
- Often only see concrete meaning for double meaning words
- Vocabulary limited
- Do they do worse when given more complex verbal material?
- Negative behaviours masking serious underlying difficulties with language

Adjustments

Classroom Management
In order to access the school curriculum, students need to be able to understand language and express themselves clearly in both oral and written forms. When a child has a communication difficulty, he may become frustrated and this can often lead to poor behaviour. Because early identification and treatment is the best way to prevent a difficulty becoming a long-term problem, most students with language or communication differences will have been assessed and in receipt of early intervention through Speech Language Pathologists (SLP’s).

Speech language therapeutic strategies may include:
- Language intervention strategies – interacting and talking using stimuli eg. games, pictures, worksheets to stimulate language development; modification of classroom resources to enhance curriculum access and participation
- Articulation therapy – focuses on the mechanics of mouth and tongue in practicing sound production
- Pragmatic therapy – role-playing in common social situations
Guidelines and language intervention strategies can be obtained through appropriate reports and consultation with SLPs.

**Teaching Strategies**

In addition to strategies associated with the specific communication difficulty the following are good tips to remember:

- Use visual prompts
- Give main point lesson plan handouts
- Work on increasing word links, similarities, differences, group
- Monitor the use of double meanings, concrete vs abstract
- Monitor the complex sentence use, break down step by step
- Encourage use of and model range of feeling words, link to body clues and environment clues
- Check the student’s understanding of a social situation before considering consequences

**Links**

Refer also to: [Expressive Language Disorder](#), [Receptive Language Disorder](#), [Pragmatic Language Disorder](#), [Word Finding Difficulties](#)

- [www.slpsite.com](http://www.slpsite.com) (Speech Pathologist, Caroline Bowen)
- [www.hearandsaycentre.com.au](http://www.hearandsaycentre.com.au) The Hear and Say Centre, Brisbane,
- [www.elr.com.au](http://www.elr.com.au) (has literacy resources designed by speech pathologists)

The Mater Hospital, University of Queensland, Department of Speech Pathology and Audiology


**Sources of Information**

- [www.speechpathologyaustralia.org.au](http://www.speechpathologyaustralia.org.au) (Speech Pathology Australia, Registered Speech Pathologists can be accessed through this site)

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Convergence Insufficiency

Definition
Convergence Insufficiency is responsible for up to 75% of Vision Based Learning Difficulties (VBLD) and is characterised by an inability to aim the eyes at a page while reading/writing, or further inability to maintain this aim under cognitive load. During reading both eyes must converge on the print simultaneously.

Features
Convergence Insufficiency leads to:

- Fatigue and stress symptoms such as red eyes, sore eyes, frontal or temporal headaches, transient near and/or distance blur
- Occasionally a child will also complain of double vision or the letters moving or running (swirling)
- Difficulty sustaining attention at visually demanding tasks and associated loss of concentration
- Losing place while reading which leads to reduced reading fluency and slower comprehension
- Behaviours of avoidance during reading activities
- Abnormal postural adaptations when trying to centre on near tasks, including head tilting or holding their work very close

Adjustments
Classroom Management
Watch for symptoms:

- Complaints of blurred vision, headaches
- Poor concentration
- Limited comprehension
- Needing to reread material
- Poor eye-hand coordination (small ball catching)
- Turning or tilting head and squinting while reading
- Doing better at maths than reading
- Slow to copy from the board
- Frustration and fatigue with near tasks like reading
- Complaints of words "running together" or "swimming" on the page
- Family history of poor reading skills
Teaching Strategies

Arrange for screening for convergence insufficiency and referral to expert Optometrist attention for Vision Training (eye exercises) to remediate the problem. Glasses are not required to rectify this problem; 15 mins of eye training exercises daily will solve the problem.

How to Screen for Convergence Insufficiency

You can test for convergence insufficiency using a pen or small toy. Sit directly in front of the child, and have him/her look at your nose, then at the pen/toy (held at 10cm from their nose), and watch their eyes for equal convergence (turning the eyes in). If the pen/toy is aligned with the centre of their nose, both eyes should be turned in by the same amount. Do a few jumps between your nose and the pen/toy, having the child hold the nearer focus for a few seconds each time.

- You are looking for the child to focus steadily on the pen/toy, with both eyes remaining still.
- Watch for one eye not looking at the pen / both eyes looking then drifting outwards / switching focus between the eyes.

This is testing how well the student can make the eye movement of board-to-book, which is done repeatedly at school, and also how well they can hold their focus on a close task, for example, reading.

Once you have established whether or not the child can hold this convergence, then ask them an age appropriate question and prompt them to keep looking at the pen/toy. Whatever the question is, it must make them THINK – this is testing whether the student is able to hold their eye coordination while thinking and doing something new; an inability to hold convergence while thinking affects a child’s concentration and comprehension while reading/writing. If you see one or both eyes wandering, ask the child to ‘look at the pen’ or ‘use both eyes’ – even from an early age, children know exactly what this means. Repeat this test a few times to gauge their ability.

Other Vision Based Learning Difficulties (VBLD)

Other eye coordination problems (around 15% of VBLD)

This can include problems of the aiming (convergence/divergence) system or focusing (accommodation) system; also problems of eye muscle control. Watch for symptoms - headache, sore eyes, eye rubbing, appearance of blurred vision, fatigue, loss of place while reading/copying from board, avoidance of near tasks.

The child needs expert Optometrist attention to provide Vision Training if required, as well as advice on classroom positioning in the case of eye muscle disorders.

Blurred Vision (5-10% of VBLD)

Children who appear to have blurred vision need to visit their local Optometrist for an eye examination and prescription of glasses or contact lenses.

Colour Vision Deficiency ‘Colour Blindness’ (8% Of Males and 0.5% Of Female)

It can coexist with any of the other VBLDs. A child with colour vision deficiency will have difficulties with any colour based learning:

- Early maths concepts
- Grade 1-2 writing books (with red/blue lines)
- Coloured pens on whiteboards/chalk on blackboards
- Low contrast tasks like reading overhead projectors (OHPs)
If you think a male student could have a colour vision deficiency, he should visit his local Optometrist for diagnosis. This child requires ongoing advice on learning adaptations and future career considerations.

Links


Sources of Information

Gerry & Johnson Optometrists
Level 4, 217 George Street
Brisbane QLD 4000
Australia

Phone: (07) 3210 1822
Fax: (07) 3210 2110

Email: admin@gjo.com.au


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Depression

Definition
All children feel sad or blue at times, but feelings of sadness with great intensity that persist for weeks or months may be a symptom of more chronic depression or major depressive disorder. These depressive disorders are more than “the blues”; they affect a young person’s thoughts, feelings, behaviour, and body, and can lead to school failure, social isolation, and even suicide.

Features
Symptoms of depression in children and young people often go unrecognised or untreated and are often masked by other behaviours such as anger or aggression. Symptoms of depression in children or young people may include:

- Changes in appetite (either increase or decrease) or failure to make expected weight gains
- Disturbed sleep resulting in daytime lethargy and poor concentration
- Frequently seeming upset, sad, anxious or negative (adolescents) or crankiness, grouchiness or irritability (children)
- Becoming withdrawn or isolated from others
- Becoming involved in risky or criminal behaviour
- A marked decline in academic interest and performance
- Fidgeting, or an inability to sit still
- Loss of interest in activities once enjoyed
- Sudden outbursts of anger, aggression and/or crying
- Suicidal thoughts
- Self-harming behaviour
- Fear or anxiety
- Excessive use of alcohol, drugs
- Constant complaints or emotional outbursts with no apparent cause
- Repeated physical complaints

Adjustments

Classroom Management
Students experiencing depression may display a marked change in their interest in schoolwork and activities and may display the following behaviours:

- Difficulty commencing tasks/staying on task or refusal to attempt tasks
- Difficulty completing, or refusal to complete, assessments
- Lateness to school
- Frequent absences
- Truancy
- Lowered self esteem
- Aggression towards others
- Social isolation/difficulty sustaining friendships
- School refusal

**Teaching Strategies**

Educational adjustments are designed to meet individual student needs on a case-by-case basis. Possible adjustments could include:

**Adolescence:**
- Negotiated attendance
- Reducing subject load
- Negotiate with student to determine short and long term goals
- Encourage building links with other students through activities with peers e.g. group work.
- Additional time for students to complete assessable tasks - assignments, exams
- Tasks given in writing to give specific direction
- Exemption or alternative arrangements (refer to QSA Policy on Special Provisions)
- Allowance of break periods as needed for rest and medication
- Access to external agency support (Child and Youth Mental Health Services)
- Access to resilience programs e.g. RAP - Resourceful Adolescent Program
- Regular access to a guidance officer or school based youth health nurse
- Recognising small achievements using positive reinforcement, communication strategies and feedback

**Early and Middle Childhood:**
- Establishing a daily communication mechanism with parents/carers to monitor moods and behaviour
- Conducting a Functional Behavioural Assessment (FBA) to help determine triggers/antecedents, as well as maintaining consequences
- A handover plan for the commencement of each school day (if school refusal is an issue)
- Establishing areas of interest and ability
- A desk-top reinforcement schedule to encourage on-task behaviour
- A buddy for the classroom and playground
- Give a job or role which includes positive socialisation and reinforcement
- Strategies to manage behaviours out of class - e.g. playground monitoring plan
- Whole class sessions on resilience strategies e.g. FRIENDS Program
- Access to external agency support (Child and Youth Mental Health Services)
- Regular access to a guidance officer or school based youth health nurse
Links
Beyondblue - The National Depression Initiative
www.beyondblue.org.au
Call 1300 22 4636
www.betterhealth.vic.gov.au
www.sane.org

Sources of Information
Information Sheet: Depression - Student Services Department of Education Training and the Arts

Australian Government – National Mental Health Strategy (Brochures available from Mental Health and Workforce Division of the Australian Government Department of Health and Ageing:
GPO Box 9848
Canberra ACT 2601

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Developmental Verbal Dyspraxia

Definition

Developmental Verbal Dyspraxia (DVD) is used specifically to indicate a disorder of speech sound production characterised by impaired voluntary capacity to program the position and sequence of phonemes (speech sounds).

A person with Verbal Dyspraxia knows what they want to say but is unable to organise the lips, tongue, palate and vocal cords for the voluntary production of speech i.e. they have difficulty initiating sounds and sequencing these sounds into words.

The American Psychiatric Association’s Diagnostic and Statistical Manual (DSM-IV) lists five criteria for diagnosis:

- A marked impairment in the development of motor co-ordination
- The impairment significantly interferes with academic performance or daily living activities
- The co-ordination problems are not the result of a general medical condition such as cerebral palsy, hemiplegia, or muscular dystrophy
- It is not a pervasive developmental disorder
- If developmental delay is evident, the motor difficulties are greater than those usually seen in same-aged children

The Dyspraxia Foundation of Great Britain describes dyspraxia as "an impairment or immaturity in the organisation of movement with associated problems of language, perception and thought".

Features

Observable behaviours in students of secondary school age include:

- Disorganisation
- Difficulty developing peer/social relationships
- Emotional lability (over-reactivity and almost appears to have a personality disorder exhibiting high levels of excitement at times and almost clinical depression at others, could develop obsessive/repetitive behaviours and phobias)
- Coordination difficulties (which are masked so they appear untidily dressed, difficulty carrying equipment or school bags)
- Difficulty recording information (print rather than cursive handwriting, slow speed of information processing and instructions not followed appropriately)
- Poor short term visual and auditory memory (slow at copying from the board or taking dictated notes)
- Being easily led by peer group
- Obsessional behaviours which were previously not observed
Adjustments

Classroom Management
Children with Dyspraxia appear outwardly like all other children yet this hidden disability can lead to severe educational, behavioural and social problems for the child. Classroom management and teaching strategies would be designed on an individual basis in response to the specific and unique needs of the student.

Speech Pathologists would provide input and advice on Oral and Verbal Dyspraxia.

Occupational Therapists would provide input and advice on Motor Dyspraxia.

Teaching Strategies
There is no cure to dyspraxia, however early intervention can help a person learn to deal with his or her difficulties. Depending on the severity of the disability, work with occupational, speech and physical therapists can greatly improve a person’s ability to function and succeed independently.

Beginning at an early age, it is vital that parents offer their child patience and encouragement. It can be very frustrating to have difficulty communicating or moving, and a parent can ease that frustration by offering help and support in overcoming these difficulties.

All people with dyspraxia need help practicing simple tasks and can benefit from step-by-step progress into more complex activities. Encouraging easy physical activities that develop coordination can increase confidence. It is also important to encourage friendships to broaden a person’s experience and understanding of social relationships.

Links
www.dyspraxia.org.nz (contains information aimed specifically at young children)

Sources of Information
Australian Dyspraxia Support Group & Resource Centre
PO Box 5519
South Windor NSW 2756
Phone: (02) 45 776220
Email: information@dyspraxia.com.au
www.dyspraxia.com.au

Queensland Dyspraxia Parent Support Group
Tel: 07 326 68701

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Diabetes

Definition
Diabetes is a condition in which the body cannot use glucose properly. Glucose is a type of sugar that provides most of the energy for the body's cells. Normally glucose gets into body cells using the hormone insulin. In diabetes, the body does not produce enough insulin, or does not respond to insulin as well as it should.

There are two main types of diabetes:
(In both types of diabetes, the amount of glucose in the blood stream rises too high)

Type 1 Diabetes
Previously called insulin-dependent diabetes mellitus, IDDM or juvenile diabetes
- The insulin-producing cells in the pancreas do not function
- People with this form of diabetes need insulin injections to survive

Type 2 Diabetes
Previously called non-insulin-dependent diabetes mellitus, NIDDM or mature-onset Diabetes
- Cause is unknown, but it seems to be a lifestyle disease related to having high blood pressure, high cholesterol, being overweight and being physically inactive
- Insulin is still produced by the pancreas, but either not enough is produced or the body cannot respond to it properly
- Is the most common form of diabetes

Hypoglycaemia
People may experience hypoglycaemia ('hypo') if they are on insulin or take certain types of diabetes tablets. Hypoglycaemia can occur when the blood-glucose level falls low enough (usually around 3.5mmol/L) to cause the following signs and symptoms:
- Sweating
- Headache
- Confusion
- Hunger
- Tingling around the mouth
- Weakness or dizziness
- Unusual behaviour
- Low blood glucose result
Features

If diabetes is not well controlled, blood vessels and nerves will be damaged. Over time this may cause complications such as:

- Loss of eyesight
- Foot problems
- Diseases of the heart
- Poor blood flow
- Kidney damage
- Less resistance to skin, kidney and other infections

Adjustments

Classroom Management

The aim of diabetes management is to keep blood glucose levels as close to normal as possible (4-8 mmol/L) at all times.

Implications for students at school require consideration particularly in relation to missing lunches, participation in sport and exercise and safety during practical activities in the instance of a “hypo”. A student with diabetes will have a management plan worked out in consultation with medical expertise, which will be accessible to staff. The plan will include management guidelines specific for the individual student.

It will include regular testing of blood glucose levels at school. If the blood glucose level is low, the student needs to:

- Take a ready source of glucose eg. 5 jelly beans, 30 mls of sweet cordial in water or lemonade
- Eat fruit or sandwiches after the glucose
- Check blood glucose levels again

If someone with diabetes is unconscious do not give them anything by mouth. Turn them on their side and follow first-aid procedures. Get medical help.

Teaching Strategies

Links

International Diabetes Institute
www.diabetes.com.au

Diabetes Australia
www.diabetesaustralia.com.au (includes multilingual information)
www.eyesondiabetes.org.au - information on diabetic retinopathy

Abbott Medisense products
www.medisense.com.au (includes information on blood-glucose meters).
Sources of Information

Diabetes Australia
www.diabetesaustralia.com.au
Down Syndrome

Definition
Down syndrome is the most common and readily identifiable chromosomal condition associated with intellectual disability. It is caused by a chromosomal abnormality and instead of 46 chromosomes, people with Down Syndrome have 47 chromosomes which affects the orderly development of the body and brain.

Features
Physical
- Poor muscle tone and hyper flexibility leading to poor balance, co-ordination, postural control
- Slanting eyes
- Short broad hands often with fine motor difficulties
- Broad feet with short toes
- Short low-set ears
- Short neck
- Small head
- Small oral cavity
- Slower physical and intellectual development
- May have specific health related problems eg prone to respiratory infection
- Commonly have visual problems; mild to moderate hearing loss and speech difficulty
- Tendency to become obese with age

Language
- Speech and language delays – may have difficulties with learning vocabulary, intelligibility, understanding instructions, learning grammar, social conversational skills, understanding language of the curriculum and holding, processing, assimilating and responding to language
- Students may express themselves in telegraphic speech – short sentences and words.

Adjustments
Classroom Management
- As there is a wide range of ability in children with Down Syndrome, it is important to place few limitations on potential capabilities. However specific and explicit instruction and negotiated assessment are realistic adjustments for students with intellectual disability
- Consider any physical impairments i.e. sit child at front of class if hearing or visual problems; use of keyboard rather than hand writing
- Consider communication skills level and impact on social interactions
Teaching Strategies

Giving instructions:
- Gain student’s attention
- Repeat group instructions individually
- Use simple and familiar language
- Adjust pace of instruction
- Break instruction down into small steps
- Use written supports – steps on board or task outline
- Use pictures or colour coding
- Have student repeat instructions

Maintaining attention:
- Give work which is interesting and appropriate to ability
- Break activities into small, achievable steps
- Teach the key features of an item or situation
- Provide a quiet area for difficult work
- Give frequent and specific feedback on performance

Thought processing:
- Slow down the pace of instruction
- Give short, clear directions and requests
- Give students enough time to process information
- Use objects or pictures to focus on the concrete rather than the abstract
- Use direct instruction such as modeling, prompting or feedback

Memory:
It helps immediate recall if you:
- Provide more prolonged experiences to learn new information or skills, to the point of 'overlearning'

It helps long-term memory recall if you:
- Give enough opportunity to practise or use the information or skills

It helps recall generally if you:
- Use visual supports, such as word lists, pictorial timetables or self-management charts
- Use verbal and gestural prompts
- Clarify to make sure the student understands and recalls the task
- Use a home-school communication book - this allows parents and teachers to prompt recall of experiences across environments

Generalisation:
It is possible and necessary to teach students how to generalize acquired skills across a variety of settings, people, materials and time periods. It helps if you:
• Create real-life or life-like environments; use a range of concrete materials
• Use role-play
• Plan contingencies for potential errors

Adjustments to basic teaching procedures may involve:

• Selection of the learning task:
  o Changing characteristics of the task (a non-reading student may use audiovisual aids)
  o Changing the criteria to ensure early success (criteria for quantity, speed or accuracy)
  o Breaking the task into smaller sub-tasks
  o Reducing the extent of the task

• Presentation of new information or skill:
  o Giving more consideration to the student’s learning style (e.g. More visual and concrete support)
  o Using language concepts the student understands
  o Presenting less material in one session
  o Giving more attention to linking new learning to previous experience
  o Giving additional modelling and concrete examples
  o Providing direct instruction (see information following)

• Guided student practice:
  o Scheduling extra time for guided student practice
  o Modelling the task while explaining it
  o Using short, clear directions
  o Checking that directions are understood
  o Waiting longer for the student to process information
  o Monitoring the student’s practice more closely
  o Giving more assistance (concrete materials, verbal prompts)

• Feedback (correction and reinforcement):
  o Giving immediate and specific feedback during guided practice
  o Correcting when necessary (simplify the question, break the task into even smaller sub-tasks, increase prompts, model the correct response)
  o Giving reinforcement frequently (about four times the usual)
  o Increasing motivation by using age-appropriate reward systems, negotiated with the student whenever possible

• Independent student practice:
  o Giving practice for short periods over time
  o Giving practice to the point of 'overlearning'
  o Giving practice with a variety of activities, materials, situations and instructors
  o Reducing prompts gradually
  o Teaching strategies for effective learning/thinking (e.g. Process-based instruction)

• Review:
- Reviewing more frequently to check that the skill/information is maintained
- Timetabling opportunities for generalization

Direct Instruction:

Direct instruction typically involves face-to-face instruction in which the teacher helps the student to perform each step, by modeling and using cues and prompts which may be physical, visual, verbal or gestural. Reinforcement or correction is then given.

Often planning for direct instruction involves doing a task analysis - in other words, breaking the task into small steps. It also involves systematic assessment and monitoring.

Direct instruction may also be used to teach cognitive strategies associated with process-based instruction.

Links

Refer also to: Intellectual Disability
Down Syndrome Association of QLD
http://dsaq.org.au/

Sources of Information

http://www.nichcy.org/pubs/factshe/fs4txt.htm
www.down-syndrome.org

Down Syndrome Association of QLD
http://dsaq.org.au/

282 Stafford Rd
Stafford QLD 4053
(07) 3356 6655

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Dravet Syndrome

Definition
(Severe myoclonic epilepsy in infancy – SMEI) SubhDravet
Dravet Syndrome was first described by French physician, Dr Charlotte Dravet in 1978. It is a progressive childhood neuro-developmental disorder characterized by intractable seizures. Understanding the causes of the condition is an ongoing challenge to researchers. Genetic mutations are present in many patients with Dravet Spectrum Disorders. Most, but not all, patients test positive for a mutation in the SCN1A gene. The presence of the SCN1A mutation usually means a diagnosis of a Dravet Spectrum Disorder.

Features
The course of Dravet Syndrome is variable from child to child. Seizures begin during the first year of life. Development is normal prior to the onset of seizures. In most cases the first seizures occur with fever. During the second year of life, varying degrees of developmental delay become apparent. Problems can include, but are not limited to, learning difficulties and speech delays, and moderate behavioral abnormalities. Not all children will be affected by developmental delays, many lead completely typical lives. Currently, treatment for Dravet syndrome consists mainly of anti-convulsant medications to help control seizures. As children with Dravet syndrome get older, their decline in cognitive function stabilizes, and in many, it improves slightly. However, most teenagers with Dravet syndrome are dependent on caregivers. The degree of cognitive impairment appears to correlate with the frequency of seizures.

Adjustments
Classroom Management
Based on the implications of the degree of accompanying level of global delay

Teaching Strategies
Refer to strategies according to degree of cognitive functioning. E.g. Intellectual Impairment, Speech Language Impairment

Links
<a href="G:\Staff\TLS\Learning Differences\Epilepsy.doc">Click here to view information on Epilepsy</a>

<a href="G:\Staff\TLS\Learning Differences\Intellectual Impairment.doc">Click here to view information on Intellectual Impairment</a>

<a href="G:\Staff\TLS\Learning Differences\Speech Language Impairment.doc">Click here to view information on Speech Language Impairment</a>

Sources of Information
http://dravet.org/

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Duane Syndrome

Definition
Duane syndrome (DS) is a rare, congenital (i.e. present from birth), eye movement disorder. It is a miswiring of the eye muscles, causing some eye muscles to contract when they shouldn't and other eye muscles not to contract when they should.

Features
People with DS have a limited (and sometimes absent) ability to move the eye outward toward the ear (abduction) and, in most cases, a limited ability to move the eye inward toward the nose (adduction).

Often, when the eye moves toward the nose, the eyeball also pulls into the socket (retraction), the eye opening narrows and in some cases, the eye will move upward or downward. Many with DS develop a face turn to maintain binocular vision and compensate for improper turning of the eyes.

Clinically, Duane syndrome is often subdivided into three types each with associated symptoms.

Type 1
The affected eye, or eyes, has limited ability to move outward toward the ear, but the ability to move inward towards the nose is normal or nearly so. The eye opening narrows and the eyeball pulls in when looking inward toward the nose however the reverse occurs when looking outward toward the ear. About 78 percent of all DS cases are Type 1.

Type 2
The affected eye, or eyes, has limited ability to move inward toward the nose, but the ability to move outward towards the ear is normal or nearly so. The eye opening narrows and the eyeball pulls in when looking inward toward the nose.
Type 3

The affected eye, or eyes, has limited ability to move both inward toward the nose and outward toward the ears. The eye opening narrows and the eyeball pulls in when looking inward toward the nose. About 15 percent of all DS cases are Type 3.

Although surgery is an option towards elimination or improvement of an unacceptable head turn, and / or reduction of significant misalignment of the eyes, the reduction of severe retraction, surgical technique has not been completely successful in eliminating the abnormal eye movements. A simpler solution is the use of special glasses with prism to eliminate the head turn and eye vision training exercises to address the convergence problems.

Adjustments

Classroom Management

It is important to engage in conversations with the young person and their family concerning the implications of Duane Syndrome for them. Gain an understanding of the compensatory strategies that they have adopted to deal with their eye condition. Clarify if they are required to wear glasses or if they are involved in vision therapy sessions.

Teaching Strategies

Be guided by the young person and the family as to the compensatory strategies that work for them.

Links


Sources of Information


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Duchenne Muscular Dystrophy

Definition
Duchenne muscular dystrophy (DMD) is a progressive muscle disorder that causes loss of muscle function and independence. It is the most common fatal genetic disorder diagnosed during early childhood. Duchenne affects approximately one out of every 3,500 boys and 20,000 babies each year worldwide. Duchenne is not contagious, and it mostly affects boys. It knows no other boundaries and touches all races and cultures.

Features
Typically, Duchenne muscular dystrophy is diagnosed in boys between the ages of three and seven. Muscles will weaken progressively, affecting the young person's physical capabilities.
While the rate of progression and severity of symptoms are different for each individual, there are four stages usually associated with Duchenne.

Early phase (diagnosis through age 7) - Many times, the very first signs of DMD involve a speech and language delay and other cognitive weaknesses. Physically, your student will move slower or with more difficulty than his peers. He may appear clumsy and fall a lot. His calves may appear enlarged or overdeveloped (called pseudohypertrophy). This happens because the calf muscle is replaced by other tissues (fat and fibrous).

Transitional phase (6–12 years) - During this time, your student will typically have trouble walking because his quadriceps (muscles in the front of the thighs) have grown weaker. This causes him to be off-balance as he attempts to shift his weight and walk. He may walk on the balls of his feet or on his toes with a slight rolling gait.

Loss of ambulation (8–14 years) - By about 12 years old, most boys with DMD need a wheelchair. Your student's weakened muscles will cause him to tire easily. The teen years bring a continuous progression of weakness. After loss of ambulation, this progression becomes more apparent. Activities involving the arms, legs, or trunk of the body will require assistance or mechanical support. Most young men will retain the use of their fingers through this phase, so they can generally still write and use a computer.

Adult stage (15+ years) - In the teen years, life-threatening heart and respiratory conditions become more prevalent. Major symptoms of heart and lung complications include shortness of breath, fluid in the lungs and swelling in the feet and lower legs (fluid retention due to congestive heart failure). Young men with DMD usually pass away due to these types of complications before their third decade of life.

Adjustments
Classroom Management
Young men with DMD often experience learning problems. Most learning problems are related to the amount of information your student can effectively process at one time, particularly verbal instructions. For elementary-school students, it’s important to speak clearly and concisely and repeat the information to ensure he grasped it. Problems with planning and organization have also been documented. Some learning problems do not get worse, and young men often overcome them as they get older. In fact, students with DMD have above-
average intelligence. Their visual skills and creativity are excellent, which is perhaps why many are good artists.

Many boys with DMD experience emotional or behavioral problems. Specifically, they may have difficulty controlling their response to frustration and may become easily angered, irritable or aggressive. They may also be impulsive and act without thinking. Some children with DMD may experience feelings of depression, anxiety and loneliness. Other emotional issues arise from the understandable stress that a fatal, independence-robbed disorder puts on a child and his family. As a teacher, you can help him adjust by being supportive, understanding and consistent with your words and actions.

A conversation with your student’s parents will help you gain a better understanding of his current level of ability and particular needs. Confidentiality is of great concern for many parents of children with Duchenne muscular dystrophy, and of course the respect for individual dignity and privacy must always be maintained.

Language and Learning Profiles
Speech Pathology Department, Montrose Access

"Note: Not all children present with these difficulties. Each child needs to be assessed individually."

Language Skills

- Parents report delayed development of early speech and language milestones - perhaps an indicator that cognitive deficits are more likely to affect verbal skills.
- Nature of specific language difficulties has not been reported in detail.
- Difficulty attending to and understanding complex verbal information (e.g., Sequences of instructions, and complex language concepts).
- Delayed play skills. Limited symbolic and imaginative play.
- Tend to latch on to the content words in a sentence, rather than understand the true meaning of a sentence.
- Difficulty understanding and using questions.
- Concrete thinkers who take utterances literally.
- Difficulty understanding that many words may have multiple meanings.
- Difficulty producing grammatical sentences using age appropriate vocabulary.
- Difficulties recalling, analysing and interpreting information in stories. Boys with DMD will recall a few discrete story details, but have difficulty producing a cohesive recount.

Literacy

- Delayed acquisition of skills required for reading and spelling.
- Difficulties processing and analysing sequences of speech sounds (phonemes) ⇒ phonological processing difficulties.
- Difficulties with sound – letter association.
- Limited strategies to read/spell unfamiliar words due to difficulties with phonological processing.
- Use whole word or visual approach to reading/spelling acquisition.

Memory

- Difficulty attending to, processing, retaining and recalling information presented sequentially (verbal and non-verbal material).
- Greater impact of these difficulties in verbal situations.

Attention / Concentration

- Easily distracted by auditory and visual stimuli.
- Poor organisational skills - flit from one activity to another without completing the task.
- Enjoy routines.
- Difficulties regulating attention (both focusing attention and "letting go" of attention).
Social Skills (Pragmatics)
- Social competence is a significant component in successful integration.
- Boys with DMD appear immature and have difficulties understanding complex social situations and interacting with peers.
- These problems are due to difficulties with:
  - Non-verbal behaviour (eg. Facial expressions and gestures)
  - Turn taking
  - Perception of the situation
  - Conversational skills (eg. Introducing and maintaining a topic)
  - Greetings and interruptions

Feeding
- Muscle weakness may lead to chewing and swallowing difficulties, mainly in late teenage years and beyond.

Speech
- Delayed development of speech sounds.
- Difficulties in this area depend upon the extent of DMD and whether the muscles of the tongue and face are involved. Sometimes affects children in late teenage years and beyond.
- Speech may be slurred or difficult to understand.
- Often have large tongue.

Teaching Strategies
Classroom accommodations and adaptive equipment can help maximize your student’s physical capabilities. While some depend on the student’s age and the progression of his symptoms, here are some practical solutions for all ages:

- Supportive seating: a sturdy chair with arms to support upright posture and getting up successfully (similar to the needs of an elderly person)
- Raised desktop: height should accommodate the height of the supportive chair
- Special pencil grips: to help control writing
- Note-taking: allow more time, use of a tape recorder or computer
- Access: allow extra time between classes or assign a buddy to help carry heavy books and supplies

Hints for Working with Boys With DMD
- Repeat information frequently.
- Check that instructions have been understood.
- Use visual information to supplement verbal information, for example gestures, pictures and other contextual cues.
- If possible, teach new information/tasks in quiet environments with limited distractions.
- Attract the child’s attention and maintain eye contact when giving information.
- Encourage interests and areas of strength, especially activities that do not involve a lot of complex language.
- Talk about ‘here and now’ events.
- Take turns talking and listening.
- Label new objects and repeat new words frequently.
- Explain or demonstrate the meaning of new words or concepts.
- Copy what is said, expanding the utterance and correcting any grammatical or speech sound errors.
- Encourage use of questions.
- Encourage discussions about feelings, rules, and situations the child may face and his reaction to them.
- Emphasize phonological awareness skills by identifying sounds at beginning and end of words and blending sounds together.
- Emphasize sound – letter associations
Links

Refer also to:

Teachers Guide to DMD

Sources of Information

MontroseAccess

(Formally The Queensland Society for Crippled Children – established 1933)
54 Consort Street Corinda Qld 4075
www.montrose.org.au

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Dyscalculia

Definition
Dyscalculia refers to a wide range of learning differences involving math skills. There is no single form of dyscalculia - difficulties can vary from person to person and can change throughout a lifetime. Like all learning disabilities, dyscalculia is a life-long challenge.

Two major areas of weakness that are responsible for learning difficulties in math are:

- **Visual-spatial difficulties** - which result in a person having trouble processing what the eye sees
- **Language processing difficulty** - which result in a person having trouble processing and making sense of what the ear hears

Features
Dyscalculia is estimated to occur in up to 3% of the population. Simply performing poorly in maths does not necessarily mean that a student has dyscalculia.

Discalculia is rarely identified early. studies have been done to try to identify predictors of potential mathematical disability. The main predictors in **early childhood** include:

- Difficulty learning to count - lacking effective counting strategies
- Trouble recognizing printed numbers
- Difficulty tying together the idea of a number (4) and how it exists in the world (4 horses, 4 cars, 4 children)
- Poor memory for numbers
- Trouble organizing things in a logical way - putting round objects in one place and square ones in another
- Not knowing which of two digits is larger, i.e. understanding the meaning of numbers
- Inability to add simple single-digit numbers mentally and

School-age Children

- Poor mathematical concept development
- Lack of understanding of mathematical terms
- Confusion over printed symbols and signs
- Difficulty solving basic maths problems using addition, subtraction, multiplication and division
- Poor memory of number facts (i.e. times tables)
- Trouble in applying their knowledge and skills to solve maths problems
- Weakness in visual-spatial skills, where a person may understand the required maths facts, but has difficulty putting them down on paper in an organized way
- Frequent reversal of single figures and reversal of tens and units (e.g. 34 written as 43)
• Difficulty in reading text compound the student’s problem in maths

Adolescents & Adults

If basic maths facts are not mastered, many adolescents and adults with dyscalculia may have difficulty moving on to more advanced maths applications. Language processing disabilities can make it difficult for a person to grasp the vocabulary of maths. Without a clear understanding of the vocabulary, it is difficult to build on maths knowledge.

Success in more advanced maths procedures requires the ability to follow multi-step procedures. For individuals with learning disabilities, it may be difficult to visualize patterns, different parts of a maths problem or identify critical information needed to solve equations and more complex problems.
Implications of the symptoms of dyscalculia include:

Normal or accelerated language acquisition: verbal, reading, writing. Poetic ability. Good visual memory for the printed word. Good in the areas of science (until a level requiring higher math skills is reached), geometry (figures with logic not formulas), and creative arts.

Mistaken recollection of names. Poor name/face retrieval. Substitute names beginning with same letter.

Difficulty with the abstract concepts of time and direction. Inability to recall schedules, and sequences of past or future events. Unable to keep track of time. May be chronically late.

Inconsistent results in addition, subtraction, multiplication and division. Poor mental math ability. Poor with money and credit. Cannot do financial planning or budgeting. Cheque books not balanced. Short term, not long term financial thinking. Fails to see big financial picture. May have fear of money and cash transactions. May be unable to mentally figure change due back, the amounts to pay for tips, taxes, etc.

When writing, reading and recalling numbers, these common mistakes are made: number additions, substitutions, transpositions, omissions, and reversals.

Inability to grasp and remember math concepts, rules, formulas, sequence (order of operations), and basic addition, subtraction, multiplication and division facts. Poor long-term memory (retention & retrieval) of concept mastery- may be able to perform math operations one day, but draw a blank the next! May be able to do book work but fails all tests and quizzes.

May be unable to comprehend or "picture" mechanical processes. Lack "big picture/whole picture" thinking. Poor ability to "visualize or picture" the location of the numbers on the face of a clock, the geographical locations of states, countries, oceans, streets, etc.

Poor memory for the "layout" of things. Gets lost or disoriented easily. May have a poor sense of direction, loose things often, and seem absent minded.

May have difficulty grasping concepts of formal music education. Difficulty sight-reading music, learning fingering to play an instrument, etc.

May have poor athletic coordination, difficulty keeping up with rapidly changing physical directions like in aerobic, dance, and exercise classes. Difficulty remembering dance step sequences, rules for playing sports.

Difficulty keeping score during games, or difficulty remembering how to keep score in games, like bowling, etc. Often looses track of whose turn it is during games, like cards and board games. Limited strategic planning ability for games, like chess.
Adjustments

Classroom Management

Helping students recognise their strengths and weaknesses is the first step in supporting students with dyscalculia.

An evaluation is required to gain an understanding of the student’s full range of math-related skills and behaviours. The establishment of how a student understands and uses numbers and math concepts to solve advanced level, as well as everyday, problems is a starting point. The evaluation compares the student’s expected and actual levels of skill and understanding while noting their specific strengths and weaknesses. Below are some of the areas that may be addressed:

- Ability with basic math skills like counting, adding, subtracting, multiplying and dividing
- Ability to predict appropriate procedures based on understanding patterns — knowing when to add, subtract, multiply, divide or do more advanced computations
- Ability to organize objects in a logical way
- Ability to measure — telling time, using money
- Ability to estimate number quantities
- Ability to self-check work and find alternate ways to solve problems.

Following identification, parents, teachers and other educators can work together to target an intervention and establish strategies that will help the student learn maths more effectively. Additional tutoring outside the classroom enables students to achieve mastery in areas of weakness before moving on to new topics. Drill-type interventions such as repeated reinforcement and specific practice target verbal memory and can make understanding easier.

Teaching Strategies

- Use graph paper for students who have difficulty organizing ideas on paper
- Work on finding different ways to approach math facts; i.e., instead of just memorizing the multiplication tables, explain that $8 \times 2 = 16$, so if 16 is doubled, $8 \times 4$ must = 32
- Practice estimating as a way to begin solving math problems
- Introduce new skills beginning with concrete examples and later moving to more abstract applications
- For language difficulties, explain ideas and problems clearly and encourage students to ask questions as they work
- Provide a place to work with few distractions and have pencils, erasers and other tools on hand as needed.
- Consider use of technology and computer aided instruction to motivate students
- Encourage use of a calculator as a compensatory strategy

Links

Sources of Information

http://www.dyscalculia.org/

http://www.ldonline.org/article/13709

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**Dyslexia**

**Definition**

“Dys” means something that is poor or inadequate. “Lexia” refers to verbal language. Dyslexia refers to language difficulties.

There are hundreds and possibly thousands of definitions of dyslexia. A serious and complete definition was adopted by the Orton Dyslexia society, renamed The International Dyslexia Association, an organization devoted to supporting people with dyslexia. This organization states:

Dyslexia is a neurologically based, often familial disorder which interferes with the acquisition and processing of language. Varying in degrees of severity, it is manifested by difficulties in receptive and expressive language, including phonological processing, in reading, writing, spelling, handwriting, and sometimes in arithmetic.

Dyslexia is not a result of lack of motivation, sensory impairment, inadequate instructional or environmental opportunities, or other limiting conditions, but may occur together with these conditions. Although dyslexia is lifelong, individuals with dyslexia frequently respond successfully to timely and appropriate intervention.

**Features**

Three categories of Dyslexia:

- Visually based problem
- Auditorily based problem
- A problem which stems from a combination of both visual and auditory causes

Dyslexia affects a person’s ability to deal with language, including spoken language as well as written. A person with dyslexia can have difficulty understanding, remembering, organizing and using verbal symbols. Because of this, many basic skills can be affected, especially reading and writing, spelling, handwriting, and arithmetic. There is no one "dyslexic" profile, no one standard set of characteristics. Instead, some students have speech articulation problems and halting verbal expression, while others speak fluently. Some experience eye-hand coordination immaturity, while others are able to assemble intricate puzzles and designs. Some seem to be in a world of their own, while others listen attentively and are very aware of social cues. Some cannot decode the simplest word, while others can read almost anything but have trouble comprehending what they read. Some reverse letters in reading and writing, whereas others do not. In addition, other issues can occur concurrently with dyslexia such as ADD or ADHD, and people do not outgrow it.
Adjustments

Classroom Management

Developing IT Skills
- Allow use of voice input, assistive technology if required

Completing Work
- Shorten the task
- Break the task into a series of steps, set time-lines and check each step on the due date
- Modify the task

Marking Work
- Expect high level intellectual content and reasonable written response
- Advise students on how tasks will be marked. Where spelling/ punctuation is part of the marking structure, give opportunity to draft and edit
- Mark content, effort, presentation separately
- Comment on the positives and provide constructive feedback for improvement
- Ignore spelling mistakes; students with dyslexia are likely to have spent hours trying to improve their spelling
- If the assignment isn’t finished, mark what has been done

Building Confidence and Self-Esteem
- Reward effort
- Show appreciation
- Acknowledge frustrations, celebrate even small successes
- Capitalise on special interests and talents
- Provide opportunities to shine
- Help students set manageable goals and work out strategies to attain them
- Include student in decision making

Accommodating Difficulties with Reading, Note-Taking and Completing Assignments
- Provide photocopied notes: teacher’s or another student’s: students with dyslexia can’t listen and write at the same time, neither can they copy from the board efficiently
- Provide resources at student’s reading level
- Give extended/unlimited time for tests
- Reduce amount of reading, teach short cuts: students with dyslexia read slowly and are always under pressure of time
- Don’t ask a student with dyslexia to read aloud if reluctant
- Encourage response in point form, on spider map, oral presentation or tape
• Provide a scribe when possible so student can concentrate on their ideas, let them dictate into dictaphone, cassette
• Provide genre structures and model how to use them eg for narrative, science report, newspaper article etc
• Brainstorm vocabulary and write on the board
• Provide topic sentences for paragraphs
• Encourage the use of a word processor, assistive technology

Teaching Strategies

Intention:
• Students need to have a reason to remember
• Establish an expectation to remember

Support:
• Give student time if struggling
• Provide scaffolding/cues
• Divide learning task into small, achievable steps
• Teach each step explicitly
• Make sure one step is learned before moving to the next

Teach Memory Strategies:
• **Rehearsal / repetition** - simple recitation is useful for learning facts eg multiplication tables, lists (items at the beginning & end of a list are most likely to be recalled so have several short lists rather than one long one)
• **Narrative chaining** - relate information to a theme or make up a story incorporating the information
• **Chunking** - group information into sub-units eg the phone number 82164532 (8 bits) might be reduced to 3 bits (821 645 32); the word-ending e d (2 bits) could be reduced to ed (1 bit)
• **Mental visualisation** - create a mental picture of the content to be remembered eg details of a story; a process, directions. Close your eyes. Can you see it inside your eyes? For some students this may be difficult and require guided practice
• **Mnemonics** - talk about the memory 'tricks' you use eg
  - To remember the spelling of stationary/stationery: cars for stationary, stationery paper
  - Make up a sentence using the letters of a word eg because- big elephants can always understand small elephants
  - Make up a sentence with the order of the points of the compass: Never Eat Soggy Weetbix
  - Rhymes eg Thirty days has September, April, June and ....
  - Practice - students with memory difficulties may know something one day and have forgotten it the next
• Provide many opportunities for practice
• Consider also the value of computer programs with their immediate feedback, infinite patience, potential for variety

• Review previous learning regularly e.g. spellings, maths concepts, routines

• Memory Aids

• Encourage the use of diaries, illustrations, charts, calendars, graphs, cue cards, concept maps, notes, flash cards, summaries, post-it stickers with reminders, copy of daily/weekly timetable, checklist of tasks to complete, calculator, multiplication tables chart, card with correct letter formation, indexed book with often mis-spelt words, business size cards with address/important telephone numbers etc

Metamemory - knowing how to remember:

• Ask student: How are you going to remember this information?

• Model strategies they might use

• Students choose their preferred strategy and talk themselves through the task

• Give constructive feedback

Links

Sources of Information

SPELD NEWS VOLUME 35 NO 3 August 2003
What Can I Do To Help The Secondary Students With Dyslexia Whom I Teach?

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Dyspraxia

Definition
Dyspraxia describes a disruption of the abilities to perform a sequenced movement following demonstration or oral request.

Developmental Dyspraxia is a motor planning disability, which is present from birth. It is an impairment or immaturity of the organization of movement. This affects the way in which the brain processes information, resulting in messages not being properly or fully transmitted. In other words a child knows what he wants but can’t get his body to do it!

Features
There are several different types of apraxia/dyspraxia which may be diagnosed by experienced medical and/or therapeutic disciplines, and which may affect gross motor, fine motor and/or oral motor functioning.

Oral Dyspraxia
Difficulty in planning and executing non-speech sounds, such as blowing, sucking or individual tongue/lip movements. This may indirectly affect speech and/or swallowing skills.

Verbal Dyspraxia
Knows what they want to say but is unable to organise the lips, tongue, palate and vocal cords for the voluntary production of speech i.e. they have difficulty initiating sounds and sequencing these sounds into words.

Motor Dyspraxia
May not know what they want to do and will appear clumsy and disorganised. They find it hard to plan and organise the body movements needed to carry out age appropriate motor skills in a smooth co-ordinated manner eg skipping, riding a bike, tying shoe laces, writing (fine motor skills).

Dyspraxia and Other Developmental Difficulties
Though not always, dyspraxia often co-exists with other learning disabilities, such as dyslexia (difficulty reading, writing and spelling) and dyscalculia (difficulty with mathematics); as well as AD/HD (Attention-Deficit/Hyperactivity Disorder). The symptoms from these learning disabilities can be similar to those of a person with dyspraxia; and regardless of whether there is an overlap in disabilities, the severity and range of difficulties can vary widely.

Other common difficulties facing people with dyspraxia may include:

- Low self-esteem, depression, mental health problems and emotional and behavioral difficulties
- Weaknesses in comprehension, information processing and listening
- Difficulty developing social skills, and trouble getting along with peers
- Though they are intelligent, children with dyspraxia may seem immature and some may develop phobias and obsessive behavior
• Frustration - all young people must deal with their rapidly changing bodies. However many young people with dyspraxia may also have the added stress of dealing with coordination problems, as well as speech and academic difficulties.

• Coordination difficulties can be particularly problematic in physical education classes and other sports activities

• Speech difficulties can interfere with casual conversation, which can result in social awkwardness and an unwillingness to risk engaging in conversation.

• Writing difficulties such as poor letter formation, pencil grip and slow writing can make school work frustrating

The challenges presented to adolescents and adults with dyspraxia can be seen in all aspects of everyday life. Difficulties can have an impact on:

• Driving
• Completing household chores
• Cooking
• Personal grooming and self-help activities
• Manual dexterity needed for writing and typing
• Speech control — volume, pitch and articulation
• Perception inconsistencies — over- or under-sensitivity to light, touch, space, taste, smell

Adjustments

Classroom Management

Children with Dyspraxia appear outwardly like all other children yet this hidden disability can lead to severe educational, behavioural and social problems for the child. Classroom management and strategies would be designed on an individual basis in response to the specific and unique needs of the student.

Speech Pathologists would provide input and advice on Oral and Verbal Dyspraxia.

Occupational Therapists would provide input and advice on Motor Dyspraxia.

Teaching Strategies

There is no cure for dyspraxia; however early intervention can help a person learn to deal with his or her difficulties. Depending on the severity of the disability, work with occupational, speech and physical therapists can greatly improve a person's ability to function and succeed independently.

Beginning at an early age, it is vital that parents offer their child patience and encouragement. It can be very frustrating to have difficulty communicating or moving, and a parent can ease that frustration by offering help and support in overcoming these difficulties.

All people with dyspraxia need help practicing simple tasks and can benefit from step-by-step progress into more complex activities. Encouraging easy physical activities that develop coordination can increase confidence. It is also important to encourage friendships to broaden a person's experience and understanding of social relationships.
Links

www.dyspraxia.org.nz (contains information aimed specifically at young children)

Sources of Information

Australian Dyspraxia Support Group & Resource Centre
PO Box 5519
South Windsor NSW 2756
Phone: (02) 45 776220

Email: information@dyspraxia.com.au
www.dyspraxia.com.au

Queensland Dyspraxia Parent Support Group
Tel: 07 326 68701

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Epilepsy

Definition
Epilepsy is a tendency to have recurring seizures. A seizure occurs when there is a discharge of excessive electrical activity in the brain. Our brain usually receives and sends messages in the form of electrical impulses; a seizure happens when there has been a surge of electrical impulses in a part of the brain and this causes erratic uncontrolled electrical discharges.

Epilepsy is common, affecting one person in every 100. About 50% of people have their first seizure before 12 years of age.

Epilepsy is
- NOT a disease
- NOT something which means that you are crazy or strange
- NOT an intellectual disability and does not affect intelligence
- NOT a mental illness
- NOT a single syndrome with just one cause
- NOT necessarily convulsions
- NOT just one seizure
- NOT a condition requiring others to be over-protective and unnecessarily restrict the activities of the person with epilepsy

Causes
In about 50% of cases there is NO known cause; of the other 50% the following are most frequently identified:
- Injury at birth
- Not enough oxygen going to the brain
- Brain tumour
- Head injury
- Congenital malformations
- Certain infectious illness, eg. Meningitis, encephalitis
- Metabolic abnormalities
- Inheritance

Trigger Factors
For some people with epilepsy, their seizures may be triggered by:
- Lack of sleep
- Stress / boredom
- Menstruation
- Alcohol and other drugs
• Infections
• Stopping anti-convulsant medication suddenly

Features

Common Types of Seizures

There are over 20 different types of seizures, but the most common of these are:

Simple partial seizures (also known as an aura)
• Often go undetected as they are subjective
• Person does not lose consciousness
• Person may experience tingling sensation, numbness of the cheek, vomiting, hallucinations, strange smells or tastes,
• Short in duration (usually less than 30 seconds)

Complex partial seizures (also known as temporal lobe or psychomotor seizures)
• Person experiences altered state of consciousness
• Loss of awareness of surroundings - may run in circles, look vacant or not respond to other people
• May be short in duration or may-last several minutes
• Inappropriate movements eg.chewing movements, tug at their clothes or experience deja vu or hallucinations
• Often followed by a period of confusion

Tonic Clonic seizures (also known as grand mal epilepsy)
• Person stiffens and may fall to the ground
• Begins strong jerking movements, shakes
• May bite tongue and produce excessive saliva or breathe noisily
• Skin may turn blue
• May lose control of bladder
• Person loses consciousness
• Usually lasts between two and five minutes
• Upon regaining consciousness, person may be disoriented and confused
• Many people need to sleep for up to an hour or more to fully recover from this type of seizure

Absence seizures (also known as petit mal)
• Sudden brief loss of consciousness
• Like a blank spell; the person stops what they are doing and stares
• Usually last between 5 and 10 seconds
• Usually occur in primary school age children, rarely in adults
• Person may appear to be daydreaming, eyes may drift upwards or flicker to rapid eye-blinking or the head may drop forward
• Activity is resumed immediately at conclusion of seizure
• May occur frequently (sometimes 100 times each day)
• Children may have trouble learning and paying attention in class

Adjustments

Classroom Management

• Teachers require to be fully informed about students seizures, medications and lifestyle restrictions
• Provision of a positive, caring, sensitive attitude encourages supportive responses from both students and adults within the school community. Only disclose private information to other students with the permission of the student with epilepsy
• Careful observations especially of excessive drowsiness or poor concentration may indicate seizure activity or a need for adjustment of dosage or type of medication
• Students with epilepsy are the same as other students in regard discipline and performance expectation unless there is an established learning difficulty
• Areas of caution for students who continue to have seizures:
  o Swimming – requires 1:1 supervision
  o Spring board diving and scuba diving should be avoided
  o Wear a safety helmet when riding a bike, horse etc.
  o Rock Climbing should not be encouraged
• Peer buddy to be around to help student ‘keep up’ if the presence of numerous absence seizures during the day
• Capitalise on the student’s most alert and receptive time of the day

Take care not to overprotect the student nor allow the epilepsy to be used as an avoidance mechanism / excuse!

Teaching Strategies

Possible impacts on learning due to learning differences for students with epilepsy are contained in the accompanying table. Implement appropriate strategies to address differences.

Sources of Information

National Epilepsy Association of Australia
PO Box 554
Lilydale, Victoria 3140

Epilepsy Queensland Inc
Level 2 Gabba Towers
411 Vulture Street Woolloongabba Qld 4102
Tel 07 3435 5000
www.epilepsyqueensland.com.au
Correlation of Brain Hemisphere Functions and Effect of Temporal Lobe Epileptic Focus

<table>
<thead>
<tr>
<th>Left Hemisphere of the Brain</th>
<th>Right Hemisphere of the Brain</th>
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<tbody>
<tr>
<td>Usually dominant</td>
<td>Visual Processing</td>
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<tr>
<td></td>
<td>(including comprehension, memory,</td>
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<td></td>
<td>reasoning and expression of words, phrases,</td>
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<td></td>
<td>spoken-ideas and writing)</td>
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<td></td>
<td>Analysis, noting details, correct</td>
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<td>order, judgements, noting time,</td>
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<td></td>
<td>mathematical calculations</td>
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<tr>
<td><strong>Left Temporal Lobe Focus</strong></td>
<td><strong>Right Temporal Lobe Focus</strong></td>
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<tr>
<td>More common than right</td>
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<td>Often earlier onset than right</td>
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<td>May have difficulties with:</td>
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<td>Language and Verbal Skills</td>
<td>Visual Perception</td>
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<td>and related reasoning and verbal learning processes</td>
<td>both visual/motor and/or visual spatial</td>
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<tr>
<td><strong>Recognizing and remembering what is heard:</strong></td>
<td>Recognizing and remembering shapes, patterns, forms, letters, numbers, mathematical symbols etc.</td>
</tr>
<tr>
<td>rote memory - words, names, rhymes, mathematical tables, telephone numbers, etc. may recall similar but incorrect words/numbers resulting in confusion</td>
<td><strong>Reading and practical skills</strong></td>
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<tr>
<td><strong>Reading and Spelling:</strong> phonetic approaches may be difficult</td>
<td><strong>Motor co-ordination</strong></td>
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<tr>
<td>Speech</td>
<td>may be 'clumsy', have difficulty with right/left differentiation</td>
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<td></td>
<td>Handwriting may be poor</td>
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<td>Mathematics</td>
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Bilateral (both sides) Temporal Lobe Foci

If the same onset of seizures occurs before the child is five (5) years old with seizure activity in both temporal lobes, the child is at a greater risk of experiencing a combination of both auditory to verbal and visual to motor processing difficulties. Difficulty with memory is more likely.
FIRST AID FOR EPILEPSY

WHAT TO DO

STAY CALM

- The person is not in pain
- The tongue cannot be swallowed
- Do not place anything in the mouth
- Do not force the jaws apart
- Do not apply CPR.

FOR SAFETY

- Do not try to restrain the person’s movements
- Protect the person from obvious injury
- Clear the area of harmful objects
- Place something soft under head and shoulders

FOR RECOVERY

- When the seizure has finished, roll the person onto their side to keep the airway clear
- Recovery Position (see below)
- Loosen tight clothing
- After a seizure the person may be confused; stay with them, protect and reassure the person and explain what has happened

TIME THE SEIZURE

Teacher observations before, during and after a seizure will assist in providing families and medical specialists with valuable information if the incident is leading up to an initial diagnosis

Call an ambulance:

- if the active or jerking movements of the seizure lasts more than five minutes
- if another seizure quickly follows or
- if the person has been injured.
Executive Functioning

Definition
The concept is used by psychologists and neuroscientists to describe a loosely defined collection of brain processes which are responsible for planning, cognitive flexibility, abstract thinking, rule acquisition, initiating appropriate actions and inhibiting inappropriate actions, and selecting relevant sensory information.

Executive functions are the higher-level cognitive skills (or thinking skills) that can play an important role in a person's school, academic or work performance. These higher-level skills are required for conscious control of thought, emotion and action that are central to the management of one's day to day functioning. Our executive functions help us to be organised, pay attention and concentrate, complete tasks and activities in a timely fashion, use our memory, control and manage our emotions, and be generally self-aware.

Features
People with executive functioning problems experience difficulty with planning, organizing and managing time and space. They also show weakness with working memory. They do not perform the following tasks intuitively.

- Estimating and visualizing outcomes
- Analyzing sights, sounds, and physical sensory information
- Perceiving and estimating time, distance, and force
- Anticipating consequences
- Mentally evaluating possible outcomes of different problem-solving strategies
- Choosing the most appropriate action
- Performing tasks necessary to carry out decisions

In people without executive functioning problems, the brain performs these tasks quickly in the subconscious, often without their awareness. In a sense, executive functioning is almost like instinct.

Some signs to look for in identifying students with executive functioning problems:

- Difficulty planning and completing projects
- Problems understanding how long a project will take to complete
- Struggling with telling a story in the right sequence with important details and minimal irrelevant details
- Trouble communicating details in an organized, sequential manner
- Problems initiating activities or tasks, or generating ideas independently
- Difficulty retaining information while doing something with it such as remembering a phone number while dialing
Adjustments

Classroom Management

As with all interventions, it is important to respond to the unique characteristics of individual students, so plan and implement strategies accordingly. Sometimes it takes trial and error to find strategies that work for the individual student. If the person is not helped with the strategy or is making no progress after a reasonable amount of time, look for a better way. Older children and adults may be able to help identify more effective strategies or ways to adjust strategies for more effectiveness. One of the most important things to remember about executive functioning disorders is that this is as much of a disorder as any other. Although it is an invisible disability, it can have a profound effect on all aspects of a person's life.

Teaching Strategies

The following strategies may be useful in training young people with Executive Functioning difficulties to manage and cope with their schooling more effectively:

- Give clear step-by-step instructions with visual organizational aids. Children with executive functioning disorders may not make logical leaps to know what to do. Be as explicit as possible with instructions. Adjust your level of detail based on the student’s success.
- Use planners, organizers, computers, or timers.
- Provide visual schedules and review them at least every morning, after lunch, and in the afternoon. Review more frequently for people who need those reminders.
- Pair written directions with spoken instructions and visual models whenever possible.
- If possible, use a daily routine.
- Create checklists and “to do” lists.
- Use positive reinforcement to help kids stay on task.
- Break long assignments into smaller tasks and assign mini-timelines for completion of each. If children become overwhelmed with lists of tasks, share only a few at a time.
- Use visual calendars or wall planners at to keep track of long term assignments, deadlines, and activities.
- Older students may find time management planners or software such as the Microsoft Outlook calendar and task lists, or Personal organisers helpful. If possible, try before you buy to ensure effectiveness.
- Organize the work space, and minimize clutter on a weekly basis.
- Consider having separate work areas with complete sets of supplies for different activities. This reduces time lost while searching around for the right materials for a task.
- Try to keep your strategies consistent across classrooms, at home, or in the workplace. People with executive functioning disorders are more likely to do well when their routines are similar in different settings.
- Encourage students to understand their own learning profile and their strengths and weaknesses as well as which strategies work for them; help students become metacognitive learners who can understand how they learn.”
- Memorization—When using acronyms to help students memorize information, the “crazier the phrase,” the better. If a student is non-verbal, then make a cartoon.
- Cognitive Flexibility—To help students improve cognitive flexibility, work with riddles and jokes to help students shift between word meanings. In math, students can ask themselves: do I know another way to solve this problem, does this look similar to other problems I have seen, is this problem the same or different from the one before it?
• Prioritizing—To help students prioritize information, teach students to listen to the teacher’s intonation during lectures. Also, students can highlight the most important ideas in a text in one color and details in another color.

• Notetaking—To help students prioritize and remember information students can take 3-column notes: the first column contains one word that is the core concept, the second column contains the details supporting the concept, the third column contains the strategy the student will use to remember the information. When taking notes from text, students can use a 2-column approach. In the first column, students ask themselves questions about the text, and they put the answers in the second column.

• Self-Monitoring and Self-Checking—Helping students check their work requires two processes: 1) Provide explicit checklists for assignments, so students know what to check for, and 2) Help students develop personalized checklists, so they become aware of and check for their most common errors. As a final step, students can make their own acronyms to remind themselves of their personal error traps.

Links
http://www.schoolbehavior.com/conditions_edf.htm

Sources of Information
http://learningdisabilities.about.com/od/eh/a/executive_funct.htm
http://www.bridges4kids.org/articles/8-08/CEC8-08.html
http://en.wikipedia.org/wiki/Executive_functions

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Expressive Language Disorder

Definition

Expressive language disorder refers to a child's ability to express themselves and get their meaning across through either speaking or writing. Children with expressive language disorders often present with difficulties using words to express meaning such as putting words together, limited vocabulary and word finding difficulties.

Language can either be delayed or disordered or a combination of the two. These categories can overlap and it can be difficult to differentiate between the two.

- Delayed – is when a child is slow to develop language but the usual sequence, or pattern of development is typical to that of same aged peers.
- Disordered – is when language is slow to develop and the sequence of development and pattern of grammatical errors is different to that of typically aged peers.

Features

Symptoms differ from one child to the next and depend on the child’s age and the severity of the disorder. Symptoms can include:

- Frequently having trouble finding the right word
- Having a limited and basic vocabulary
- Using non-specific vocabulary such as ‘this’ or ‘thing’
- Using the wrong words in sentences or confusing meaning in sentences
- Making grammatical mistakes, leaving off words (such as helper verbs) and using poor sentence structure
- Relying on short, simple sentence construction
- Using noticeably less words and sentences than children of a similar age
- Relying on stock standard phrases and limited content in speech
- Repeating (or ‘echoing’) a speaker’s utterance
- Inability to ‘come to the point’ or talking in circles
- Problems with retelling a story or relaying information
- Inability to start or hold a conversation
- Difficulty with oral and written work and school assignments in older children

Students with Expressive language disorder will display the following symptoms:

- Poor sentence or grammatical structure
- Limited content in their speech
- Confused meaning and grammar
- Generally use short simple sentences
- Have difficulty coming to the point
• Have problems initiating conversation or participating in conversations
• May have difficulties recalling or retelling information
• Difficulty completing oral and written narratives and/or assignments
• May have trouble finding the right words

Adjustments

Classroom Management

Expressive language disorders are most often diagnosed in the early years and the child would have been working one-on-one with a speech therapist on a regular schedule practicing speech and communication skills. The child's parents and early years teachers would also have worked together to incorporate spoken language that the child needs into everyday activities and play.

Given this effective intervention, most children develop same-age language skills by high school. In some cases, as with acquired types of expressive language disorder, the implication depends on the nature and location of the brain injury. In this instance an ongoing supportive, language rich environment, in which students receive encouragement and time to communicate their needs, opinions etc., will be required.

A consistent approach is vital in order for students to achieve success. Communication between home and school is important. It is important that there is consistency between approaches used and home and at school; after all, both parents and teachers share the goals for students.

Teaching Strategies

The following list of strategies will help in responding to students with language support needs.

• Provide ample opportunities for the child to practice effective listening behaviors. You can do this by making sure the child understands the goals. For instance, before you give the instructions, let the student know that he will be responsible for repeating them.
• Each time the student is reading, provide opportunities for him/her to predict outcomes or why the character acted in that way.
• Chunk information into small pieces at a time, use headings when possible.
• Make frequent eye contact and focus the student by using close proximity or a touch on the shoulder, this often helps to engage the student.
• Clarify and demonstrate organizational strategies that will assist the student.
• Teach the student how to use effective organizers like agendas and to do lists.
• Whenever possible, ask the student to re-tell stories and re-state directions and instructions.
• Provide reading materials that are matched to the child's interest and ability level.
• ALWAYS present information in short, simple sentences and repeat them often or present information both orally and in writing.
• Encourage the student to seek clarification when uncertain.

Be sure to provide a variety of listening opportunities for students that have follow up activities.

Links

Refer also to: Communication Difficulties, Receptive Language Disorder, Pragmatic Language Disorder, Word Finding Difficulties
Sources of Information


http://learningdisabilities.about.com/od/learningdisabilitybasics/p/exprslangdisrdr.htm

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Foetal Alcohol Syndrome

Definition

Foetal Alcohol Syndrome (FAS), Foetal Alcohol Effects (FAE), Alcohol Related Neurodevelopmental Disorders (ARND) and Alcohol Related Birth Defects (ARBD) are all names for a spectrum of disorders that potentially result from pregnant women consuming alcohol.

Alcohol is a teratogen, ie an environmental agent that causes malformation of the embryo and the developing foetus. The effects of teratogens can cause functional deficits in individuals. Alcohol's teratogenic effects on the developing foetus causes FAS/FAE/ARND/ARBD. The brain and the central nervous system of the unborn child are particularly sensitive to prenatal alcohol exposure and this can lead to long-term developmental disabilities.

There are several things which define FAS:

- Changes in appearance such as small eyes and flat lips
- Problems with growth resulting in a smaller baby
- Brain involvement resulting in poor learning ability, incoordination and even aggressiveness

Features

An individual with FAS can struggle in many areas of life without adequate support. Other than their difference in appearance, they may experience a range of difficulties including:

- Low IQ (around 70 – an IQ of 100 is considered average)
- Developmental delays
- Behaviour problems – antisocial behaviour and aggressiveness
- Learning and attentional difficulties
- Memory problems
- Increased risk of behaviour problems – for example; Attention Deficit Hyperactivity Disorder
- Increased risk of mental health difficulties such as depression and psychosis
- Increased risk of alcohol and drug misuse

Primary Characteristics in Young Children:

- Impulsive, unpredictable and mischievous, creating ongoing safety hazards, e.g. Setting fires and running away
- Uneven sleep patterns
- Innately skilled in manipulative tactics
- Desperate for stimulation and excitement to keep them happy
- Emotionally volatile and often exhibit wide mood swings during the day
- Often disconnected from their own feelings and are unable to identify or express logical reasons behind their volatile outbursts or behaviour
• Void of natural empathy for others
• Often isolated and lonely because the desire to be included remains intact while the reasoning skill to figure out why they are excluded is lacking
• May struggle to master basic skills in literacy and numeracy, money concepts and time
• Deficits in memory, reasoning and judgement

Primary Characteristics in Adolescents:
• Still in need of limits and protection because of their deficits in reasoning, judgement and memory
• At high risk of being drawn into anti-social behaviour such as lying, stealing and addiction to legal and illegal drugs
• Unable to easily distinguish between friends and enemies
• Often obsessed by primal impulses such as sexual activity and fire setting
• Able to recover from emotional crises very quickly
• Judgement and reasoning skills seriously impaired
• Safety menace to themselves and others
• Unaware or negligent of normal hygiene responsibilities
• Extremely vulnerable to suggestions in movies, videos, advertisements
• Unable, not unwilling to take responsibility for their actions
• Volatility - rage and strong emotions

Adjustments

Classroom Management
Manage as per symptoms and associated problems.

Teaching Strategies
Implement strategies in response to the individual needs of the young person. Effective strategies for managing the behavioural and emotional responses could include:
• Inform students what is expected from them
• Establish a positive learning environment
• Provide meaningful learning experiences
• Avoid threats
• Demonstrate fairness and be consistent
• Build and exhibit self-confidence
• Recognise positive student attributes
• Use positive modelling
• Structure the curriculum and classroom environment so that student can achieve success

Links
http://www.healthinsite.gov.au/topics/Foetal_Alcohol_Syndrome
Sources of Information
Foetal Alcohol Syndrome Fact Sheet
National Organisation for Foetal Alcohol Syndrome And Related Disorders (NOFASARD)

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Fragile X Syndrome

Definition
Fragile X Syndrome (FXS) is caused by a mutation on the 'X' chromosome. A gene near the end of the 'X' chromosome normally contains between 6 and 50 repeats of the genetic code CGG. In FXS the number of CGG repeats increase. 50 to 200 repeats is a FXS premutation and over 200 CGG repeats is a full mutation of FXS. The FMRP (protein) important to brain development turns off.

Features

Physical
- Elongated narrow face
- Large or prominent ears
- Epilepsy (including petit mal seizures or 'absences')
- Hypotonia (low muscle tone)

Developmental
- Intellectual disability (80% males; 65% females)
- Speech delay
- Learning disabilities
- Fine and gross motor delays

Behavioural
- Attention deficit
- Autism-like features eg biting, gaze aversion
- Social anxiety
- Speech perseveration and echolalia (repeats)
- Shyness
- Anxiety/hyperarousal
- Sensory defensiveness(aversion to loud noise, touch, strong smells, eye contact)

Adjustments

Classroom Management
Common Academic features:
- Strengths:
  - Learn best visually
  - Whole word, number and pattern recognition
  - Strong imitation skills
  - Functional life skills
Challenges:
- Poor auditory short term memory
- Phonics
- Maths
- Abstract thought
- Sensory overload defensiveness
- Following auditory directions

Teaching Strategies
- Highly structured routines
- Preparations for transitions
- Minimal auditory and visual distractions
- Maximum visual input
- Written and visual timetables
- Manage as for individual issue eg. Attention deficit disorder
- Accommodations for postural control – frequent breaks, movement, adjust chair, desk
- Accommodations for sensory defensiveness

Links
www.fragilex.org.au
http://en.wikipedia.org/wiki/Fragile_X_syndrome

Sources of Information
The Fragile X Association of Australia Inc.
PO Box 109 Manly NSW 1655
Email: support@fragilex.org.au
www.fragilex.org.au
Hearing Impairment

Definition
Hearing loss is measured as the increase in decibels (dB) of a person’s hearing thresholds (the softest sounds which can be detected) relative to normal hearing levels (0 – 20 dB). Thresholds are tested across the frequencies of speech. Hearing loss is described as:

- **Mild** – thresholds between 21dB and 45dB
- **Moderate** – thresholds between 46dB and 65dB
- **Severe** – thresholds between 66dB and 90dB
- **Profound** – thresholds greater than 91dB

Hearing loss is also described according to the site of damage to the auditory system:

- **Conductive hearing loss** - a difficulty with the transmission of sound through the outer ear or middle ear. Sound appears softer to the listener, that is, the quantity of sound is affected. Conductive hearing loss may be temporary or permanent.
- **Sensorineural hearing loss** - a difficulty with the inner ear process in the conversion of sound into electrical signals in the cochlea, or in the transmission of the sound along the auditory nerve to the brain. Sound appears softer to the listener and is likely to be distorted. The quantity and quality of sound are affected. A sensorineural hearing loss is a permanent loss.
- **Mixed hearing loss** - a hearing loss with a conductive component and a sensorineural component. The overall impact of a mixed loss is the sum of the conductive component and the sensorineural component.

Department of Education and Training (DET) Criteria
Verification for the Education Queensland, Education Adjustment Program (EAP) disability category of Hearing Impairment is based on two criteria.

**Criterion 1:** Evidence of a hearing loss greater than 20 dB HL at any one frequency.

**Criterion 2:** The hearing loss must be shown to manifest itself in activity limitation and participation restriction in the school context.

Features
Characteristics that alert you to the possibility of Hearing Impairment in young children:

- Fails to pay attention when spoken to casually or in play setting
- Gives wrong answers to simple questions
- Appears to hear better when watching speaker’s face
- Functioning below academic potential
- Often asks to have words or sentences repeated
- Frequent earaches, colds, upper respiratory infections, tonsillitis, allergies
- Behaviour problems at home and school
• Articulation problems, particularly consonants
• Withdrawn from peers in social settings
• Turning or cocking the head
• Achievement and attention levels higher in small groups

Degrees of Hearing Loss
Acuity of hearing is measured in units called decibels (dB). Zero dB is the point at which people with normal hearing can begin to detect the faintest sounds. Normal conversation is usually carried out at an overall sound level of between 40 and 50dB. Loss of hearing is expressed in terms of the amplification required before the individual can hear each sound. The greater the degree of impairment the less likely it is that the child will develop normal speech and language. Individuals with a hearing loss above 95dB are usually categorised as ‘deaf’ or ‘profoundly deaf’.

Adjustments

Classroom Management
An awareness of the type and features of the hearing loss and the impact it has on the student’s access and participation will determine the management issues. Close collaboration with the Visiting Teacher – Hearing Impairment will be a good source of information on individual specific needs.

Disadvantages for a student listening and communicating:
• Language learning can be delayed
• Difficulty following instructions given orally; misses information
• Listening for long periods is difficult
• Fatigue because of intense concentration needed to listen, especially in background noise
• Increased time necessary to complete tasks
• Listening while performing another task which involves visual attention is difficult

Some behavioural consequences:
• Gives up on listening
• Easily distracted
• Disruptive or passive behaviour
• Easily offended
• Jumps to conclusions

Social and emotional implications:
• Less social confidence
• Greater likelihood of acting out
• High frustration level
• Need for dependence on peers and teachers
• Possibility of withdrawal
• Difficulty adapting to new situations
• Strategies employed to listen better, may appear as inappropriate non-verbal behaviour/communication

Teaching Strategies

Adjustments and adaptive teaching strategies to overcome barriers to participation for a student with Hearing Impairment can include:

Arrange the classroom to enhance communication:
• Give the student with a hearing impairment a clear view of your face
• Seat the student away from environmental noises eg. Air conditioner, fan
• Do not seat student facing bright lights or glare

Give the student with hearing impairment clear input:
• Keep classroom movement/noise to a minimum
• Be sure to have the student’s attention before beginning
• Give instructions in short, sequenced statements
• Make the purpose of the task clear
• Use anticipatory set - find out what the student knows about a topic to begin with, and then build upon that knowledge
• Prepare the student with new vocabulary prior to whole class discussion
• Check the students understanding frequently; ask "what did i say?", "what do you have to do?", etc. Avoid yes/no questions
• Provide the student with written notes of a lesson at the student’s language level.

Enhance the student’s participation in group discussions:
• Seat the students in a circle where possible
• Remind students to speak one at a time
• Pass the fm system from speaker to speaker
• Point to the student who will speak next; give the student with hearing impairment a moment to locate the speaker
• Repeat discussion points made by students not close to, or not visible to the student with a hearing impairment

Enhance input with visual aids frequently:
• Use concrete aids and demonstrations when introducing new concepts
• Model reading and writing processes before expecting the student to do tasks independently
• Use visual frameworks to organise information, for example, charts, tables, semantic maps
• Use role plays to demonstrate appropriate behaviours
• Ohts enable the teacher to write down information while still speaking to the class, so the student is not missing out on valuable lip-reading clues (be aware, however, if head is too far forward when writing, that the student who is endeavouring to lip-read, will not see your face at all)
• Repair communication breakdowns when they occur:
• Repeat the message (perhaps more clearly or from a closer range)
• Rephrase the message varying vocabulary and sentence structure
• Demonstrate or act out the message
• Write down the message or key words

Organise additional support when necessary:
• Have regular contact with Visiting Teacher
• Have regular parent contact
• Organise a school officer/note-taker
• Use a peer note-taker
• Use a peer tutor or a “buddy” system

Be aware of the effort of concentration a student with hearing impairment makes to maintain communication throughout the day.

Make sure input is understood before assuming a student with a hearing impairment has failed or acted inappropriately.

Communication Strategies

The teaching of new speech sounds and language patterns does not in itself ensure carry-over to the child's own spoken language. Carry-over occurs with the teaching of social and communicative uses of those sounds and patterns.

Communication strategies to foster carry-over include:
• Mending meaning - "I'm sorry, I didn't get (or understand) that."
• Requesting repetition - "Tell me that again please."
• Specifying difficulty - "I didn't get what happened to Jim."
• Using ellipsis (seeking completion) - "You and Jim went to see ___?"
• Using questions - "So then what happened?" or "How did Jim like that?" and "What do you think Peter will do about that?" Note: Don't over use questions that can be answered with a simple "yes"
• Modelling and imitation - "Oh! You mean xxx xx xxxx. You tell me that."
• Modelling and reflection of child's utterance - Child: "Pe uh te you hum oh wimme." Adult: Oh yes! Peter said you come home with me!"
• Encouraging continuation: "Really!", "Uh huh!", "Wow!"
• Praising efforts - "My, you said that well! I understood every word!"
• Using directions - "Go to the store and ask Mr Brown for some more chalk, please. Say "Please Mr Brown, may I have some more chalk for our class."
• Using linguistic prompts - "You should use more breath (talk louder)."
• Using non-verbal prompts - holding one's fingers in front of one's mouth to prompt the child to increase the breath stream, or on one's chest to indicate that the child should lower voice pitch, and so on
For students with a unilateral loss:

- Use supporting visual material, avoid just talking
- Face the student when speaking eg. Don't talk to the blackboard
- Don't expect the student to listen and write eg. Listening and looking are interdependent
- Repeat or clarify - time spent 1:1 with the student is valuable
- Check that student has understood instructions
- Allow extra time to complete tasks involving language processing
- Keep background noise to a minimum, particularly near the student's better ear
- Expect student to sit near the teacher with the better ear towards the speaker
- Remember the student has difficulty locating the source of the sound
- Cue the students to enable full participation in discussions eg. Ask students to say their name or raise their hand before commenting
- Establish a signal to indicate that the teacher requires quietness and attention to give instructions

The golden rule of good communication:

Always check WHAT the child has heard rather than whether the child has heard.

**Other Related Difficulties**

**Difficulty Hearing in Background Noise**

*What is the problem?*

Some people have difficulty in conditions that don't trouble listeners with typical hearing.

*Doesn't everyone have difficulty hearing in background noise?*

It is true that everyone has trouble hearing when the background noise is louder than the speech sounds they are trying to listen to.

Sounds like the following can drown out speech:

- Pneumatic drills, heavy construction machinery, tractors, artillery, sanders, grinders, jet engines, rock bands.

This level of background noise is not what is being referred to when someone is described as having difficulty hearing in background noise.

A good way to describe the problem is:

"Difficulty Hearing in Insignificant Levels of Background Noise".

The problem is characterized by listening performances that are degraded at a level of background noise does not interfere with the listening of the average person.

Some types of background noise that cause this trouble are listed below. The average person will often not even notice these sounds, having "tuned them out" automatically:

- A hum of conversation in a room,
- A conversation nearby,
The sound of a fan or air-conditioning unit,

The sound of people moving about,

Someone tapping a pencil on a table

The sounds of birds outside a window

The sounds of an ordinary classroom of normally busy children

Who has this problem?

People who have difficulty hearing in background noise include:

- All who have hearing even slightly outside the normal range
- All who have a hearing loss, even in one ear
- All who have any hearing loss, whether it is sensorineural or conductive
- All who wear one or two hearing aids
- All who have had a cochlear implant
- Some who have central auditory processing difficulties
- Some who have a history of conductive hearing loss but whose hearing is now normal

Is the problem just because they have difficulty hearing anything?

People with profound or severe and moderate hearing losses in both ears have difficulties with hearing clearly even under quiet, nonreverberant conditions. These will experience greatly increased difficulties in background noise. Others have the problem only in background noise.

Does everyone with this problem experience it to the same degree?

No. People vary greatly as to the loudness and type of background noise that they can cope with. Special types of Audiological testing are required to determine the extent of the effect. Even people themselves are not always able to report reliably. They can say what they have heard, and we can check the accuracy of their report, but they do not know what they have not heard. Indeed they sometimes do not even know that there was something to hear.

As conditions become worse the performance of the average person will begin to decrease, but the performance of these people will decrease much more rapidly. In general, those who have the worst problems with low levels of background noise will show more rapid decreases in listening performance as conditions worsen.

What is reverberation and how is it related to background noise?

Reverberation is the persistence of a sound in an enclosed space. It does not occur in the open air. It is caused by the reflection of sound from hard surfaces like the walls of a room. High levels of reverberation that are obvious to normal listeners are observed in Cathedrals. The sound of a speaker or singer’s voice dies out slowly. If people speak quickly in this type of environment it can be hard for normal listeners to understand them because the echoes of what they have already said get confused with what they are saying now.

Ordinary rooms in homes and schools have much lower levels of reverberation, particularly when carpeted and with soft furnishings. Even at these lower levels of reverberation the lingering echoes of what has been said still provide a type of background noise. This can make things difficult for the listeners listed above even when the average listener does not notice there is any reverberation at all.
What can be done about the problem?

- Reducing the distance between the speaker and the listener
- Having the listener watch the speaker's face
- Having the listener concentrate on listening
- Measures that reduce noise in the working environment
- Measures that reduce reverberation in the working environment
- Requiring specific feedback from the listener as to what was heard
- Using fm systems, where they have been recommended

Note:

- Some teaching methods that rely heavily on class discussion make for levels of background noise, which preclude meaningful participation for these students.
- Rooms with carpeted floors, drapes, sound absorbent tiles are the least reverberant and those with flat, hard walls, floors and ceilings are the worst.
- Each halving of the distance between listener and speaker adds a 6dB advantage to the speech over the background noise. Even 6dB can make a difference, though about 14dB extra is usually necessary.
- General inquiries such as "Can you hear me OK?" almost never produce a meaningful response. It is far better to ask specific questions like "What year was I speaking about?"
- FM systems are recommended for students who will benefit from them. Audiologists are the experts qualified to decide whether they are needed. If an audiologist recommends an FM system, it is certain that it will benefit the user despite the difficulties its use involves.

Distance Hearing

- Problems with distance hearing are a consequence of hearing impairment.
- Distance hearing is the distance over which speech sounds are intelligible and not merely audible. (Ling, 1989)
- Hearing losses reduce the distance over which speech sounds are intelligible, even when using hearing aids. Typically, the greater the hearing loss, the greater the reduction in distance hearing.
- Reduction in distance hearing has negative consequences for classroom and life performances because distance hearing is necessary for passive learning. (Ramsdell, 1978; Ross, Beckett, & Maxon, 1991).
- A child with a hearing loss, even a minimal one, cannot casually overhear what people are saying. Most normally hearing children absorb information from their environments; they learn easily information that is not directed at them. However, children with hearing losses, because of their reduction in distance hearing, must be taught directly many skills and concepts that other children learn incidentally.
- Additional implications of reduction in distance hearing include a lack of redundancy of instructional information and a lack of access to social cues.
- Learning is an active, not a passive process for children with hearing losses. Active attention must be directed to appropriate sources at all times [with] ... the strain and effort of constant disciplined attention.
Unilateral Hearing Loss  (Hearing loss in one ear)

The head exerts a shadow to sound travelling around it. This effect is greater for high frequencies than for lower frequencies. Speech discrimination is highly dependent on access to high frequencies information.

If speech is coming from the side of the "poorer ear" the listener is at a disadvantage. He is hearing speech at 6.4dB less intensity. This small intensity loss can result in substantial discrimination loss.

If speech is coming from the side of the "poorer ear" and noise of equal loudness originates on the side of the good ear, a great problem is experienced. The signal to noise ratio (S/N) at the poor ear is +6.5dB and at the good ear is - 6.4dB, resulting from the head shadow. Almost 13dB deficit is experienced relative to that experienced by one with normal hearing. If conditions are reversed (speech on the good side, noise on the poor side) the unilateral listener is not at a major disadvantage relative to the normal hearer.

Illustration of Head Shadow Effect

Low frequency tones have long wavelengths which bend around corners easily while travelling through a medium, in opposition to high frequency tones with short wavelengths which are very directional, and tend to reflect away from the head rather than bend around it.


- Increased Difficulty In Groups And In Noise - experience difficulty understanding speech in the presence of background noise
- Localisation Confusion -experience difficulty locating the source of the sound
<table>
<thead>
<tr>
<th>Signal Conditions</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>speech &amp; noise on side of bad ear</td>
<td>discrimination decrease due to intensity loss (due to head shadow)</td>
</tr>
<tr>
<td>speech on good side, noise on bad side</td>
<td>6.4dB advantage due to head shadow</td>
</tr>
<tr>
<td>noise on good side, speech on bad side</td>
<td>greatest problem - 13dB signal to noise ratio difference relative to normal</td>
</tr>
</tbody>
</table>

How the Unilateral Listener Will Function

Links

QSA Information sheets on disabilities and learning difficulties accessed through:

http://education.qld.gov.au/curriculum/learning/students/disabilities/

http://education.qld.gov.au/curriculum/learning/students/disabilities/resources/information/hi/hi

Source of Information

Queensland Deaf Society
34 Davidson Street
Newmarket Q 4051
Tel: (07) 3356 8255 (voice and TTY)
Fax: (07) 3356 1331

The Volta Review, Volume 99(3), 133-162
Individual and Sound-Field FM Systems: Rationale, Description, and Use Carol Flexer
There is a range of personnel within the school systems who could be approached for information and assistance.

Teachers of the deaf, including visiting teachers: hearing impairment (VT-HI) are employed by Brisbane Catholic Education to support students with Hearing Impairment in RI schools.

Teaching Students with Disabilities Resource Kit 1998, Griffith University and Education Queensland, Brisbane.

A kit containing six videos and six booklets. Contains an introduction, a section for administrators, and sections on each of the following disability areas: • hearing impairment • intellectual disability • physical impairment • vision impairment.

This kit was distributed to State schools in March 1998.

Teacher Aides Working with Students with Disabilities 1998, Low Incidence Unit, Education Queensland, Brisbane.
A set of books developed for teacher aides.
Also available at:
http://education.qld.gov.au/curriculum/learning/students/disabilities/

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Intellectual Disability

Definition

The Department Education and Training (DET) definition of intellectual disability is adapted from the American Association of Intellectual and Developmental Disabilities (AAIDD, 2002).

Intellectual disability is characterised by significant limitations both in intellectual functioning and in adaptive behaviour as expressed in conceptual, social, and practical adaptive skills. This impairment originates before age 18.

The student’s identified level of functioning results in activity limitations and participation restrictions at school requiring significant education adjustments.

The following five assumptions are essential to the application of this definition:

- Limitations in present functioning must be considered within the context of community environments typical of the individual’s age peers
- Valid assessment considers cultural and linguistic diversity as well as differences in communication, sensory, motor, and behavioural factors
- Within an individual, limitations often coexist with strengths
- An important purpose of describing limitations is to develop a profile of needed supports.
- With appropriate personalised supports over a sustained period, the life functioning of the person with intellectual disability generally will

Features

Below-average intellectual functioning mainly due to difficulties which students experience in the areas of:

- Attention
- Thought processing
- Students find it difficult to:
  - Interpret symbolic, abstract and complex thoughts and concepts;
  - Process thoughts quickly;
  - Form logical sequences of ideas;
  - Synthesise information and skills.
  - Often they get stuck on one idea, or repeat phrases
- Memory
- Generalisation
Adjustments

Classroom Management

Both below-average intellectual functioning and limitations in adaptive skills affect learning for students with intellectual disability.

Although there is some overlap, in general, below-average functioning has implications for teaching methodology, and limitations in adaptive skills have implications for curriculum content and curriculum organisation.

Curriculum Content - may need to be either modified or expanded

For some students, the focus will be on academic content in the Key Learning Areas, but adaptations will include modifying subject content and strategies, and adjusting learning outcomes.

For Example: In mathematics, the goal might be to complete five one-digit additions using age-appropriate concrete materials, while other students complete ten three-digit additions with no aids.

For some students, the focus will be on the adaptive living skills. Adaptations will include expanding the subject content to include adaptive skills such as communication, self-direction and social skills.

For Example: Health and Physical Education could include a dressing program for a young student with intellectual disability.

It is important to try to incorporate adaptive skills programs into the existing class routine, however, when the routine does not offer an opportunity to do so, you will need to work these programs into logical places in the timetable.

Curriculum content is likely to promote learning outcomes that are realistic and relevant if it is:

- Needs-based (taking into account factors such as the student's
  Interests and learning style)
- Age appropriate
- Culturally appropriate
- Promoting self-direction and participation
- Oriented towards the student's future in productive work (paid and unpaid), study, family and community living, and leisure and recreation

Teaching Strategies

Attention: Students' attention is maximised when you

- Give work which is interesting and appropriate to ability
- Break activities into small, achievable steps
- Teach the key features of an item or situation
- Provide a quiet area for difficult work
- Give frequent and specific feedback on performance

Thought processing:

- Slow down the pace of instruction
- Give short, clear directions and requests
• Give students enough time to process information
• Use objects or pictures to focus on the concrete rather than the abstract
• Use direct instruction such as modelling, prompting or feedback

Memory: It helps immediate recall if you:
• Provide more prolonged experiences to learn new information or skills, to the point of 'overlearning'

It helps long-term memory recall if you:
• Give enough opportunity to practise or use the information or skills

It helps recall generally if you:
• Use visual supports, such as word lists, pictorial timetables or self-management charts
• Use verbal and gestural prompts
• Clarify to make sure the student understands and recalls the task
• Use a home-school communication book. This allows parents and teachers to prompt recall of experiences across environments.

Generalisation:
It is possible and necessary to teach students how to generalise acquired skills across a variety of settings, people, materials and time periods. It helps if you:
• Create real-life or life-like environments; use a range of concrete materials
• Use role-play
• Plan contingencies for potential errors

Adjustments to basic teaching procedures may involve:
• Selection of the learning task:
  o Changing characteristics of the task (a non-reading student may use audiovisual aids)
  o Changing the criteria to ensure early success (criteria for quantity, speed or accuracy)
  o Breaking the task into smaller sub-tasks
  o Reducing the extent of the task
• Presentation of new information or skill:
  o giving more consideration to the student’s learning style (e.g. more visual and concrete support)
  o using language concepts the student understands
  o presenting less material in one session
  o giving more attention to linking new learning to previous experience;
  o giving additional modelling and concrete examples
  o providing direct instruction (see information following)
• Guided student practice:
  o Scheduling extra time for guided student practice
- Modelling the task while explaining it
- Using short, clear directions
- Checking that directions are understood
- Waiting longer for the student to process information
- Monitoring the student's practice more closely
- Giving more assistance (concrete materials, verbal prompts)

Feedback (correction and reinforcement):
- Giving immediate and specific feedback during guided practice
- Correcting when necessary (simplify the question, break the task into even smaller sub-tasks, increase prompts, model the correct response)
- Giving reinforcement frequently (about four times the usual)
- Increasing motivation by using age-appropriate reward systems, negotiated with the student whenever possible

Independent student practice:
- Giving practice for short periods over time
- Giving practice to the point of 'overlearning'
- Giving practice with a variety of activities, materials, situations and instructors
- Reducing prompts gradually
- Teaching strategies for effective learning/thinking (e.g. Process-based instruction)

Review:
- Reviewing more frequently to check that the skill/information is maintained
- Timetabling opportunities for generalization

Direct Instruction:
Typically involves face-to-face instruction in which the teacher helps the student to perform each step, by modelling and using cues and prompts which may be physical, visual, verbal or gestural. Reinforcement or correction is then given.

Often planning for direct instruction involves doing a task analysis - in other words, breaking the task into small steps.

It also involves systematic assessment and monitoring.

Direct instruction may also be used to teach cognitive strategies associated with process-based instruction.

Links

*Teaching Students with Disabilities Resource Kit* 1998, Griffith University and Education Queensland, Brisbane.
A kit containing six videos and six booklets. Contains an introduction, a section for administrators, and sections on each of the following disability areas: • hearing impairment • intellectual disability • physical impairment • vision impairment

This kit was distributed to State schools in March 1998.
Teacher Aides Working with Students with Disabilities 1998, Low Incidence Unit, Education Queensland, Brisbane.
A set of books developed for teacher aides.
Also available at: http://education.qld.gov.au/curriculum/learning/students/disabilities/


Sources of Information

Teaching Students with Disabilities: Intellectual Disability

Teaching Students with Disabilities Resource Kit 1998, Griffith University and Education Queensland, Brisbane.

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Kabuki Syndrome

Definition
Kabuki syndrome is a rare genetic disorder caused by mutations in the KMT2D gene (also known as MLL2) or the KDM6A gene. It presents a range of characteristics, including intellectual disability, distinctive facial features and skeletal abnormalities. Estimates suggest that Kabuki syndrome occurs in about one in every 32,000 births. However, Kabuki syndrome is thought to be underdiagnosed, so it could be more common.

The condition affects males and females equally, and there is no cure. The condition is also known as Kabuki Makeup syndrome or Niikawa-Kuroki syndrome.

Features
Kabuki syndrome has a wide range of characteristics, but not all are present in every child with the condition.

The most common characteristics include:
- distinctive set of facial features, including widely spaced eyes, low-set or prominent ears, exaggerated eyebrow arch, flattened nose tip and a very high palate or cleft palate
- short stature
- skeletal abnormalities, such as scoliosis, short fingers or lax joints
- intellectual disability, ranging from mild to severe.

Other health problems with Kabuki syndrome
Kabuki syndrome may be associated with other health problems, including:
- heart defects such as coarctation (narrowing) of the aorta, ventricular or atrial septal defects (holes between the right and left heart chambers)
- hearing loss
- kidney abnormalities
- dental problems, such as missing or misshapen teeth
- eye problems, such as drooping eyelid (ptosis) or strabismus
- immune system dysfunction, such as the autoimmune disease idiopathic thrombocytopenic purpura (ITP) – a bleeding disorder
- small skull (microcephaly)
- undescended testicles
- ongoing middle ear infections
- epilepsy
- behaviour problems
- early puberty
- substantial weight gain at puberty.
Adjustments

Kabuki syndrome is often associated with a number of different health issues however each individual presents differently. Refer to any relevant health management plans.

People with Kabuki syndrome have a higher incidence of conditions that may impact on classroom behaviour and social-emotional wellbeing including sensory processing disorder, anxiety, attention problems, obsessive-compulsive traits, and autistic behaviors.

For people with these challenges, successful strategies may include:

- Structure, routine, and preparation for change are all helpful
- Calming activities
- Clear concrete plans and visual cues (i.e. visual sign for quiet)
- Proactive behavioral plans that include goals, rewards, and consequences for appropriate behavior
- Seating in back section of room and/or allow seating near exit.
- Structure and predictability
- Reduced level of environmental noise/sound, natural lightening, and avoidance of crowded areas.
- Predictable transitions and signal with visual cues
- Non-verbal cues and feedback
- Role playing the behavioral consequences
- Alternative to stressful events
- Breaks and downtime if needed
- Work on conversational skills and friendships

Links

http://www.sakks.org/
http://kabukisyndrome.com/

Sources of Information

https://www.gemssforschools.org/conditions/Kabuki/behavior-sensory-supports

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Learning Differences

Definition

The brain’s information processing system can be likened to the operation of a computer. Memory is said to be made up of three information stores; sensory, working and long-term.

For information to be processed, the child must be focusing attention on the subject. If attention is not focused, the information will not reach the memory stores. Material which has been focused on can be held in the sensory memory for a brief time.

The stored information is passed to the working memory, the so called computer screen, where it is interpreted and organised. It is then passed on to the long-term memory store where it can be retained and retrieved in the future. Long-term memory holds an unlimited amount of information for an indefinite period of time.

A separate system known as the central executive system regulates these processes. The more efficient the memory storage process, the easier it is to retrieve information.

Progress may be compromised and the effects on learning can be quite significant if students have differences in their ability to attend to stimuli, encoding and manipulate information within working memory so that it can be successfully encoded into the long-term memory store.

Differences may be evident at any of the four stages of learning:

- Input – information is entered into the brain via the senses
- Integration – information has to be understood prior to being remembered and used
- Memory – information must be stored and retrieved when required
- Output – as proof that we have learned, learning must be expressed in some way
Features

Visual Perceptual Deficits

- Reversals: b for d, p for q
- Inversions: u for n, w for m
- Yawns while reading
- Complains eyes hurt, itch/rubs eyes
- Complains print blurs while reading
- Turns head or paper at odd angles
- Closes one eye while working
- Cannot copy accurately
- Loses place frequently
- Rereads lines/skips lines
- Does not recognize an object/word if only part of it is shown
- Reading improves with larger print/fewer items on page/uses a marker to exclude portion of page
- Sequencing errors: was I saw; on I no
- Does not see main theme in a picture, picks up some minute detail
- Slow to pick up on likenesses-differences in words; changes in environment
- Erases excessively
- Distortions in depth perception

Visual Perceptual/Visual Motor Deficits

- Letters collide with each other/no space between words
- Letters not on line
- Forms letters in strange way
- Mirror writing (holding paper up to mirror and you see it as it should look)
- Cannot color within lines
- Illegible handwriting
- Holds pencil too tightly; often breaks pencil point/crayons
- Cannot cut
- Cannot paste
- Messy papers

Auditory Perceptual Deficits

- Auditory processing: cannot understand conversation or learning delivered at the normal rate/may comprehend if information is repeated very slowly
- Auditory discrimination: does not hear differences in sounds: short i, e; sounds b, p, d, t, c, g, j, n, m; does not hear final consonants accurately
- Cannot tell direction sound is coming from
- Does not recognize common sounds for what they are
- Cannot filter out extraneous noise; cannot distinguish teacher's voice from others-hears wrong answers, steadfastly maintains "teacher said it" (some children get very tense in noisy classroom)
- Does not follow directions
- Does not benefit from oral instruction

**Spatial Relationships and Body Awareness Deficits**
- Gets lost even in familiar surroundings such as school, neighborhood
- Directionality problems, does not always read or write left to write
- No space between words
- Cannot keep columns straight in math
- Bumps into things; clumsy, accident prone
- Does not understand concepts such as over, under, around, through, first, last, Front, back, up, down

**Conceptual Deficits**
- Cannot read social situations, does not understand body language
- Cannot see relationship between similar concepts
- Cannot compare how things are alike/different; classification activities are difficult
- Does not understand time relationships-yesterday, today, tomorrow, after before, 15 minutes versus 2 hours, "hurry"
- Does not associate an act with its logical consequence. "if i talk, i get detention" (being punished for no reason. Unfair.)
- Little imagination
- No sense of humor; cannot recognize a joke/pun
- Tends to be expressionless
- Slow responses
- Not able to create, to "think," to create poetry, original stories
- Cannot make closure; cannot read less than clear ditto; cannot finish a sentence such as "i like it when . . . ."; difficulty filling in blanks
- Excessively gullible
- Cannot do inferential thinking: what might happen next? Why did this happen?
- Great difficulty in writing
- Bizarre answers/or correct answers found in bizarre ways
- Cannot think in an orderly, logical way
- Does not understand emotions, concepts such as beauty, bravery
- Classroom comments are often "off track" or reasons in bizarre ways
- Difficulty grasping number concepts: more/less; >/<; can't estimate
• Mispronounces common words

**Memory Deficits**

• Cannot remember what was just seen (was shown)
• Cannot remember what was just heard
• Cannot remember sequence of 4 numbers given auditorally
• Cannot copy math problems accurately
• Cannot remember spelling for common/frequently encountered words
• Remembers things from long ago but not recent events
• Poor sight vocabulary-few words known to automatic level
• Slow to memorize rhymes/poem (makes many errors)
• Appears to know something one day but doesn't know it the next
• Limited expressive language; does not remember names for objects-"that thing"
• Limited receptive language
• Makes same error again and again; does not seem to benefit from experience
• Writing poor-cannot remember to capitalize, punctuate, skip a line, indent, and so on
### Processing Deficits

<table>
<thead>
<tr>
<th>Processing Deficits</th>
<th>Features</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auditory Sequencing</strong></td>
<td>Confusion with number sequences, lists or directions. Hearing ninety-four instead of forty-nine</td>
<td>Provide written instructions as reinforcement of oral instruction. Use of visuals</td>
</tr>
<tr>
<td><strong>Auditory memory</strong></td>
<td>Difficult remembering what was heard or important items in lecture. Spells poorly</td>
<td>Provide written instruction to look back on. Don’t penalise spelling, just correct. Provide basic outlines of that is being presented</td>
</tr>
<tr>
<td><strong>Visual Sequencing</strong></td>
<td>Problems in using a separate answer sheet. Loses place easily. Problems with reading. Reversing or misreading numbers of letters. Reading words incorrectly; difficulty with equations.</td>
<td>Read directions aloud. Provide oral instruction. Write on overhead. Colour code things written down When writing questions on the board, change colour every question</td>
</tr>
<tr>
<td><strong>Visual memory</strong></td>
<td>Difficulty in remembering what was seen. Reading comprehension. Difficulty with math equations. Poor recall of information.</td>
<td>Provide handouts that are clearly written. Provide oral instructions.</td>
</tr>
<tr>
<td><strong>Dysgraphia</strong></td>
<td>Inability to form letters correctly – students cannot read their own writing</td>
<td>Oral tests. Taped projects</td>
</tr>
<tr>
<td><strong>Visual Motor integration</strong></td>
<td>Mechanical problems in test taking. Difficulty copying off blackboard or book. Spaces poorly. Poor written work. Unorganised.</td>
<td>Allow use of computer. Auditory recording of lessons. Substitute oral reports. Provide individual written outlines so there are fewer steps to process. In maths/science require answers only for calculations. Use graph paper. Lower standards of acceptable writing</td>
</tr>
<tr>
<td><strong>Auditory discrimination</strong></td>
<td>Often seems to misunderstand. Trouble telling differences between similar sounds or words eg seventeen and seventy. Seems to hear but not to listen.</td>
<td>Written lessons notes. Talk at a slower pace. Give one task at a time.</td>
</tr>
<tr>
<td><strong>Auditory Figure ground</strong></td>
<td>Trouble hearing sounds over background noise.</td>
<td>Sit student near you</td>
</tr>
<tr>
<td><strong>Visual Figure ground</strong></td>
<td>Trouble seeing an image within a competing background. Picking one line of print from another when reading</td>
<td>Use an index card or marker when reading to blot out distracting words</td>
</tr>
<tr>
<td><strong>Visual Discrimination</strong></td>
<td>Seeing the difference between two similar objects</td>
<td>Sit student near you</td>
</tr>
<tr>
<td>Spatial Orientation</td>
<td>Loses materials. Late to class. Difficulty with oral reading. Unorganised homework. Difficulty judging time.</td>
<td>Provide more time for assignments or shorten them. Encourage silent reading. Provide help in organisation.</td>
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</tr>
<tr>
<td>Expressive language</td>
<td>Difficulty expressing themselves. May sound ‘cynical’</td>
<td>Provide opportunities for written reports. Allow adequate time to respond to questions.</td>
</tr>
<tr>
<td>Receptive language</td>
<td>Appears to be not listening. Incomplete work</td>
<td>Have students repeat directions back to you for understanding</td>
</tr>
</tbody>
</table>

### Adjustments

#### Classroom Management

- Learning is complex for a large number of students, be patient and consistent
- Identify student learning style and strengths as a starting point to overcome their learning differences
- Remember all students can learn; they just do it differently. Adjust your teaching to suit the way the student will learn
- Encourage students to acknowledge and understand their learning differences and take charge of their own learning
- Empower students with the strategies to become increasingly independent and successful.
- A consistent approach is vital in order for students to achieve success; close communication between home and school needs to be maintained

#### Teaching Strategies

Refer to the enclosed table and individual conditions for management and specific strategies.

### Links

Refer also to: [Auditory Learning Differences](http://www.qsa.qld.edu.au/p-9/691.html), [Visual Processing Learning Differences](http://www.speld.org.au)


[www.speld.org.au](http://www.speld.org.au)

### Sources of Information

[www.ldonline.org](http://www.ldonline.org)

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## LEARNING DIFFERENCES

<table>
<thead>
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<th>Learning Stage</th>
<th>Implications for classroom Impacts on .....</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. INPUT STAGE</strong></td>
<td><strong>Sensory Systems</strong>: visual, auditory, tactile, vestibular, proprioception, kinaesthetic, olfactory &amp; gustatory</td>
<td><strong>Avoid lengthy copying</strong>: provide photocopies, USB to student computer</td>
</tr>
<tr>
<td></td>
<td><strong>Visual Perception / Visuospatial</strong>: organizing the shape and position of what is seen</td>
<td><strong>Use technology</strong>: NeoSmart, AlphaSmart, laptop</td>
</tr>
<tr>
<td></td>
<td><strong>Scotopic Sensitivity Syndrome</strong>: excess sensitivity of the retina to light frequencies</td>
<td><strong>Proximity seating to minimize distractions</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Auditory Perception</strong>:</td>
<td><strong>Reduce glare</strong>, use fresh W Board markers, different colours, consider lighting</td>
</tr>
<tr>
<td></td>
<td><strong>Auditory Discrimination</strong>: difficulty distinguishing differences between sounds</td>
<td><strong>Provide clear, legible, uncluttered handouts</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Phonological Awareness</strong>: perception of sounds within words</td>
<td><strong>Gain attention prior to giving instructions</strong>, use names</td>
</tr>
<tr>
<td></td>
<td><strong>Social Perception</strong>:</td>
<td><strong>Give short, clear directions and requests</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Non-verbal Learning Disorder</strong>:</td>
<td><strong>Simple specific instructions in sequence</strong> – 1-2 steps</td>
</tr>
<tr>
<td></td>
<td><strong>Asperger Syndrome</strong>: misperceive social cues, body language, gestures, facial expressions, voice tones</td>
<td><strong>Clarify / confirm understanding of task expectations</strong>, repeat back, rephrase</td>
</tr>
<tr>
<td></td>
<td><strong>Sensory Impairments</strong>: HI, VI, PI, Attention, arousal, self-regulation</td>
<td><strong>Use visual aids to accompany verbal instructions</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Spelling – sounds within words</strong></td>
<td><strong>Avoid asking st to listen and write at same time</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Distinguishing noise and sounds from background impacts on understanding, following instructions, mishearing questions</strong></td>
<td><strong>Additional time, build in breaks, chance to move around</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Peer interaction / social misunderstandings</strong></td>
<td><strong>Enhance attention</strong> – use highlighter pens, heavy lines around pertinent items, colour coding, notemaking frameworks to extract main ideas, emphasise key words</td>
</tr>
<tr>
<td></td>
<td><strong>Confusion, anxiety and frustration with learning can lead to self-doubt, reluctance to take risks, avoidance, masking difficulties. Concentration level</strong></td>
<td><strong>Ensure work is interesting and relevant</strong></td>
</tr>
<tr>
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<td><strong>Writing - tendency to reverse or rotate letters, words, numbers, shapes (b, d was, saw)</strong></td>
<td><strong>Buddy support</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Effects copying and transferring information</strong></td>
<td><strong>Self-regulation strategies, ‘sensory diet’ – maximize learning</strong></td>
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<td></td>
<td><strong>Reading – skip words, lines, diff tracking Left-Right</strong></td>
<td><strong>Multi sensory instruction – reading, spelling</strong></td>
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<td></td>
<td><strong>Loses place, distorted print, convergence insufficiency- blurs print, words swim, background interference leads to decoding strain, stress, mental fatigue</strong></td>
<td><strong>Visual, Auditory, Kinesthetic modes</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organising own position in space – clumsy, confuse right and left, misjudge distances, depth in space, page layout, map work, handwriting, visual motor difficulties, fatigue with writing tasks</strong></td>
<td><strong>Use of separate answer sheets – a problem</strong></td>
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<td><strong>Spelling – sounds within words, saying vowel sounds correctly (ball, bell) (17, 70)</strong></td>
<td><strong>Verbal, gestural prompts, model, reinforce</strong></td>
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<td><strong>Distinguishing noise and sounds from background impacts on understanding, following instructions, mishearing questions</strong></td>
<td><strong>Provide frequent specific feedback</strong></td>
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<td><strong>Peer interaction / social misunderstandings</strong></td>
<td><strong>Clarify words and phrases that have double meaning</strong></td>
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<td><strong>Wait time to process, organise and respond</strong></td>
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<td><strong>Teach simple tasks before complex ones</strong></td>
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<td><strong>Reading –skip words, lines, diff tracking Left-Right</strong></td>
<td><strong>Teach key words</strong></td>
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<td><strong>Loses place, distorted print, convergence insufficiency- blurs print, words swim, background interference leads to decoding strain, stress, mental fatigue</strong></td>
<td><strong>Teach / model organisation strategies – planners, folders</strong></td>
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<td><strong>Spelling – sounds within words, saying vowel sounds correctly (ball, bell) (17, 70)</strong></td>
<td><strong>Relate learning to real life examples / situations</strong></td>
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<td><strong>Distinguishing noise and sounds from background impacts on understanding, following instructions, mishearing questions</strong></td>
<td><strong>Reduce visual, auditory distractions; consider lighting</strong></td>
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<tr>
<td></td>
<td><strong>Reading –skip words, lines, diff tracking Left-Right</strong></td>
<td><strong>Relate learning to real life examples / situations</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Loses place, distorted print, convergence insufficiency- blurs print, words swim, background interference leads to decoding strain, stress, mental fatigue</strong></td>
<td><strong>Reduce visual, auditory distractions; consider lighting</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organising own position in space – clumsy, confuse right and left, misjudge distances, depth in space, page layout, map work, handwriting, visual motor difficulties, fatigue with writing tasks</strong></td>
<td><strong>Self-regulation strategies, ‘sensory diet’ – maximize learning</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Spelling – sounds within words, saying vowel sounds correctly (ball, bell) (17, 70)</strong></td>
<td><strong>Multi sensory instruction – reading, spelling</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Distinguishing noise and sounds from background impacts on understanding, following instructions, mishearing questions</strong></td>
<td><strong>Visual, Auditory, Kinesthetic modes</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Peer interaction / social misunderstandings</strong></td>
<td><strong>Use of separate answer sheets – a problem</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Confusion, anxiety and frustration with learning can lead to self-doubt, reluctance to take risks, avoidance, masking difficulties. Concentration level</strong></td>
<td><strong>Verbal, gestural prompts, model, reinforce</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Writing - tendency to reverse or rotate letters, words, numbers, shapes (b, d was, saw)</strong></td>
<td><strong>Provide frequent specific feedback</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Effects copying and transferring information</strong></td>
<td><strong>Clarify words and phrases that have double meaning</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Reading –skip words, lines, diff tracking Left-Right</strong></td>
<td><strong>Teach st strategies to clarify understanding to avoid misunderstanding or misinterpretation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Loses place, distorted print, convergence insufficiency- blurs print, words swim, background interference leads to decoding strain, stress, mental fatigue</strong></td>
<td><strong>Wait time to process, organise and respond</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organising own position in space – clumsy, confuse right and left, misjudge distances, depth in space, page layout, map work, handwriting, visual motor difficulties, fatigue with writing tasks</strong></td>
<td><strong>Teach simple tasks before complex ones</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Spelling – sounds within words, saying vowel sounds correctly (ball, bell) (17, 70)</strong></td>
<td><strong>Teach key words</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Distinguishing noise and sounds from background impacts on understanding, following instructions, mishearing questions</strong></td>
<td><strong>Teach / model organisation strategies – planners, folders</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Peer interaction / social misunderstandings</strong></td>
<td><strong>Use hands-on, concrete manipulative objects</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Confusion, anxiety and frustration with learning can lead to self-doubt, reluctance to take risks, avoidance, masking difficulties. Concentration level</strong></td>
<td><strong>Relate learning to real life examples / situations</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Writing - tendency to reverse or rotate letters, words, numbers, shapes (b, d was, saw)</strong></td>
<td><strong>Reduce visual, auditory distractions; consider lighting</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Effects copying and transferring information</strong></td>
<td><strong>Self-regulation strategies, ‘sensory diet’ – maximize learning</strong></td>
</tr>
</tbody>
</table>
### 3. MEMORY STAGE

**Remembering what we have learned. The information must be stored and retrieved when required.**

<table>
<thead>
<tr>
<th>Short Term / Working Memory: Executive Functioning:</th>
<th>Remembering the homework that was set, forgetting what happened in class that day</th>
</tr>
</thead>
<tbody>
<tr>
<td>involves retaining information for a short time while focusing on it - attending to organising for storage or discarding and connecting to pre-existing info anywhere from a few minutes to twenty-four hours for 5 to 9 items</td>
<td>Remembering while copying from the board</td>
</tr>
<tr>
<td><strong>Auditory Sequential Memory:</strong></td>
<td>Remembering directions, instructions</td>
</tr>
<tr>
<td><strong>Visual Memory:</strong></td>
<td>Retrieval of information is draining, time consuming - fatigue</td>
</tr>
<tr>
<td><strong>Long Term Memory:</strong> very large capacity and duration</td>
<td>Ability to use visualization</td>
</tr>
<tr>
<td><em>Components of long term memory</em></td>
<td>Working memory is disrupted by high levels of social/emotional stimulus</td>
</tr>
<tr>
<td><strong>Episodic</strong> - personal memories</td>
<td>Negative self-concept OR</td>
</tr>
<tr>
<td><strong>Semantic</strong> - meaningful</td>
<td>High anxiety = reduced working memory span</td>
</tr>
<tr>
<td><strong>Procedural</strong> - how to do things</td>
<td>Positive associations / pleasant memories of school – increases success</td>
</tr>
</tbody>
</table>

- Need to unlearn mistakes – eg spelling errors as they become automatic

**Kinesthetic memory:** muscles

- **Language Disorders:**
  - Motor Planning Difficulties:
  - **Dyspraxia:** Developmental Coordination Difficulty (DCD)
  - **Visuomotor:** Hand-eye coordination
  - **Gross Motor:** large muscles
  - **Fine Motor:** small muscles

- **Generalization:** transferring / applying a learned skill to a new situation

- **Behavioural characteristics:** associated with the downward spiral of failure, reluctance to take a risk

- **Attention Deficit Disorders**

**3. MEMORY STAGE**

**Express in some way what has been learned. (proof that we have learned something).**

<table>
<thead>
<tr>
<th>Language Disorders:</th>
<th>Language output –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Planning Difficulties:</td>
<td>Word finding diff</td>
</tr>
<tr>
<td><strong>Dyspraxia:</strong> Developmental Coordination Difficulty (DCD)</td>
<td>Spontaneous- student initiated time to think</td>
</tr>
<tr>
<td><strong>Visuomotor:</strong> Hand-eye coordination</td>
<td>Demand- responding to questions, reading around</td>
</tr>
<tr>
<td><strong>Gross Motor:</strong> large muscles</td>
<td>class cf. pressure cooker</td>
</tr>
<tr>
<td><strong>Fine Motor:</strong> small muscles</td>
<td>Social- Pragmatic Language - Social diff – peer interactions and conversations</td>
</tr>
<tr>
<td><strong>Generalization:</strong> transferring / applying a learned skill to a new situation</td>
<td>Motor output</td>
</tr>
<tr>
<td><strong>Behavioural characteristics:</strong> associated with the downward spiral of failure, reluctance to take a risk</td>
<td>Coordination of vision with movement</td>
</tr>
<tr>
<td><strong>Attention Deficit Disorders</strong></td>
<td>Clumsy handwriting, ball skills, balance, HPE</td>
</tr>
<tr>
<td></td>
<td>Awkward pen grip – fatigue with writing</td>
</tr>
<tr>
<td></td>
<td>Difficulty getting thoughts onto paper for extended writing tasks – despite having creative, detailed ideas and thoughts</td>
</tr>
<tr>
<td></td>
<td>Frustrated – head works faster than the hand</td>
</tr>
<tr>
<td></td>
<td>Impulsivity, Inattention, distractibility, perseveration, inflexibility, hyperactivity</td>
</tr>
</tbody>
</table>

**Activating prior knowledge, provide field / background information and vocabulary – to ensure st has meaningful networks of info into which to link new incoming info for storage and retrieval**

- Repetition / rehearsal x10 – to keep info in working memory longer so that it will be transferred into long term memory. St to repeat task instructions. Rehearse out loud, then covertly. |
- **Visual-spatial sketchpad** – teach st visualization, imagery techniques for representation of information in the mind’s eye |
- Use of checklists, visual prompts, charts |
- Chunk information into meaningful categories |
- Break tasks down into small achievable steps |
- Simplify complex tasks – task analysis |
- Overlearning and opportunity to practice |
- Vertical presentation of math rather than horizontal – easier to solve problems |
- Mnemonic techniques, acronyms |
- Organisation strategies – term planners, separate folders, task analysis sheets for assignments

**4. OUTPUT STAGE**

**Express in some way what has been learned.**

<table>
<thead>
<tr>
<th>Language Disorders:</th>
<th>Present orally, dictate answers to a scribe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Planning Difficulties:</td>
<td>Scaffolding of written tasks</td>
</tr>
<tr>
<td><strong>Dyspraxia:</strong> Developmental Coordination Difficulty (DCD)</td>
<td>Checklists, cue cards</td>
</tr>
<tr>
<td><strong>Visuomotor:</strong> Hand-eye coordination</td>
<td>Negotiate task adjustments – show evidence of understanding</td>
</tr>
<tr>
<td><strong>Gross Motor:</strong> large muscles</td>
<td>Model, prompt appropriate responses in social interactions, requesting assistance</td>
</tr>
<tr>
<td><strong>Fine Motor:</strong> small muscles</td>
<td>Debrief social misunderstandings</td>
</tr>
<tr>
<td><strong>Generalization:</strong> transferring / applying a learned skill to a new situation</td>
<td>Role play social conversations</td>
</tr>
<tr>
<td><strong>Behavioural characteristics:</strong> associated with the downward spiral of failure, reluctance to take a risk</td>
<td>Prepare st by alerting them / saying name before asking a question</td>
</tr>
<tr>
<td><strong>Attention Deficit Disorders</strong></td>
<td>Ask non-threatening questions</td>
</tr>
<tr>
<td></td>
<td>Use of laptop, Alpha Smart notetaker</td>
</tr>
<tr>
<td></td>
<td>Encourage cursive writing – easier to keep ideas flowing and pen doesn’t have to be lifted</td>
</tr>
<tr>
<td></td>
<td>Limit copying,</td>
</tr>
<tr>
<td></td>
<td>Maths – graph paper or turn lined paper to the side – neater</td>
</tr>
<tr>
<td></td>
<td>Raise expectations based on strengths and use adaptive compensatory strategies</td>
</tr>
<tr>
<td></td>
<td>Avoid confrontations</td>
</tr>
</tbody>
</table>
Marfan Syndrome

Definition

Marfan syndrome (or Marfan’s syndrome) is an inherited disease that affects the connective tissue within the body. This results in a variety of skeletal deformities, as well as problems with the heart and the blood vessels (the cardiovascular system).

Features

Marfan syndrome is known to be a dominant genetic disorder, which means that a person needs to inherit only one defective gene in order to actually have the syndrome. In addition to those cases of Marfan’s which are clearly inherited, 20% of all Marfan’s patients have no family history of the syndrome. It is believed that these patients have undergone a spontaneous genetic mutation leading to the syndrome. Interestingly, one risk factor for Marfan syndrome (in a family where Marfan’s is not already an inherited disorder) is an elderly father. Marfan syndrome is said to have variable expression, meaning that either all, or only a few, of the classic signs of Marfan syndrome may occur in any given patient.

The biochemical problem which results in Marfan syndrome has not been well defined. The group of tissues affected by Marfan syndrome are called the connective tissues. These are tissues that are made of fibrous components, and they provide structural support for other body tissues. Included in the group called connective tissues are bone, cartilage, fat tissue, lymph tissue, and blood. The current belief is that the affected gene results in an abnormality in a protein called microfibrillin; and this protein is responsible for certain structural characteristics of connective tissue throughout the body.

Typically, a person with Marfan syndrome appears quite tall and thin, particularly when compared with other members of the same family. The patient’s arms are proportionally quite long, compared to their stature, and their fingers are also long and thin, termed “arachnodactyly” (arachno means spider-like, while dactyly refers to fingers). The patient’s chest wall may protrude out, or be sunken in, while the spine often has an abnormal curvature. The patient’s joints are usually loose, and may be able to be bent in the wrong direction (double-jointedness). Muscles are often smaller than normal, and hernias (protrusions of internal organs through weak areas in muscle) are frequent in Marfan’s patients. Several lung problems are common, including the tendency to spontaneously suffer a collapsed lung (pneumothorax).

The most serious-and potentially life-threatening complications of Marfan syndrome occur due to the involvement of the heart and blood vessels. The mitral valve (the gateway out of the heart for all the blood entering the body’s circulation) is frequently abnormal, resulting in a heart murmur. The wall of the aorta (the major artery leaving the heart) is prone to stretching (dilation). Over time, the aorta becomes increasingly weak, leading to bulging (called an aneurysm) and possible rupture. Such ruptures lead to heavy, uncontrollable bleeding into the body (severe hemorrhage), and almost certain death.

Adjustments

Classroom Management

Considerations for precautions, especially in relation to physical participation need to be discussed with the family and collaboration with any relevant specialist expertise should guide the management of students with Marfan Syndrome.
Teaching Strategies

Marfan Syndrome is a medical condition and does not affect a person's ability to think and learn. Teachers should be well informed about the condition if there is a young person in their care who has Marfan syndrome. Close communication and conversations with the family and the young person will reveal considerations with regards managing any limitations and lifestyle adaptations necessary in the school setting.

Families follow the advice of their health care provider. Depending on which body parts are affected and to what degree, considerations may include:

- Avoiding strenuous exercises and activities, contact sports or generally exhausting sports to prevent injury to the main blood vessels
- No physical activities that depend on isometric exercise, such as weight training or moving heavy objects
- Avoid strenuous exercises and activities, avoid contact sports or generally exhausting sports, to prevent injury to the main blood vessel

Links

http://www.marfan.net.au/  (A link to a PowerPoint featuring a good, clear overview with graphics suitable for young High School students, set up by the Mother of a young person with Marfan)
http://marfan.net.au/queensland/

Sources of Information

http://www.marfan.net.au/

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Neurofibromatosis Type 1

Definition

Neurofibromatosis Type 1 (Nf1) is a relatively common genetic condition of nerve tissue. It can cause benign tumours to form on nerve tissue anywhere in or on the body at any time. It affects 1 in 2500 of the population.

Some basic facts about Nf1:

- It occurs in all communities and all ages can be affected
- It affects males and females equally
- An affected individual has a 1 in 2 chance of passing the condition on to their child
- Approximately half the cases of Nf1 occur as a new event, without either parent being affected
- It is a variable and unpredictable condition with a number of associated features, even within one family

How is the Diagnosis Made?

A doctor familiar with the clinical features can diagnose Nf1 relatively easily. The main signs are:

- More than six brown patches (cafe-au-lait marks) on the skin
- Freckles in unusual places such as armpit or groin
- Lumps and bumps (neurofibromas) on or below the surface of the skin
- Lisch nodules (harmless patches of pigment) in the iris of the eye
- An affected parent

Complications can develop in Nf1 and include:

- Learning difficulties of varying degrees
- Behavioural problems
- Bone problems affecting the spine (scoliosis) and the long bones of the leg or arm (pseudarthrosis)
- Lumps growing internally on nerves
- Large lumps that can be painful
- Speech difficulties
- Variation in blood pressure (hypertension)
- Increased risk of epilepsy

Children with Nf1 are regularly checked by either a paediatrician or GP. Some children will be only mildly affected whilst others can have complex medical problems, which mean they will be under the care of numerous hospital specialists. The resulting time off to attend hospital appointments can disrupt the school routine.
Features

A relatively high proportion of children with Nf1 (30-60 %) experience some difficulty in school due to learning differences in any of the following areas:

Perception and Performance

They tend to perform less well than other children of similar ability. They can be verbally competent but have difficulty expressing themselves on paper.

Concentration

Many children with Nf1 find it hard to concentrate and pay attention to one stimulus for any length of time. The teacher and instruction can fade out of their attention because of some minor distraction that has equal or greater weight in their perception. Conversely, concentration can become almost obsessive - a child will persevere in a course of action and be unable to switch to a new activity or approach.

Co-ordination

Problems with co-ordination are present in some children with Nf1 and this affects both fine and gross motor skills. For example they can have difficulty riding a bike, kicking and catching a ball. Fine motor control can be poorly developed so handwriting might be immature or illegible.

Memory

Some children with Nf1 will have difficulty with memory - remembering what they have just been told. They seem to have understood, but cannot retain the information and so are unable to retrieve it only a short time later.

Movement

Children with Nf1 often move about in an aimless and purposeless way. They can be restless, get up and walk around during an activity or "fiddle" with things. They can also be clumsy, apparently unable to control either their own movement or visualise where they are in relation to other people and objects. From a teaching point of view they seem to be deliberately knocking things over, bumping into things, pushing other people and generally causing irritation in the classroom.

Impulsiveness

The children can also be impulsive in their behaviour - they embark on a course of action without considering the consequences of their actions or the instruction to start. Their impulsiveness is carried over into speech and language and they may talk too quickly, gabble or be over-familiar in manner. They can also misunderstand the unwritten social rules which we all observe so they might stand too close, talk too loudly or touch inappropriately.

Social Difficulties

Children with Nf1 can have difficulty making and keeping friends and so might be seen as "loners". They often prefer to keep to the company of adults or younger children who do not judge them so harshly. This behaviour combined with any significant physical difference, such as having brown patches on the skin, can lead to a child being bullied or feeling isolated. Often it is the child with Nf1 who is regarded as the troublemaker because their behaviour is inappropriate or silly and lacks the sophistication to avoid blame.

Organisation

Problems with organisation in general is also a feature in children with Nf1. This can be particularly problematic at the transition from primary to secondary school. Meeting the conflicting demands of a range of different teaching styles and expectations, or being in the right place at the right time
with the right equipment, places an additional burden on a relatively immature child who has little concept of time management.

**Inconsistency**

From a teaching standpoint the apparent inconsistencies in a child of average ability can seem baffling and this impression can be compounded by the fact that the child's performance can vary from day to day. On a good day they will achieve results and do well, whilst on a bad day those same tasks seem quite beyond their grasp. Within such a short time-scale this can seem difficult to understand where the teacher is unfamiliar with NF1.

**Self-esteem and confidence**

Not all children with NF1 will have all or even any of these problems; however, they can influence how children learn and, more importantly, how they see themselves. Very often they are written off as lazy and low achievers. If they have any physical blemish that marks them out as "different" no matter how small, self-esteem and confidence is undermined. They are the ones who have to try harder, who do not understand despite repetition, who cannot pay attention when they should. Increasingly they believe they are condemned to fail, become less motivated, expect to do badly and do not get opportunities to shine. Lack of effort, truancy, lying, outbursts of anger can emanate from this negative mood. For teachers trying to manage a whole class, the child with NF1 can be a disruptive presence if there is no access to appropriate support and advice.

**Adjustments**

**Classroom Management**

Teachers should be well informed about the condition if there is a young person in their care who has neurofibromatosis type 1 (NF1). Close communication and conversations with the family and the young person will reveal considerations with regards managing any limitations and lifestyle adaptations necessary in the school setting.

**Teaching Strategies**

It is most common that specific learning differences will accompany the condition and the general classroom management and teaching strategies for the specific difference can be implemented.

**Links**

- [http://www.nfauk.org/](http://www.nfauk.org/)
- [http://rarediseases.about.com/od/neurofibromatosis/a/neurofibroma1.htm](http://rarediseases.about.com/od/neurofibromatosis/a/neurofibroma1.htm)

**Sources of Information**

Neurofibromatosis Type 1
Information for Teachers
The Neurofibromatosis Association
Quayside House, 38 High Street
Kingston on Thames, Surrey KT1 1 HL
website: [www.nfauk.org](http://www.nfauk.org)

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Non-Verbal Learning Disorder

Definition

Non-verbal learning disorder (NLD) is a neurological disorder consisting of specific assets and deficits. The inability to interpret and apply appropriate non-verbal communication skills to all social settings is at the heart of this disorder. The process to cognitively develop appropriate behaviours through observation of others is not accessible to children with NLD.

Features

Strengths

- Early speech language and vocabulary development
- Superior verbal skills and ability for eloquent expression
- Highly developed rote auditory memory skills for verbal information
- Early reading skills dev and well developed spelling ability

Deficits / dysfunctions

- Social ineptness
  - Unable to comprehend non-verbal communication signals and cues
  - Difficulties adjusting to transitions and novel situations
  - Deficits in social competencies, judgement and social interaction
- Visual-spatial-organisational
  - Unable to visualise
  - Poor visual recall
  - Faulty spatial perceptions and difficulty with spatial relations
- Motor
  - Lack of co-ordination
  - Severe balance problems
  - Difficulties with graphomotor skills

There is a great diversity in clinical manifestation of NLD and it is important to note that no two children who meet this diagnosis criteria are the same. For some children the problem may rest predominantly with their maths and handwriting. For others it may be more organisation, attention, behaviour and social skills. For some the motor problems are significant whilst for others they are non-existent.

Adjustments

Classroom Management

Because of their highly developed verbal skills and remarkable rote memory ability; students with NLD appear a lot more adept and adaptable than is actually the case and can be mistakenly identified as ‘behaviour problems’. Recognise the neurobehavioural characteristics that impede the student with NLD and seek to provide compensatory strategies based on their assets.
Students may have difficulty in a variety of areas:

- Social understanding – struggle to read the non-verbal information in other people’s facial expressions, body language, tone of voice and choice of words; interpret speech literally, can’t decipher metaphors, puns

- Anxiety & stress– confusion and fear lead to emotional vulnerability, so management is important to avoid depression and anxiety disorders

- Maths – unable to visualise the sequence so need step-by-step processes, especially with concepts about what the operations are trying to achieve; routines are not automatic

- Non-verbal and spatial thinking– especially with abstract concepts, maps, team sports where direction and movement are important, orientation and negotiating new environments

- Handwriting – getting thoughts on paper. Have trouble automating letter formation, trouble organising the letters and words on paper(size and placement), trouble planning the whole process of putting thoughts into sentences and words to write

- Organisation – the core problem is impairment in the ability to take multiple pieces of information and pull them together to form a single, integrated ‘picture’; need large tasks to be broken down into little ones

- Attention – maintaining attention especially if material in uninteresting

- Motor coordination – clumsiness in some physical activities including handwriting

**Teaching Strategies**

**Social:**

- Explicit instruction in social competencies

- Teach situation specific social skills such as verbal rules

- Behaviour modification based on the assumption that students know the appropriate behaviour may not be effective

- Non-verbal social reinforcers need to be coupled with descriptive words and verbal explanations

- Monitor anxiety levels; acknowledge the problem and give explanations and strategies for specific situations

- Monitor teasing and bullying and teach strategies to deal with these

- Concept formation – teach them to ask for help when they need concepts explained individually and ensure this can be done without embarrassment

- Fact and fantasy – some children become so adept at creative explanations for difficult situations that they can often lose the ability to know if what they are saying is the truth or wishful thinking. Help them to distinguish between these in their own minds with clarity

**Visual spatial:**

- Maths – if they are pushed to keep up with peers they suffer an increasing fragmented understanding of maths concepts. Consolidate the basics – they may need an individual curriculum then progress at own rate

- Structured predictable environment
Motor:

- Gross motor – find activities they enjoy and that are non-competitive
- Handwriting – efficient use of adaptive technology for getting ideas down on paper. Use of Alpha Smart, laptop
- Executive function – memory, attention, organisation – teach organisational skills explicitly eg study skills, planning. Use usual strategies to assist with memory and attention problems

With all problems – intervene as early as possible and put things into words and verbal instructions.

As the academic curriculum, and life in general (socially, organisationally) becomes more complex and challenging, the difficulties for children with NLD increase. With maths, for example, there is often a ceiling to comprehension, a point beyond which it becomes almost impossible to keep up with the curriculum.

Links
www.nldline.com
http://www.nldontheweb.org

Sources of Information
www.literacyscare.com/articles/nild.pdf
http://www.nldline.com/

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Obsessive Compulsive Disorder

Definition

Obsessive Compulsive Disorder (OCD) is characterised by involuntary, recurrent thoughts and behaviours that consume time, provoke anxiety and interfere with normal life functioning. OCD lies at one end of a continuum on which all persons are positioned. Almost everyone experiences obsessive thoughts and/or exhibits compulsive behaviour. However, whether obsessions or compulsions are a problem for the individual depends on the degree to which normal functional behaviour is restricted or whether the enjoyment of life is adversely affected.

Features

Obsessive-compulsive behaviour is a consequence of anxiety. It is the individual's current best attempt to manage his or her anxiety. However, if the obsessive-compulsive behaviour interferes with functional behaviour, it creates further anxiety. In this way a repetitive cycle of behaviour is set up, ie, anxiety creates obsessive-compulsive behaviour which, in turn, creates further anxiety, etc.

Obsessions are unpleasant thoughts, ideas, or images that are bothersome and intrude on the person’s thinking relevant to his/her current activity. They are usually persistent, occur repeatedly and are excessive. They can not be controlled. Because they cause anxiety, the sufferer tries to ignore them or put them out of the mind, but this is very hard to do. Some times they can be suppressed for awhile, but they return.

Compulsions are actions or behaviours that the sufferer feels compelled or "forced" to repeat over and over again even though he realises he is doing it to excess and that what he is doing is senseless. He repeats these behaviours until his anxiety level has been reduced and he is satisfied that they have been carried out adequately. He may realise that these behaviours are unnecessary and inappropriate, but he continues such activities because it helps to relieve inner tension and stress.

Obsessive-compulsive behaviours can have a waxing and waning course. Any environmental event, which increases stress and anxiety, is likely to increase the severity of the obsessive-compulsive behaviour. While locked into the obsessive thinking and/or compulsive behaviour, the OCD sufferer experiences anxiety and has the feeling of being "stuck" in a ritualised routine which is inappropriate although it serves to reduce the anxiety? If he is interrupted anxiety will increase and may be exhibited as fearfulness, agitation, aggression, irritability, restlessness, indecisiveness or somatic complaints (headaches, stomachs).

Common obsessions

Many obsessive thoughts and compulsive behaviours are normal and may be engaged in most people to a minor extent. It is only when the level of these behaviours becomes excessive and interferes with normal functioning that one would describe them as obsessive or compulsive. Some of the more common examples of obsessive thinking are as follows:

- Anxiety about lights, heaters etc being turned off
- Anxiety that doors and windows are not locked
- Abnormal suspicion of people
- Fear of losing things
- Concern about germs or illness or dirt
If i produce perfect work i will be acceptable to others
Body dysmorphic disorder (needing the perfect body)

Common Compulsions
A large number of behaviours may become compulsive if they serve to reduce anxiety. Many of these behaviours are quite idiosyncratic, but the following list contains behaviours that frequently become compulsive.

- Excessive washing of hands, rooms, etc.
- Rituals to ensure lights, heaters etc are turned off or doors and windows are locked
- Frequent checking of appearance in anything that will serve as a mirror
- Spending so long on one task that the rest of it is not completed, i.e., perfectionism
- Excessive concern with tidiness and order
- Possessions arranged in a ritualized manner
- Daily activities conducted as rituals. Activities engaged in at certain times and in certain orders. The sufferer endures increased anxiety if such rituals are disrupted
- Engaging in rituals to ensure good luck, e.g., touching objects an exact number of time, or jumping cracks in the pavement.

Adjustments

Classroom Management
OCD may be a chronic, life-long disorder. Since obsessive and compulsive behaviours are the obvious manifestation of anxiety, the prognosis is heavily dependent on the cause of the anxiety and the degree to which such anxiety can be managed through medication or counselling. The course and duration of the disorder varies from person to person as much as the symptoms. Without appropriate treatment, it is very likely that the sufferer will experience a life-long debilitating disorder. With treatment, the prognosis is much more positive. The person may cope reasonably well most of the time, although it is probable that the sufferer will continue to experience difficulties during periods of stress.

Teaching Strategies

- Obsessions and compulsions are coping mechanisms. It is unwise to take away a coping mechanism while the need for such strategies exist, unless you can substitute a more effective coping mechanism.
- The fact that obsessional compulsive behaviour appears to be irrational to an observer is irrelevant. It is serving some purpose to the sufferer. Arguing logically with the sufferer about the irrationality of his/her behaviour will be ineffective, and will often merely increase anxiety and exacerbate the problem.
- People with OCD are aware that their behaviour is irrational. It is simply that they feel increasingly anxious if they try to eliminate such behaviour.
- OCD is often only the symptom of an underlying problem. Treatment of the symptom may not alleviate the basic problem with the result that treatment may not be effective.
- Banning one obsessive-compulsive behaviour may simply lead to symptom substitution. Another symptom will take its place.
- Because it is likely that anxiety will be increased through the repressive focus on the first symptom, it may well happen that the condition deteriorates.
• Work closely with specialist expertise and counsellor in addressing the issue
• Effective treatment strategies may include improving self esteem, since poor self esteem is often associated with anxiety.
• Anxiety reduction strategies such as relaxation techniques and systematic desensitisation may be implemented.
• Various cognitive-behavioural strategies may be helpful, since these focus on the destructive self-talk engaged in by people with OCD.
• Helping the person to find more appropriate coping strategies may reduce adverse effects of the current obsessive-compulsive behaviours. While these new coping strategies may also be obsessive-compulsive in nature, they can be tolerated if they do not interfere with effective daily functioning.

Links
Refer also to: Anxiety Disorder

www.odcawareness.com
http://psychcentral.com/disorders/ocd

Sources of Information
ADDIDD Information Sheet
Written by Christine Cage and Steve Dossel.

Teaching the Tiger
Dombush, M.P. and Pruitt, S.K.

The Treatment of Anxiety Disorders

Tourette Syndrome
Nash, Dr. Harry

Obsessive Compulsive Disorder Support Group - Queensland
Telephone: 33584988

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Oppositional Defiant Disorder

Definition

Oppositional Defiant Disorder (ODD) is a Disruptive Behaviour Disorder described by DSM-IV as a pattern of negativistic, hostile and defiant behaviour lasting at least six months during which four or more of the following are present:

- Often looses temper
- Often argues with multiple adults
- Often actively defies or refuses to comply with adult requests or rules
- Often deliberately annoys people
- Often blames others for his/her mistakes or behaviour
- Is often touchy or easily annoyed by others
- Is often angry or resentful
- Is often spiteful and vindictive

Conduct Disorder (CD), another Disruptive Behaviour Disorder, is associated with efforts to break rules without getting caught. Such children may be aggressive to people or animals, destroy property, lie or steal things from others, run away, skip school, or break curfews. CD is often described as delinquency. The behaviours must occur more frequently and to a greater degree that is age or developmentally appropriate.

Both of these Disruptive Behaviour Disorders most commonly occur as a co-morbid condition with ADD or ADHD. About 40 percent of individuals with AD/HD have oppositional defiant disorder (ODD). Among individuals with AD/HD, conduct disorder (CD) is also common, occurring in 25 percent of children, 45-50 percent of adolescents and 20-25 percent of adults. Young people who have co-existing conditions experience much more difficult lives than those with ADHD alone.

Features

Oppositional behaviour is typically shown by aggressive refusal to comply with teacher or parent requests. The child may become physically or verbally abusive to the adult concerned and may damage property, or risk injury to self or others.

Parents and/or teachers feel that their discipline is being threatened and feel impelled to persevere in order to make the child confirm. This results in an escalation of the problem as both parties to the confrontation struggle to assert their wills. The consequence is that the interaction between adult and child becomes locked into a win-lose confrontation.

While it is possible that this type of behaviour occurs as a result of other factors, it often happens that the characteristics of ADHD are implicated in the occurrence of such behaviour. Children with ADHD lose their tempers easily, and react without thought of consequences to the constraints of their environment. Because of the considerable failure and frustration which they experience in their daily activities, they are more likely to react aggressively to the constraints being imposed on them.
Adjustments

Classroom Management

In managing problem behaviours in children, it is often useful to consider your own perspective of the problem. If the child is seen as the problem, the focus becomes a search for effective ways of changing the child. This is likely to increase the child’s antagonistic feelings and lead to an escalation of the oppositional behaviour. It is more productive to consider the oppositional behaviour in the context in which it occurs and to look for ways in which this context can be altered. In other words, the behavioural context has become confrontational, and, as long as the participants in this context maintain a win-lose orientation, the oppositional behaviour will continue.

Oppositional behaviour only occurs in an oppositional interaction. Regardless of who triggers off the oppositional episode, both parties become enmeshed in the oppositional interaction. If one party leaves the interaction, it ceases to exist.

Teaching Strategies

- Learn the strategies the child uses to engage the adult in a confrontation.
- Learn to identify situations and child’s emotional states which are most likely to lead to confrontation.
- If confrontation starts, conclude the interaction as soon as possible
- Reiterate the original command and tell the child that you will respond to him when the child shows he is ready to comply. This avoids win-lose situations.
- Teach self-control strategies to the child and social skills training. Social skills training for the whole class avoids singling out child.
- Teach child alternative behaviours to use early in the interaction in a non-threatening manner during weekly debriefing sessions.
- It is better to change what is provoking the oppositional behaviour before it occurs.
- When a child withdraws and won’t carry on his work, it is better to walk away after saying something like “I expect this work to be finished by... You can decide when you are ready to start. I have to go to the other side of the room to help... Come and see me if you need help.”
- Be careful with your tone of voice, facial expression and body language. Speaking calmly and quietly in a detached manner emphasises your control. Becoming angry and frustrated emphasises how much the child is in control.
- If child is agitated, avoid starting an interaction involving a direct demand.
- Don’t argue with a child or become involved through a series of questions initiated by the child.
- Don’t attempt to use coercion if the child refuses to cooperate.
- Apply penalties promptly with minimum of talking and emotion.
- Be positive, assertive and brief and use humour if appropriate.
- Give genuine positive feedback when you see child is trying to take some steps in the right direction.
Links
Refer also to: Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder

www.oppositional-defiant-disorder.com
www.teenswithproblems.com/conduct_disorder.html: explains the difference between conduct disorder and oppositional defiant disorder

Children and Adults with Attention -Deficit/Hyperactivity Disorder (CHADD) - Fact Sheets - ADHD and Co-Existing Disorders
http://www.chadd.org

Sources of Information
Attention Deficit Disorder Information and Support Services ADDISS PO Box 1661 Milton Q 4064 Telephone: (07) 3368 3977 Information Sheet – Oppositional Defiant Disorder

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Pervasive Developmental Disorder

Definition

Autism is a complex neurodevelopmental disorder that typically appears during the first three years of life; occurring in as many as 1 in 500 individuals and four times more prevalent in boys than girls.

Significant changes to the criteria and categories of Autism Spectrum Disorder were made in the revised Diagnostic and Statistical Manual- Fifth Edition (DSM-5), which was released in 2013. The previous DSM-IV identified a set of Pervasive Developmental Disorders that were considered “autism spectrum disorders” (ASDs). These included Autistic Disorder, Asperger’s Disorder, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). One of the most significant changes is that these separate diagnostic labels will be replaced by one umbrella term “Autism Spectrum Disorder.” The removal of the formal diagnoses of Asperger’s Disorder and PDD-NOS is a major change.

The previous criteria for the domains for Autistic Disorder included a triad of impairments in Communication, Social Interaction, and Restricted Interests and Repetitive Behaviours. In the DSM 5 the Communication and Social Interaction domains have been combined into one, titled “Social/Communication Deficits”. The second domain refers to “Restricted, repetitive patterns of behaviour, interests or activities.”

Diagnosis

As outlined in the DSM 5 (2013), the revised criteria needed to meet a diagnosis of Autism Spectrum Disorder is **ALL Four of the following criteria A, B, C and D must be met:**

A **Deficits in social communication and social interaction as manifested by all 3 of the following:**

- Deficits in social-emotional reciprocity
- Deficits in nonverbal communicative behaviours for social interaction
- Deficits in developing and maintaining relationships

B **Restricted, repetitive patterns of behaviour, interests, or activities as manifested by at least 2 of following:**

- Stereotyped or repetitive speech, motor movements, or use of objects
- Excessive adherence to routines/resistance to change
- Highly restricted, fixated interests
- Hyper-or hypo-reactivity to sensory input

C **Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed capacities)**

D **Symptoms together limit and impair everyday functioning.**
Further distinctions are made according to severity levels. The severity levels are based on the amount of support needed, due to challenges with social communication and restricted interests and repetitive behaviors. For example, a person might be diagnosed with Autism Spectrum Disorder, Level 1, Level 2, or Level 3.

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social communication</th>
<th>Restricted, repetitive behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 3</strong></td>
<td>Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.</td>
<td>Inflexibility of behaviour, extreme difficulty coping with change, or other restricted/repetitive behaviours markedly interferes with functioning in all spheres. Great distress/difficulty changing focus or action.</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td>Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and how has markedly odd nonverbal communication.</td>
<td>Inflexibility of behaviour, difficulty coping with change, or other restricted/repetitive behaviours appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td>Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with</td>
<td>Inflexibility of behaviour causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.</td>
</tr>
</tbody>
</table>
Features

Autism is a spectrum disorder. In other words, the symptoms and characteristics of autism can present themselves in a wide variety of combinations, from mild to severe. Although autism is defined by a certain set of behaviors, children and adults can exhibit any combination of the behaviors in any degree of severity. Individuals on the Autism Spectrum, can act very differently from one another and have varying skills. Therefore, there is no standard “type” or “typical” person with autism.

Features exhibited may include:

- Difficulties in the ability to interact socially, communicate with others and relate to the outside world
- Spending time alone rather than with others; shows little interest in making friends; less responsive to social cues such as eye contact or smiles
- Aggressive and/or self-injurious behavior
- Repeated body movements (hand flapping, rocking)
- Unusual responses to people
- Attachments to objects - perseverates (shows an obsessive interest in a single item, idea, activity or person)
- Resistance to changes in routines
- Sensitivities in the five senses of sight, hearing, touch, smell, and taste
- Process and respond to information in unique ways
- Unique pattern of learning strengths and difficulties

Some individuals with autism may also have other disorders which affect the functioning of the brain such as: Epilepsy, Intellectual Disability, Down Syndrome, or genetic disorders such as: Fragile X Syndrome, Landau-Kleffner Syndrome, William's Syndrome or Tourette's Syndrome. Many of those diagnosed with autism will test in the range of intellectual disability. Approximately 25-30 percent may develop a seizure pattern at some stage.

Adjustments

Classroom Management

Every person with autism is an individual, and like all individuals, has a unique personality and combination of characteristics; including strengths and gifts which can be used to compensate for and cope with their disability.

Evidence indicates that early, appropriate, and intensive educational interventions result in dramatically positive outcomes for young children with autism. Explicit instruction in the use of management strategies and coping mechanisms is the key in ensuring people with Autism learn skills to function successfully, enjoy a quality lifestyle and contribute as valuable community members.

Individuals with autism can learn when information about their unique styles of receiving and expressing information is addressed and implemented in their programs. Abilities may fluctuate from day to day due to difficulties in concentration, processing, or anxiety. The child may show evidence of learning one day, but not the next. Changes in external stimuli and anxiety can affect learning.
Teaching Strategies

- A highly structured, specialized education program, tailored to the individual needs
- A well-designed intervention approach may include some elements of communication therapy, social skill development, sensory integration therapy and applied behavior analysis delivered by trained professionals in a consistent, comprehensive and coordinated manner
- The more severe challenges of some children with autism may be best addressed by a structured education and behavior program which contains a one-on-one teacher to student ratio or small group environment
- Training in functional living skills at the earliest possible age to enhance independence
- Opportunity for personal choice
- Approach should be flexible in nature
- Positive reinforcement
- Re-evaluate programming on a regular basis in consultation with family and specialist expertise
- Provide a smooth transition from home to school to community environments
- Incorporate training and support systems for parents and caregivers include training in generalization of skills to all settings

Links

Refer also to: Autism Spectrum Disorder

Sources of Information

http://www.dsm5.org/Pages/Default.aspx

PO Box 1661 Milton Q 4064 Telephone: (07) 3368 3977
Information Sheet – Oppositional Defiant Disorder

Children and Adults with Attention-Deficit/Hyperactivity Disorder
CHADD - Fact Sheets - ADHD and Co-Existing Disorders
http://www.chadd.org

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Phonemic Awareness

Definition
Phonemic awareness is the ability to hear, identify and manipulate single sound units in words (phonemes). It also involves understanding the physical movement of the mouth and placement of the tongue in order to articulate the phoneme.

Phonemic awareness is vital in learning to read, write and spell and is a prerequisite skill to phonics. Children must acquire phonemic awareness prior to beginning formal phonics instruction. In order to successfully engage in reading, writing and spelling, children need to be able to make letter to sound connections and also sound to letter connections.

Features
Once children can recognize and work with sounds, they are ready to learn the symbolic representations that accompany them (phonics).

Children who understand speech sounds are better able to learn rapid-accurate naming of letters. Children who can blend and pull apart the sounds of words are equipped to identify and record sounds in words.

These understandings are essential because children must know that:

- A single letter may make different sounds
- A single sound may have different letter representations

The key understanding children require is knowledge that a single sound is constant, ie. one sound will always be one sound, despite different visual representations.

Adjustments

Classroom Management
Steps to build phonemic awareness:

1. Focus on individual phonemes
2. Engage in explicit examinations (oral and auditory), eg. learn the tongue twister, stretch out the sound, play games to practice
3. Engage the children in oral games, listening for known phonemes in words. Generalisation is evidence of phonemic knowledge

Teaching Strategies
The five levels of phonemic awareness are:

1. Identifying rhyme
2. Matching words by beginning sound or by rhyme
3. Separating a word into onset (the first sound) and rime (the ending sound), e.g. cat = /c/ /at/ This is known as a consonant-vowel-consonant (cvc) letter sequence
4. Segmenting all phonemes, e.g. dog is /d/ /o/ /g/
5. Manipulating phonemes, e.g. Phoneme deletion tasks: cat without /c/ → /at/; Phoneme reversal tasks: cat reversed is tack

<table>
<thead>
<tr>
<th>Phoneme Counting</th>
<th>More Complex</th>
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<tbody>
<tr>
<td>Sound Isolation</td>
<td></td>
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<tr>
<td>Word to word matching</td>
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<tr>
<td>Phoneme Blending</td>
<td></td>
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<tr>
<td>Auditory Discrimination</td>
<td></td>
</tr>
<tr>
<td>Rhyme</td>
<td>Simple</td>
</tr>
</tbody>
</table>

**Links**

Refer also to: [Phonological Awareness](#)

**Sources of Information**

SMILE
Strategic Management of the Instruction of Literacy in the Early Years

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Phonological Awareness

Definition
Phonological awareness is a metalinguistic skill relating to the ability to “tune in to” or attend to the separate sounds that form spoken words. The word mum for example, has 3 sounds, mmm-uuu-mmm.

If a child has poor phonological awareness does this mean that he cannot hear properly?
The answer is, “No, not usually.”

Phonological awareness is the ability to consciously notice the individual sounds and their order within words. Children with normal hearing may or may not have difficulties in phonological awareness. Phonological awareness is the ability to recognise sounds as separate from one another. It is not the ability to hear them.

Features
Phonological awareness is a family of different skills. All require conscious reflection on the sound structure of language and an awareness that words:

- Are made up of syllables and phonemes (sounds) (ba-na-na)
- Can rhyme (jump, hump, bump)
- Can start with the same sound (alliteration) (nine nice names)
- Can be formed by blending the necessary individual sounds together (f-i-sh makes fish)
- Can be segmented into separate sounds (dog contains the sounds d-o-g)
- Can be changed by removing, adding or reordering certain sounds (bat without the b is at)

Adjustments
Classroom Management
Listening for sounds is critical in learning to read. It is especially important in the early stages of reading and spelling when children are beginning to learn about how sounds and letters are related.

Listening for these sounds may not be easy for some children because when we speak, the individual sounds in words are run together and overlap each other. They are not separate and distinct. The young child does not hear the word mum as m-u-m, because that is not how it is said. When we talk, we are busy thinking about the meaning of what we say. However, in order to learn to read and write we have to notice the separate sounds that form the structure of spoken words. This is why phonological awareness is such an important foundation for literacy.

Teaching Strategies
Provision of a language rich environment during the early years is essential to developing phonological awareness. Children’s exposure to a rich linguistic environment in the primary class rooms continue to develop automaticity in the skills required for reading and spelling. Implementation of a structured multisensory language program will be necessary for those students who continue to experience severe difficulties with spelling and reading proficiency.
Screening tests for phonological awareness can be administered to gain a clear understanding of gaps in skill development and assist with targeted intervention. (E.g. Sutherland Phonological Awareness Test)

Language activities can be planned to target the following skills:

- Syllable Identification
- Rhyme Identification
- Rhyme Production
- Phoneme Substitution
- Identification of Initial Sound
- Identification of Final Sound
- Blending
- Segmentation

Links

Refer also to: Phonemic Awareness

Sources of Information

SPELD Vic- Brochure Phonological Awareness

Tyquin group Speech Pathology
www.tyquin.com.au

SMILE (Strategic Management of the Instruction of Literacy in the Early Years)

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Physical Impairment

Definition
A physical impairment is defined as a dysfunction of the musculoskeletal and/or neurological body systems, which affects the functional ability of a student to move or coordinate movement. The impairment may have a mild impact on their access to, participation in, and outcomes from schooling, while others will experience a more significant impact.

Features
Students with a mild impairment may take a little longer to complete tasks, have problems with coordination or difficulties with fine motor skills. Students with a severe impairment may require assistance to help them to move, and have difficulty with communication and self-help skills.

Physical impairment has a variety of causes and presents differently in each case. Some conditions are progressive, whilst others are non-progressive. Some students are born with physical impairment, whilst others follow normal patterns of development until the impairment is acquired.

Some causes are:
- Damage to the central nervous system (brain, spinal cord or the nerves that run from the spinal cord)
- Malformations present at birth
- Disease
- Genetic disorders, syndromes
- Accidents which result in brain injury, spinal injury, loss of limbs or severe burns

Adjustments
Classroom Management
Classroom modifications may be required to enable the student with physical impairment to access and participate in learning activities. For example:
- A ramp over a lip across the doorway
- Power points in an appropriate position for equipment
- Appropriate furniture
- Space to manoeuvre
- Appropriate positioning of stored books and equipment
- Appropriate positioning of desks to facilitate interaction
- Access to books, equipment, activities
Specific classroom strategies are required for individual students to enable them to access the curriculum and these can be suggested by support personnel. However, regardless of the actual task or activity being performed, there are some basic principles which apply to the interaction between teachers and students with physical impairment. These are:

- Work with the student, not the disability
- Do not assume that you know what the student wants — wait to be asked or check with the student
- Do not speak about the student in front of them
- Help the student to problem solve — don’t provide all the answers
- Encourage the student to listen to the teacher and not to be dependent on the teacher aide
- Always explain your intentions if you are going to move the student manually — expect the student to be involved in all stages of movement
- Position yourself in the most appropriate position for conversation, keeping in mind who else is in the group and who and what the student needs to see — you may need to bend down to speak to a student in a wheelchair
- Promote student involvement in discussion
- Encourage others to address their comments and questions directly to the student do not speak for the student unnecessarily
- Try to approach the student within their line of vision — he or she could startle if you appear unexpectedly
- Provide opportunities for the student with physical impairment and their peers to accept responsibility for their own actions
- Use alternative methods as suggested by support personnel
- Be flexible, for example, vary the rate at which the student moves through the curriculum

Teaching Strategies

Students with physical impairment have specific and individual needs that must be addressed to enable them to participate fully and effectively in school. Therefore it is not possible to list specific teaching strategies, as they will vary to suit each student. Support teachers: physical impairment and advisory visiting teachers: physical impairment (AVT:PI), are key people to contact. They will be able to assist in determining appropriate teaching strategies that will allow individual students to access the curriculum and demonstrate learning outcomes. For example, they can model teaching strategies, advise on adaptations, suggest alternative ways to assess student learning and train teacher aides to use specialised equipment.

It is of paramount importance that students with physical impairment are comfortable and assume the postural position (seated or standing) which facilitates best their concentration and their ability to participate in activities.

As far as possible, plan activities that encourage access and participation, not specially focused on the student with physical impairment. Some strategies used to support such students could be beneficial to all students in the class, for example, handouts to reduce the amount of notes that need to written.

Teaching strategies should enable the student with physical impairment to participate as fully as possible in class activities. Strategies that utilise effective learning and teaching apply to all students, but are particularly important for students with physical impairment to ensure access and
participation.

A number of aspects should be considered when determining suitable teaching strategies. These are:

- the recognition of various learning styles and the individual needs of students
- The correct use of specialised equipment as prescribed
- The use of appropriate equipment, for example, keyboard instead of pen and paper
- Students to become as independent as possible
- Active participation in all activities
- Appropriate task performance
- The further development of fine and gross motor skills
- The correct positioning of the student
- An appropriate allowance of time to complete tasks
- The use of communication methods such as sign, gesture, object symbols,
- Pictographs, voice output communication aids
- The use of augmentative or alternative communication such as drawings, photographs, symbols, communication books, computer systems
- The consideration of the social and emotional needs of the student
- The establishment and maintenance of peer interaction and relationships through appropriate activities
- The adherence to behaviour policies and practices of the school and classroom by all students
- The consideration of the student's intellectual ability, remembering that students with physical impairment have the normal range of intellectual ability from gifted and talented to those who also have an intellectual disability.

- Generally, specialised equipment or technology used by students to access school and participate in learning activities will be used across curriculum areas.

Links


Sources of Information

*Teaching Students with Disabilities Resource Kit* 1998, Griffith University and Education Queensland, Brisbane. A kit containing six videos and six booklets. Contains an introduction, a section for administrators, and sections on each of the following disability areas: • hearing impairment • intellectual disability • physical impairment• vision impairment. This kit was distributed to State schools in March 1998.
There is a range of personnel within the school systems who could be approached for information and assistance.

Education Queensland employs advisory visiting teachers: physical impairment (AVT:PI) to work with students with physical impairment whose educational needs have been identified through the EAP verification process. They support students from birth to exiting school, across a range of educational settings including non-governmental schools, usually within a geographical cluster. Their role is to support program development and provision for students with physical impairment.

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Post Traumatic Stress Disorder

Definition
Child traumatic stress refers to the physical and emotional responses of a child to events that threaten the life or physical integrity of the child or of someone critically important to the child (such as a parent or sibling). Such events overwhelm a child's capacity to cope and elicit intense physical and emotional reactions that can be as threatening to the child's sense of physical and psychological safety as the traumatic event itself.

Features
Acute trauma
A single traumatic event that is limited in time is called an acute trauma. An earthquake, dog bite, or motor vehicle accident are all examples of acute traumas.

Other examples include:
- School shootings
- Gang-related incidents
- Terrorist attacks
- Natural disasters (e.g., wildfires, floods, hurricanes)
- Serious accidents
- Sudden or violent loss of a loved one
- Physical or sexual assault (e.g., being shot or raped)

Over the course of even a brief acute event, a child may go through a variety of complicated sensations, thoughts, feelings, and physical responses that rapidly shift as the child assesses and reassesses the danger faced and the prospects of safety. As the event unfolds, the child's pounding heart, out-of-control emotions, and other physical reactions are frightening in and of themselves and contribute to his or her sense of being overwhelmed.

Chronic trauma
When a child has experienced multiple traumatic events, the term chronic trauma is used. Chronic trauma may refer to multiple and varied events such as a child who is exposed to domestic violence, is involved in a serious car accident, and then becomes a victim of community violence or longstanding trauma such as physical abuse or war. One prevalent form of chronic trauma is child neglect, defined as the failure to provide for a child's basic physical, medical, educational, and emotional needs. Neglect can have serious and lifelong consequences. Particularly for very young children who are completely dependent on caregivers for sustenance, experiencing neglect can feel acutely threatening. Neglect often occurs in the context of other maltreatment, such as periods of abandonment and abuse, and is frequently associated with other psychosocial stressors and forms of adversity such as extreme poverty and parental substance abuse.

The effects of chronic trauma are often cumulative, as each event serves to remind the child of prior trauma and reinforce its negative impact. A child exposed to a series of traumas may become more overwhelmed by each subsequent event and more convinced that the world is not a safe
place. Over time, a child who has felt overwhelmed over and over again may become more sensitive and less able to tolerate ordinary everyday stress.

**Complex Trauma**

Complex trauma is a term used by some experts to describe both exposure to chronic trauma—usually caused by adults entrusted with the child’s care, such as parents or caregivers—and the immediate and long-term impact of such exposure on the child (Cook et al., 2005). Children who have experienced complex trauma have endured multiple interpersonal traumatic events (such as physical or sexual abuse, profound neglect, or community violence) from a very young age (typically younger than age 5).

When trauma is associated with the failure of those who should be protecting and nurturing a child, it has profound, multifaceted, and far-reaching effects on nearly every aspect of the child’s development and functioning. These children suffer impairment in many of the following areas:

**Attachment:** Traumatized children feel that the world is uncertain and unpredictable. Their relationships can be characterized by problems with boundaries as well as distrust and suspiciousness. As a result, traumatized children can become socially isolated and have difficulty relating to and empathizing with others.

**Biology:** Traumatized children demonstrate biologically based challenges, including problems with movement and sensation, hypersensitivity to physical contact, and insensitivity to pain. They can have problems with coordination, balance, and body tone, as well as unexplained physical symptoms and increased medical problems (e.g., asthma, skin problems, and autoimmune disorders).

**Mood regulation:** Children exposed to trauma can have difficulty regulating their emotions as well as difficulty knowing and describing their feelings and internal states. They may struggle to communicate their wishes and desires to others.

**Dissociation:** Some traumatized children experience a feeling of detachment or depersonalization, as if they are "observing" something happening to them that is unreal. They can also demonstrate amnesia-like states.

**Behavioral control:** Traumatized children can demonstrate poor impulse control, self-destructive behavior, and aggression towards others. Sleep disturbances and eating disorders can also be manifestations of child traumatic stress.

**Cognition:** Children exposed to trauma can have problems focusing on and completing tasks in school as well as difficulty planning for and anticipating future events. They sometimes have difficulty understanding their own contribution to what happens to them. Some traumatized children demonstrate learning difficulties and problems with language development.

**Self-concept:** Traumatized children can experience a lack of a continuous, predictable sense of self. They can suffer from disturbances of body image, low self-esteem, shame, and guilt.

**Features**

Physical and emotional reactions include:

- An overwhelming sense of terror
- Helplessness
- Horror
- Physical sensations such as rapid heart rate, trembling, dizziness, or loss of bladder or bowel control
Children in the United States are exposed to a wide range of traumatic events, from natural disasters to motor vehicle accidents, dog bites, community violence, and physical and sexual abuse. Studies indicate that one in four children and adolescents experience at least one potentially traumatic event before the age of 16 (Costello et al., 2002). According to the National Survey of Adolescents (Kilpatrick et al., 2003):

- Four out of 10 adolescents have witnessed violence
- Seventeen percent have been physically assaulted
- Eight percent have experienced sexual assault

The short- and long-term impact of such events is determined in part by the objective nature of the events, and in part by the child's subjective response to them. Not every distressing event results in traumatic stress, and something that is traumatic for one child may not be traumatic for another.

The ultimate impact of a potentially traumatic event depends on several factors, including the child’s:

- Age and developmental stage
- Perception of the danger faced
- Whether the child was the victim or a witness
- Relationship to the victim or perpetrator
- Past experience with trauma
- The adversities the child faces in the aftermath of the trauma
- The presence/availability of adults who can offer help and protection

**Adjustments**

**Classroom Management**

Traumatic stress may have both short- and long-term consequences for the child's mental health, physical health, and life trajectory, including:

- The child's traumatic exposure may have produced cognitive effects or deficits that interfere with the child’s ability to learn, progress in school, and succeed in the classroom and the community (and later in the workplace)
- The child’s inability to regulate emotions may interfere with his or her ability to function in a family, a traditional classroom, and/or with peers in the community
- The child’s mistaken feelings of guilt and self-blame for the negative events in his or her life may lead to a sense of hopelessness that impairs his or her ability and motivation to succeed in social and educational settings
- A child’s traumatic experiences may alter his or her worldview so that the child now sees the world as untrustworthy and isolates himself or herself from family, peers, and social and emotional support

Students experiencing PTSD may have difficulty concentrating on work, as they are focused on the traumatic event and ensuring that they can avoid it in the future. Students may also be distracted frequently by reminders of the trauma triggering ‘flashbacks’, leading to an inability to complete work. Students’ reactions may be out of context given the current situation as they react to their perception of events, or reminders of past events. Reminders may come from any of the senses, and may seem innocuous to others (e.g. a smell of a vehicle, the rustle of leaves, the touch of a friend, or the use of a certain word). Emotional reactions may take the
form of fear, horror, anger or hopelessness, without an obvious trigger. Younger students are not likely to identify anxious feelings, which may make it difficult for educators to fully understand the reason behind poor school performance.

The Impact of Traumatic Stress on Behavior

The behavior of traumatized children can be a reflection of their efforts to adapt to overwhelming stress. For example, some children may reenact aspects of their trauma (e.g., aggression, self-injurious behaviors, or sexualized behaviors) in response to a trauma reminder of a previous traumatic event or as an attempt to gain mastery or control over their experiences.

A trauma reminder is any person, place, situation, sensation, feeling, or thing that reminds a child of a traumatic event. When faced with these reminders, a child may re-experience the intense and disturbing feelings tied to the original trauma. These trauma reminders can lead to behaviors that seem out of place in the current situation but were appropriate-and perhaps even helpful-at the time of the original traumatic event. For example:

- A seven-year-old boy whose father and brother fought physically in front of him becomes frantic and tries to separate classmates playfully wrestling on the schoolyard.
- A three-year-old girl who witnessed her father beating her mother clings to her resource mother and cries hysterically when her resource parents have a mild dispute in front of her.
- An eight-year-old boy whose father physically abused him is tapped on the shoulder by a boy behind him in line and responds by turning and raising his fists.
- A teenager who was sexually abused by her stepfather refuses to go to gym class after meeting the new coach, who wears the same cologne as her stepfather.

When faced with a trauma reminder, children with a history of trauma may feel frightened, angry, or shut down. Their hearts may pound or they may freeze in their tracks, just as one might do when confronting an immediate danger.

Sometimes children are aware of their reaction and its connection to the traumatic situation. But often they are unaware of the root cause of their own feelings and behaviors. They may also exhibit increased behavior problems as a way of coping with deficits in self-control. For instance, in the absence of more mature coping strategies, traumatized children and adolescents may use drugs and alcohol in order to avoid experiencing overwhelming emotions. Similarly, in the absence of knowledge of how to negotiate interpersonal relationships, sexually abused children may revert to sexual behaviors with others because that is the only way they have ever experienced any degree of acceptance or intimacy.

Chronic childhood trauma is associated with two seemingly different behavior patterns: over- and under-controlled behavior:

- Over-controlled behavior may counteract the feelings of helplessness and impotence that can pose a daily struggle for chronically traumatized children. These children may be very resistant to changes in routine and may display rigid behavioral patterns.
- Under-controlled or impulsive behaviors may be due in part to cognitive deficits including difficulty planning, organizing, delaying response, and exerting control over behavior. These deficits can lead to an increase in impulsive responses such as aggression.

The Impact of Traumatic Stress on Brain Development

To understand how trauma affects children, it is important to adopt a developmental perspective. When a child is exposed to trauma, a great amount of emotional and mental energy is expended to respond to, cope with, and come to terms with the event. This may reduce the child’s capacity to explore the environment and master other age-appropriate developmental tasks. A child whose
mind is occupied with intrusive images of traumatic events cannot learn, and so lags behind in school. A child who is trying to cope with frequent reactions to trauma reminders cannot devote his or her energies fully to forming relationships with peers. A child who is fearful of taking any risk cannot take on the challenges that would lead to growth. The longer traumatic stress goes untreated, the further children tend to stray from appropriate developmental pathways.

Recent research indicates that trauma early in life can have serious consequences for the normal development of children's brains, brain chemistry, and nervous system. These changes can place them at risk for learning difficulties, drug abuse, teen pregnancy, risk-taking behavior, and psychiatric and health problems later in life.

In early childhood, trauma can be associated with reduced size of the cortex, the ability of brain hemispheres to connect ("cross-talk"), and the functioning of regions of the brain that govern emotions. These changes can affect IQ and the use of thinking to regulate emotions, and can lead to increased fearfulness and a reduced sense of safety and protection.

During school-age years, the brain develops more ability to manage fears, anxieties, and aggression, to sustain attention for learning, to allow for better impulse control, and to manage physical responses to danger that allow children to consider and take protective actions. Trauma that occurs during this period can undermine these developing capacities of the brain and result in major sleep disturbances, new troubles in learning, difficulties in controlling startle reactions, and behavior that alternates between being overly fearful and overly aggressive.

Throughout adolescence, the maturing the maturing brain permits improved consideration of the consequences of behavior, more realistic appraisals of danger and safety, enhanced ability to govern daily behavior to meet longer-term goals, and increased use of abstract thinking for academic learning and problem-solving. Trauma, by interfering in this stage of brain development, can result in reckless and risk-taking behavior, in "living for today and not tomorrow," in underachievement and school failure, and in making bad choices. Because children and adolescents may experience traumatic stress across several developmental stages, they may have a combination of these behaviors.

The brain also controls stress hormones in the body, an important set of hormones that help us deal with danger. Traumatized children and adolescents show changes in the levels of these stress hormones like those found among combat veterans. A concern is that these changes may affect the way traumatized children and adolescents respond to future stress in their lives and may influence their long-term health (Pynoos et al., 1997).

Teaching Strategies

The teaching strategies required to meet the needs of the individual student will vary. Information regarding the student's needs, and the subsequent modifications and strategies required, should be sought from the appropriate support personnel.

However, the following general strategies will assist the student to participate more fully in classroom activities and lessons:

- Be patient with the student
- Do not use a confrontational approach (allow ‘time out’ for everyone to ‘cool down’)
- Create as little stress as possible, particularly at heavy assessment times
- Be considerate of the student’s needs and abilities

Don’t:

- Become stressed or panic-stricken on the notification that you will be teaching a student with social emotional disorder as this reaction will have a negative impact on the student
• Make assumptions about the student
• Presume to have all the answers
• Try to solve the problem or be a ‘therapist’ as many illnesses are complex and require professional help
• Try to do everything for the student as this may encourage dependency

Do:
• Be willing to listen and understand
• Ask what you can do
• Help students to make use of services available to them
• Offer practical assistance such as:
  o Notetaking
  o Helping to plan work loads
  o Helping the students to manage their time
• Ensure that the student is receiving the appropriate assistance
• Help to create a ‘network’ of support

Links
Refer also to: Anxiety Disorder

Sources of Information

▲ Click here to return to the contents page
Pragmatic Language Disorder

Definition
The social use of language is called pragmatics.

Social skills are important for adolescents, and social competence in adolescence is often an indication of success in later life. Limited social ability becomes increasingly obvious in adolescence and is difficult to change.

Communication requires the integration of verbal, nonverbal and implied messages as well as the use of colloquial and peer-group language.

Features
Social language includes:

- Using appropriate body language and facial expression
- The use of language that is suitable for the listener (the language used in conversation with a mate differs from the language used in conversation with the school principal)
- Spontaneous conversation and the daily banter among peers

The rules of conversation require that:

- Conversation must be coherent
- Turns must be taken
- The speaker must give enough information for the listener to understand and respond
- The speaker must monitor the comprehension of the listener by noting reactions and responses

The pragmatics of language use is a most important area of linguistic growth during the school years. As children develop awareness of others and become more expert in expressing themselves, they develop awareness of the listener's point of view and can adapt what they are saying to different situations and requirements.

What skills do adolescents require to be able to juggle their communication to suit all circumstances?

- The ability to attend to, and to follow, logical conversation. Once a child reaches the age of eleven, topics of conversation tend to become more abstract - talking about things in the past or what might happen in the future.
- To be able to make follow-on statements spontaneously - for example: 'Yeah, i saw that movie too'.
- Be able to solve problems, work out solutions and give opinions with reasons. In doing so, they must be able to keep on a topic.
- Must know the 'lingo' of their peers. This is a changing and subtle language. For those who find language difficult, adjusting to different styles of talk is difficult, confusing and often embarrassing.
• Require knowledge of general conversational topics, and to be able to make choices and give preferences (for example, about football teams).

• Must be able to master polite forms in making requests - for example: 'I wonder if it would suit you to...'. 'Would it be possible for me to...'.

• Require the ability to express feelings and frustrations through appropriate language.

• Need to use social niceties and 'small talk' to create a positive impression - for example, saying 'good morning' and 'good bye' while maintaining eye contact.

• Must learn and practice social skills such as answering the telephone.

• To participate in classroom activities, they need to learn to use the formal language of the classroom. In the classroom, it is necessary to be able to process information quickly and efficiently. Misunderstandings are common for students with language disorders. These can be embarrassing and socially damaging. Students need to be able to express themselves lucidly and promptly if they are to participate in class discussion. If they do not have these skills, they leave themselves open to ridicule when they attempt to contribute to discussions because their comments are often inappropriate or mistimed.

Adjustments

Classroom Management

It is important that teachers are aware that the lack of skills in this area can make a difference for students in their relationships with other students.

Students with a language disorder might not be able to do certain activities e.g., difficulty giving unprepared answers or talks, or reading in front of the class. Being asked to do tasks of this sort can result in extreme distress or inappropriate behaviour.

Some common problems for students with a language disorder:

Socially:

• Students who are socially inept are rarely popular and are often rejected, particularly outside the organised classroom

• Can be the subject of bullying. This is often distressing, but sometimes they might not realise that certain comments are teasing or mean

• Might crave social acceptance by their peers but lack the skills and understanding to achieve this. This can result in such students being alone or on the edge of the group. They might seek to interact with adults or younger children.

• Difficulty expressing frustration and behave inappropriately. They can be impulsive and have no idea of the consequences. They can be inappropriately aggressive or passive and have no idea why they are rejected. They might not share and then wonder why others will not be friends.

• Can be shy and awkward and described as 'odd'. This might be a result of their being unable to converse, or unable even to work out the rules of conversation (such rules are rarely taught, but seem to evolve).

• Might therefore:
  o Interrupt often, without waiting to listen to answers
  o Not mention the topic they are talking about
  o Change topic suddenly
  o Talk on more than one topic at once
This failure to understand and observe the ‘unspoken rules’ of conversation can make it difficult for the listener to get the message.

In the classroom:

Students with a language disorder might:

- Not appreciate the difference required in language when talking to teachers, as compared with talking to friends
- Have poor awareness of body language, vocabulary and tone of voice
- Be unaware that they are perceived as being rude
- Be vague and nonspecific and not realise that they are not making sense
- Be unable to ask questions appropriately
- Not understand what they are supposed to do indeed, they might not even realise that they do not understand
- Often find generalising difficult and so do not realise that they can make similar comments (or ask similar questions) on topics that are different, but related
- Be slow to respond and might appear to be ‘deaf’
- Not respond to sarcasm and they take comments literally

**Teaching Strategies**

- Engage in group work
- Card games or board games with rules can teach skills in taking turns
- Prompting and cues to keep on a topic during conversation
- Develop strategies to help them blend in with their peers if their behaviour is unusual and socially inappropriate
- Discussion of comics, soap opera’s that depict everyday interaction between people can be useful, provided the subtleties of these everyday interactions are not too difficult
- Provide students with feedback monitor and explain what they are doing wrong.
- Learn and practise skills through role play and rehearsal. This is necessary to help develop the language and social skills required for social interaction with peers, for work experience, for interviews and for a range of classroom interaction.
- Practise conversations and think about responses to questions. For example, they could be asked:
  - ‘What would you say if you needed to request an extension for this assignment?’
  - ‘What would you say if you were seeking permission to change a sport?’
  - ‘What would you say if you wanted to make a complaint?’
Explicit teaching the basic skills of conversation is necessary for some students. These include the skills of:

- Staying on a topic
- Taking turns
- Being aware of the listener
- Learning appropriate ways of talking with different people

Debrief opportunities to speak to individual students to ensure that they have an opportunity to signal that they are encountering social difficulties

Links
Refer also to: Communication Difficulties, Receptive Language Disorder, Expressive Language Disorder

Sources of Information

▲ Click here to return to the contents page
Psychosis

Definition
The word *psychosis* is used to describe conditions which affect the mind, where there has been some loss of contact with reality. When someone becomes ill in this way it is called a *psychotic episode*.

In the general sense, a mental illness that markedly interferes with a person's capacity to meet life's everyday demands. In a specific sense, it refers to a thought disorder in which reality testing is grossly impaired.

Psychosis is most likely to occur in young adults and is very common. Around 3 out of every 100 people will experience a psychotic episode making psychosis more common in young people than diabetes. Most people make a full recovery from the experience.

What Is First-Episode Psychosis?

First-episode psychosis simply refers to the first time someone experiences psychotic symptoms or a psychotic episode. People experiencing a first-episode psychosis may not understand what is happening. The symptoms can be highly disturbing and completely unfamiliar, leaving the person confused and distressed. This distress is increased by negative myths and stereotypes about mental illness which are still common in the community.

A psychotic episode occurs in three phases. The length of each phase varies from person to person.

**Phase 1: Prodrome**
The early signs are vague and hardly noticeable. There may be changes in the way some people describe their feelings, thoughts and perceptions.

**Phase 2: Acute**
Clear psychotic symptoms are experienced such as hallucinations, delusions or confused thinking

**Phase 3: Recovery**
Psychosis is treatable and most people recover. The pattern at recovery varies from person to person

**What are the Types of Psychosis?**

Everyone's experience of psychosis is different and attaching a specific name or label to the psychotic illness is not always useful in the early stages.

However, when someone has a psychosis, a diagnosis of a particular psychotic illness is usually given. Diagnosis means identification of an illness by a person's symptoms and the diagnosis will depend on what brought on the illness and how long the symptoms last.

When someone is experiencing a psychotic episode for the first time, it is particularly difficult to diagnose the exact type of psychosis, because many of the factors which determine the label remain unclear. Nevertheless, it is useful to be familiar with some of the labels which you might hear.
Drug-induced Psychosis

Use of, or withdrawal from, alcohol and drugs can be associated with the appearance of psychotic symptoms. Sometimes these symptoms will rapidly resolve as the effects of the substances wear off. In other cases, the illness may last longer, but begin with drug-induced psychosis.

Organic Psychosis

Sometimes psychotic symptoms may appear as part of a head injury or a physical illness which disrupts brain functioning, such as encephalitis, AIDS or a tumour. There are usually other symptoms present, such as memory problems or confusion.

Brief Reactive Psychosis

Psychotic symptoms arise suddenly in response to a major stress in the person’s life, such as a death in the family or change of living circumstance. Symptoms can be severe, but the person makes a quick recovery in only a few days.

Delusional Disorder

The main problem is strong beliefs in things that are not true.

Schizophrenia

Refers to a psychotic illness in which the changes in behaviour or symptoms have been continuing for a period of at least six months. The symptoms and length of the illness vary from person to person. Contrary to previous beliefs, many people with schizophrenia lead happy and fulfilling lives, with many making a full recovery.

Schizophréniform Disorder

This is just like schizophrenia except that the symptoms have lasted for less than six months.

Bipolar (Manic-depressive) Disorder

In bipolar disorder, psychosis appears as part of a more general disturbance in mood, in which mood is characterised by extreme highs (mania) or lows (depression). When psychotic symptoms are present they tend to fit in with the person’s mood. For example, people who are depressed may hear voices telling them they should commit suicide. Someone who is unusually excited or happy may believe they are special and can perform amazing feats.

Schizoaffective Disorder

This diagnosis is made when the person has concurrent or consecutive symptoms of both a mood disorder (such as depression or mania) and psychosis. In other words the picture is not typical of a mood disorder or schizophrenia.

Psychotic Depression

This is severe depression with psychotic symptoms mixed in, but without periods of mania or highs occurring at any point during the illness. This distinguishes the illness from bipolar disorder.

Features

Psychosis can lead to changes in mood and thinking and to abnormal ideas, making it hard to understand how the person feels. It can come on suddenly or can develop very gradually. Symptoms of psychosis can vary from person to person and may change over time. Some common symptoms are:

- Changes in thinking patterns (difficulty concentrating, loss of memory, disconnected thoughts, confusion)
• Delusions (fixed, false beliefs that are not consistent with the person's culture, and have no basis in fact)

• Hallucinations (people hear, see, taste, smell or feel something that does not actually exist)

• Changes in mood (finding it hard to express feelings feeling inappropriate or intense bursts of emotion feeling empty of any emotions depression)

• Changes in behaviour (may be extremely active or lethargic-sitting around all day may laugh inappropriately or become angry or upset without apparent cause. For example, a person believing they are in danger may call the police. Someone who believes he is jesus christ may spend the day preaching in the streets. People may stop eating because they are concerned that the food is poisoned, or have trouble sleeping because they are scared of something.

Getting Help Early

Getting help early involves recognising psychosis at the earliest possible time and finding appropriate specialist treatment.
The initial episode of psychosis can be a particularly confusing and traumatic experience. The change in the person's behaviour causes concern and distress because no-one really understands what is happening.
This lack of awareness often leads to delays seeking help. As a result these treatable illnesses are left unrecognised and untreated.
Even when help is sought, further delays may occur before the right diagnosis is made because recognition of these disorders can be difficult.

Why is it Important to Get Help Early?

Often there is a long delay before treatment begins for the first episode of psychosis. The longer the illness is left untreated the greater the disruption to a person's family, friends, study and work. The way they feel about themselves can be affected, particularly if treatment is prolonged. Other problems may occur or intensify, such as unemployment, depression, substance abuse, breaking the law and causing injury to themselves may occur or intensify.

Early Signs

A person may become:
• Suspicious
• Depressed
• Anxious
• Tense
• Irritable
• Angry

A person may experience:
• Mood swings
• Sleep disturbances
• Appetite changes
• Loss of energy or motivation
• Difficulty in concentrating or remembering things

A person may feel:
• Their thoughts are speeded up or slowed down
• Things are somehow different
• Things around them seem changed

Often family and friends are the first to notice changes. Family and friends may notice when:
• A person’s behaviour changes
• A person’s studies or work deteriorate
• A person becomes more withdrawn or isolated
• A person is no longer interested in socializing
• A person becomes less active

Families often sense that something is not quite right even though they don’t know exactly what the problem is.

These behaviours might be a brief reaction to stressful events like hassles, at school or work or trouble with relationships. On the other hand they may be early warning signs of a developing psychosis. It is important that these behaviours are checked out.

**Adjustments**

**Classroom Management**

Person will need professional treatment. Psychosis can be treated, and many people make a good recovery, especially if they get help early. Treatment may be either on an outpatient basis or in hospital. Treatment usually consists of medication and psychosocial interventions (counselling, for example).

Help settle student back into class after this and observe carefully for any signs of psychotic episodes returning

**Teaching Strategies**

Educational adjustments are designed to meet student needs on a case-by-case basis. Possible adjustments could include:
• Help the student set reasonable goals
• Be flexible, as symptoms may come and go – it may happen on a daily basis
• Be accepting, caring and supportive – provide a safe environment for the student
• Break tasks down into smaller pieces, minimize distractions, have a plan to redirect the student to help him/her return to the task at hand
• Assist the student with planning and organizational skills
• Have additional materials, books, supplies available for the student to use if he/she doesn't bring them
• Work with the student to relieve anxiety and have a plan if the student does become overly anxious.
• Socialising may be exhausting for this student – she/he may have difficulty with groups or when everyone is excited, so plan accordingly
• Give short, concise directions
• Try to avoid sensory overload
- Negotiated attendance (part day attendance) followed by a plan to gradually re-integrate the student into a mainstream class/program when deemed appropriate
- Reduction of subject load
- Alternative assessment
- Extended time for assessment - assignments, exams
- Exemption or alternative arrangements (refer to QSA Policy for Special Provision)
- Immediately addressing any negative behaviour by peers towards the student
- Providing copies of class teacher’s or other students’ notes to cover emergency absences where possible
- Exit plan
- Allowance of break periods as needed for rest and taking of medication
- Access to external agency support (Child and Youth Mental Health Services)
- Regular access to a guidance officer

**Links**
Refer also to: Schizophrenia

http://www.sane.org/information/factsheets/psychosis.html
http://www.iepa.org.au/

Information on Psychosis and other mental disorders:
SANE
www.sane.org
(07) 3254 1881

**Sources of Information**


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Receptive Language Disorder

Definition
Receptive language refers to a child's ability to understand and process either spoken or written language.

Features
There is no standard set of symptoms that indicates receptive language disorder, since it varies from one child to the next. However, symptoms may include:

- Not seeming to listen when they are spoken to
- Lack of interest when story books are read to them
- Often doesn't understand longer more complex sentences, thus becomes confused easily
- Difficulty understanding and following directions or verbal instructions
- Becomes overwhelmed when given 2 or multi step directions
- Regularly requires clarification and to have the instructions/directions repeated.
- Parroting words or phrases (echolalia)
- Language skills below the expected level for their age
- Struggles with figurative versus literal language and will usually need explanations.
- Often uses the term 'I don't know' or 'I forget'
- The child may be able to read but when questioned about the passage just read, he/she has limited understanding

Students with Receptive Language disorder may have problems in the following areas:

- Understanding the meaning and content of speech
- Discriminating between sounds
- Understanding word meanings
- Understanding lengthy or complex speech
- May appear to 'not be listening' or to be 'ignoring you' most of the time
- Not keeping up with his/hers classmates either academically or socially
- May cause behavioural problems or acting up in class etc
- May be easily distracted or drift off when listen to speech or reading stories
- May appear to be forgetful ie. Only completes part of an instruction or remembers part of a shopping list etc
Adjustments

Classroom Management

The process of understanding spoken language is a complicated process. Students may also have problems with one or more of the following skills which will also require addressing with management strategies in response to their individual needs:

- Hearing - a hearing loss can be the cause of language problems
- Vision - understanding language involves visual cues, such as facial expression and gestures. A child with vision loss won’t have these additional cues, and may experience language problems
- Attention - the child’s ability to pay attention and concentrate on what’s being said may be impaired
- Speech sounds - there may be problems distinguishing between similar speech sounds.
- Memory - the brain has to remember all the words in a sentence in order to make sense of what has been said. The child may have difficulties with remembering the string of sounds that make up a sentence
- Word and grammar knowledge - the child may not understand the meaning of words or sentence structure
- Word processing - the child may have problems with processing or understanding what has been said to them

A consistent approach is vital in order for students to achieve success. Communication between home and school is important. It is important that there is consistency between approaches used and home and at school; after all, both parents and teachers share the goals for students.

Teaching Strategies

The following list of strategies will help in responding to students with language support needs:

- Provide ample opportunities for the child to practice effective listening behaviors. You can do this by making sure the child understands the goals. For instance, before you give the instructions, let the student know that he will be responsible for repeating them.
- Each time the student is reading, provide opportunities for him/her to predict outcomes or why the character acted in that way.
- Chunk information into small pieces at a time, use headings when possible.
- Make frequent eye contact and focus the student by using close proximity or a touch on the shoulder, this often helps to engage the student.
- Clarify and demonstrate organizational strategies that will assist the student.
- Teach the student how to use effective organizers like agendas and to do lists.
- Whenever possible, ask the student to re-tell stories and re-state directions and instructions.
- Provide reading materials that are matched to the child's interest and ability level.
- ALWAYS present information in short, simple sentences and repeat them often or present information both orally and in writing.
- Encourage the student to seek clarification when uncertain.
- Be sure to provide a variety of listening opportunities for students that have follow up activities.
Remember, language is complex for a large number of students, be patient and consistent. Success is usually seen in small steps when the above strategies are implemented consistently.

Links
Refer also to: Communication Difficulties, Receptive Language Disorder, Pragmatic Language Disorder, Word Finding Difficulties

Sources of Information
http://specialed.about.com/cs/learningdisabled/a/receptive.htm

▲ Click here to return to the contents page
**Schizophrenia**

**Definition**
Schizophrenia is a mental health disorder that causes a person to think and act abnormally. It is rare in children less than 10 years of age and has its peak age of onset between the ages of 16 and 25. This disorder affects about 1 percent of the population, and thus high school teachers will likely see children who are in the early stages of the illness. Schizophrenia can be difficult to recognize in its early phases, and the symptoms often are blurred with other mental health disorders.

**Features**
Schizophrenia usually comes on gradually, and teachers are often the first to notice the early signs. The early signs are usually non-specific. For example, students who once enjoyed friendships with classmates may seem to withdraw into a world of their own. They may say things that don’t make sense and talk about strange fears and ideas. Students may also show a gradual decline in their cognitive abilities and struggle more with their academic work. Since the disorder can come on quite gradually, it may be difficult to appreciate this decline in cognition without a longitudinal perspective over several academic years. The typical onset period lasts about 2 to 3 years. Some children show difficulties with attention, motor function, and social skills very early in life, before the onset, whereas others have no problems at all before the disorder sets in.

The signs of schizophrenia include hallucinations (hearing, seeing, smelling or feeling things that are not there), delusions (fixed false beliefs) and difficulties in organising their thoughts. A student may talk and say little of substance or the child may have ideas or fears that are odd and unusual (beyond developmental norms). Many, but not all students with schizophrenia may show a decline in their personal hygiene, develop a severe lack of motivation, or they may become apathetic or isolative. During adolescence the illness is not fully developed, and thus it is at times difficult to differentiate schizophrenia from a severe depression, substance abuse disorder, or bipolar disorder. Students who show signs of schizophrenia should be referred to appropriately qualified staff.

**Adjustments**

**Classroom Management**
Students with schizophrenia can have educational problems such as difficulty concentrating or paying attention. Their behaviour and performance may fluctuate from day to day. These students are likely to exhibit thought problems or physical complaints or they may act out or become withdrawn. Sometimes they may show little or no emotional reaction at other times, their emotional responses may be inappropriate for the situation. They may also have possible frequent or extended absences from school for medical intervention and difficulties with relationships.

**Teaching Strategies**
Educational adjustments are designed to meet student needs on a case-by-case basis. Possible adjustments could include:

- Help the student set reasonable goals
- Be flexible, as symptoms may come and go – it may happen on a daily basis
- Be accepting, caring and supportive – provide a safe environment for the student
• Break tasks down into smaller pieces, minimize distractions, have a plan to redirect the student to help him/her return to the task at hand
• Assist the student with planning and organizational skills
• Have additional materials, books, supplies available for the student to use if he/she doesn’t bring them
• Work with the student to relieve anxiety and have a plan if the student does become overly anxious.
• Socialising may be exhausting for this student – she/he may have difficulty with groups or when everyone is excited, so plan accordingly
• Give short, concise directions
• Try to avoid sensory overload
• Negotiated attendance (part day attendance) followed by a plan to gradually re-integrate the student into a mainstream class/program when deemed appropriate
• Identified potential triggers and cues for distress and/or violence by conducting a Functional Behavioural Assessment (FBA)
• Virtual schooling
• Reduction of subject load
• Alternative assessment
• Extended time for assessment - assignments, exams
• Exemption or alternative arrangements (refer to QSA Policy for Special Provision)
• Immediately addressing any negative behaviour by peers towards the student
• Providing copies of class teacher’s or other students’ notes to cover emergency absences where possible
• Exit plan
• Allowance of break periods as needed for rest and taking of medication
• Access to external agency support (Child and Youth Mental Health Services)
• Regular access to a guidance officer or school based youth health nurse.

Links
Refer also to: Psychosis
Information on Psychosis and other mental disorders:
SANE
www.sane.org
(07) 3254 1881

The BeyondBlue Schools Intervention Program

www.betterhealth.vic.gov.au

Sources of Information
Information Sheet: Schizophrenia - Student Services Department of Education Training and the Arts
Australian Government – National Mental Health Strategy (Brochures available from Mental Health and Workforce Division of the Australian Government Department of Health and Ageing:

GPO Box 9848
Canberra ACT 2601

ARAFMI - Association of Relatives & Friends of the Mentally Ill
PO Box 248
New Farm QLD 4005
Phone: (07) 3254 1881 (24 hours)

Schizophrenia Fellowship of South Queensland
95 Arthur Street
Fortitude Valley QLD 4006
Phone: (07) 3358 4424

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Scoptic Sensitivity Syndrome (Irlen Syndrome)

Definition

Scotopic Sensitivity Syndrome (SSS) is a visual perception dysfunction where individuals have an excess sensitivity of the retina to particular frequencies of the light spectrum. This is a perceptual processing problem related to the brain’s inability to accurately filter visual information; it is not a vision problem. The Brain has difficulty handling full spectral light causing distortions of print and interference from the background while reading text. The main problem being black print on a white background.

Features

A person who has Scotopic Sensitivity Syndrome can experience any or all of its five factors:

- Light sensitivity – sensitivity to glare, brightness and certain lighting conditions
- Inadequate background accommodation - difficulty with high contrasts eg black & white
- Poor print resolution – letters, numbers and symbols change, move, disappear
- Restricted span of recognition – difficulty reading groups of letters, words at the same time
- Lack of sustained attention – inability to maintain concentration while reading

Individuals are not aware that what they are seeing on a page is not what everyone else sees.

It may affect the following areas:

- Reading fluency
- Reading accuracy
- Comprehension skills
- Spelling
- Concentration
- Self esteem
- Memory
- May have fine motor problems

Adjustments

Classroom Management

SSS is not detected by optometrists/opthamologists but requires detection by Irlen Screeners and Clinicians. The Irlen Method addresses those sensory issues related to visual processing by determining the exact wavelengths of light to which the individual is sensitive.

If the child has been assessed by an Irlen Clinician they may use coloured overlays or coloured glasses to filter specific wavelengths of light.
Teaching Strategies

- Be aware of fatigue and give child breaks from reading or provide child with a scribe/reader to assist
- May need more time for assignments or tests
- Be aware that errors in reading, mathematics, copying may be due to misreading letters and symbols
- Assist with attention and concentration problems as you would for children with ADD. The condition may influence depth perception and sports ability so accommodate for this

Links

www.irlen.com (USA)
www.newcastle.edu.au/centre/sed/irlen (Australia)
www.irlen.org.uk (Research studies)

Queensland contact: 07 5445 2458
Gold Coast 07 5572 0269

Sources of Information

Sensory Integration

Definition
Sensory integration (SI) has been defined as the neurological process that organizes sensation from one’s own body and from the environment and makes it possible to use the body effectively within the environment—the entire sequence of central nervous system events from reception to the display of an adaptive environmental interaction.

Features
Young people with SI exhibit unique sensory preferences.

Sensory defensiveness may be exhibited in the following areas:

- Light touch
- Discomfort with many clothing textures
- Many self-care routines, including face washing, tooth brushing, hair washing, and hair brushing
- Oral defensiveness or hypersensitivity in the mouth leading to limited food choices and can interfere with tooth brushing and face washing

A ‘sensory diet’ is a planned and scheduled activity program designed to meet a child’s specific sensory needs. Wilbarger and Wilbarger (1991) developed the approach to provide the “just right” combination of sensory input to achieve and maintain optimal levels of arousal and performance in the nervous system. The ability to appropriately orient and respond to sensations can be enhanced by a proper sensory diet. A sensory diet also helps reduce protective or sensory defensive responses that can negatively affect social contact and interaction.

Adjustments

Classroom Management
Firstly gain an insight into the individual sensory preferences of individual students, often those with a diagnosis of Asperger Syndrome, and then make the necessary adjustments to support their sensory needs. Appropriate sensory strategies that are employed by students as coping / management tactics are referred to as their ‘sensory diet’.

Teaching Strategies

- Keep things VERY organized and predictable to include use of visual schedules and prompts when appropriate
- Break up tasks that require more intensive attention and provide some intermittent reinforcement for success and as a way to take a break
- Also break up tasks that are more complex into smaller, simpler steps
- Provide information/requests/etc using a multi-modal approach...pair verbal requests/directions with simultaneous gestures and/or relevant visuals when possible
- Be absolutely clear and try not to use a lot of words to explain or make requests...do not use vague or easy to mis-interpret language
• Use precorrection...let the student know what is going to happen and what is expected within tasks and across transitions

• Consider where the child sits in the room in order to reduce visual distracters and noise while allowing the teacher to do some proximity management

• Watch for early ‘warning’ signs that the child is getting overloaded and offer brief breaks / changes in the activity...teach the child to recognize these ‘warning’ behaviors and request a break, extra help, etc.

• Emphasize effective use of functional language and the child’s enhanced ability to express wants/needs

• Build rapport and consider the use of an individualized reinforcement schedule

• Identify and directly teach needed social interactive and learning readiness skills

• Administer a comprehensive functional behavioral assessment

Some children are "sensory seekers" and become more organized and attend better to a task if they receive periodic movement input, such as:

• Sit on a baffled camping pillow filled with a small amount of air. This allows for movement while doing seat work without leaving the desk.

• Use of a therapy ball for classroom seating

• Suggest 5 minutes of swinging or climbing during recess prior to coming back to class.

• Rhythmical, sustained movement e.g., marching, washing desks or bouncing can be organizing to the central nervous system

• Never discipline a "sensory seeker" by taking away recess privileges or PE- you will intensify the random movements, fidgeting and outbursts

• Erasing the blackboard or running notes to other teachers is a great way to get some extra movement

Some children also need extra sensory input to their mouths and hands in order to organize their behavior, such as:

• Drinking from water bottles kept at desk

• Chewing on rubber tubing placed on the end of a pencil, straw or coffee stir stick

• Sucking on a lozenge or chewing gum may help a child focus

• A bucket of "squeezies" can be used by children who like to fiddle with something in their hand. A "squeezie" is a small object which is soft and can fit in the hand e.g., balloons filled with flour, soft balls, "dog" toys or koosh balls.

• Pushing/carrying heavy objects i.e., books, moving desks or "pushing" against walls.

• A reading corner with a bean bag chair makes a wonderful place to escape from too much stimulation and help get ready for more focused desk work.

REMEMBER: Some children need to move in order to pay attention. Watching children can provide cues to choosing activities to provide appropriate sensory intervention for organizing behavior and improve attention.

Links

Refer also to: Autism Spectrum Disorder
Sources of Information

http://www.incrediblehorizons.com/classroom.htm#sensory%20deficits

The Tools for TeensT handbook

www.ateachabout.com

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Social Emotional Disorder

Definition

Queensland Catholic Education (QCEC), Brisbane Catholic Education (BCE) and Religious Institute Colleges (RI) recognise a disability category in addition to those listed under DET Guidelines. This category is of Social Emotional Disorder (SED).

For the purposes of this definition a Social Emotional Disorder and an Emotional or Behavioural Disorder are seen as referring to the same condition. “Emotional or Behavioural Disorder refers to a condition in which behavioural or emotional responses of an individual in school are so different from his/her generally accepted, age appropriate, ethnic or cultural norms that they adversely affect performance in areas such as self care, social relations, personal adjustment, academic progress, classroom, behaviour or work adjustment.” An Emotional or Behavioural Disorder is more than a transient, expected response to stressors in the child’s or young person’s environment and would persist even with individualised intervention, such as feedback to the individual, consultation with parents or family members, and/or modification of the educational environment.

This category may include children or youth with schizophrenia, affective disorders, anxiety disorder, or who have sustained disturbances of behaviour, emotions, attention or adjustment. A diagnosis of ADD or ADHD alone does not constitute a social emotional disorder.

Features of Sub-groups

- Conduct disorder – seeks attention, disrupts, acts out
- Socialised Aggression – likely to join a sub cultural group, openly disrespectful to peers, parents, and teachers. Delinquency, truancy, gang behaviours common
- Attention Problems – immaturity, easily distracted, poor concentration, impulsive
- Anxiety/ Withdrawal group – self-conscious, reticent, unsure of themselves, low self-esteem causes them to retreat from activities. Anxious and often frequently depressed
- Psychotic behaviour – hallucinate, talk gibberish, deal in fantasy world, bizarre behaviour
- Motor excess – hyperactive, difficulty sitting still, listening to another, keeping attention focused, often talkative

Exhibits one or more of the following:

- Inability to learn which cannot be explained by intellectual, sensory or health factors
- Inability to build and maintain satisfactory relationships with peers and teachers
- Inappropriate types of behaviour or feelings under normal circumstances
- General pervasive mood of unhappiness or depression
- Tendency to develop physical symptoms or fears associated with personal or school problems

Medical diagnosis to accompany the criterion: A documented DSM 5 TR diagnosis in this category must be determined by a Medical Specialist (Paediatrician, Neurologist, Psychiatrist).
The diagnosis used to identify a set of symptoms can fall into two categories:

- **Psychotic illness**, for example:
  - Schizophrenia
  - Bi-polar disorder
- **Non-psychotic illness**, for example:
  - Anxiety disorders
  - Depressive / mood disorders
  - Eating disorders
  - Disorders of conduct or adjustment which affect the student’s educational performance

**Note:** Emotional and Behavioural Disorders can co-exist with other disabilities. A diagnosis of ADD or ADHD alone does not constitute Social Emotional Disorder.

**Adjustments**

**Classroom Management**

- Arrange traffic patterns to lessen contact and disruption
- Arrange desks to facilitate monitoring of students at all times
- Locate those with disruptive behaviours near teachers primary location
- Locate students away from stored materials that they may find tempting
- Create spaces where students can do quiet work

**Teaching Strategies**

To manage behaviour:

- Inform students what is expected from them
- Establish a positive learning environment
- Provide a meaningful learning experience
- Avoid threats
- Demonstrate fairness and be consistent
- Build and exhibit self-confidence
- Recognise positive student attributes
- Use positive modelling
- Structure the curriculum and classroom environment

**Links**

Sources of Information

Community Organisations


Breaking Barriers
New Farm Neighbourhood Centre
967 Brunswick Street
New Farm Q 4005
Tel: (07) 3358 6000
Provides:
• community education in mental health.

Eating Disorders Association Inc
131 Leichhardt Street
Spring Hill Q 4000
Tel: (07) 3831 6900
Provides:
• resource centre and library • support groups

Queensland Association for Mental Health
20 Balfour Street
New Farm Q 4005
Tel: (07) 3358 4988
Provides:
• information and referral service • library and resource centre • support groups

Schizophrenia Fellowship of South East Queensland
97 Arthur Street
Fortitude Valley Q 4006
Tel: (07) 3358 4424
Provides:
• information about schizophrenia • support for people with schizophrenia and their families

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Speech Language Impairment

Definition
Speech Language Impairment is a Department of Education and Training (DET) category for identifying students requiring significant education adjustments as a result of having a severe ongoing primary spoken communication disorder.

Departmental Criteria
Verification for the EAP disability category of Speech Language Impairment is based on two criteria.

Criterion 1: There is a severe ongoing primary spoken communication disorder.

Criterion 2: The identified severe ongoing primary spoken communication disorder results in activity limitations and participation restrictions for the student at school requiring significant education adjustments.

Features
- Child is noticeably behind peers in acquisition of language and/or speech skills
- Speech disorders refer to the difficulties producing speech sounds or problems with voice quality. There may be disfluency – interruption in the rhythm of speech articulation or phonological disorders problems with pitch, volume or quality of voice or a combination of these.
- Language disorders refer to difficulties in understanding and/or using words in context, both verbally and non-verbally. They may include improper use of words and their meanings inability to express ideas inappropriate grammatical patterns reduced vocabulary and inability to follow directions.
- Associated problems in the areas of:
  - Thinking skills eg drawing conclusions judging and evaluating reasoning, critical analysis
  - Behaviours eg sharing emotions, anger and frustration management
  - Social problems eg conversational skills, understanding jokes puns and figurative language
  - Emotional development eg lack of self-confidence, unwillingness to take risks, isolation and withdrawal, immaturity, anxiety

Adjustments

Classroom Management
Not all students with speech–language impairment will require high levels of educational support. Those students who have high educational support needs due to their speech–language impairment may be verified under the category of speech–language impairment.
Students with speech–language impairment, like other students, vary in areas such as:

- Intellectual ability
- Physical ability
- Sensory perception (for example, hearing, vision, smell, touch, taste)
- Cultural background
- Linguistic background.

(Education Queensland 1999)

Disability-Specific Needs

Communication skills are essential in every area of the school curriculum. Speech–language impairment can affect a student’s participation in school activities and achievement of learning outcomes. The effect is not restricted to obvious areas such as LOTE, English and Mathematics.

A speech–language impairment will result in a communication disability, and can affect the student’s ability to:

- Understand and express information
- Relate to others, including teachers and peers
- Express needs, abilities and interests
- Acquire adequate literacy and numeracy skills
- Participate in group activities
- Develop a positive self-concept
- Learn appropriate behaviour and social skills
- Problem solve
- Acquire and demonstrate knowledge in key learning areas.

(Speech–Language Therapy Network, 1993)

Each student with speech–language impairment has an individual profile of strengths and weaknesses. Some students with speech–language impairment will achieve the same learning outcomes at levels above or commensurate with those achieved by their peers when teaching methods are modified, and/or specific communication skills are taught.

For other students with speech–language impairment, these modifications may not be sufficient. Alternative learning outcomes may be required. Learning outcomes for the student with speech–language impairment should still be linked to the same learning activities being undertaken by peers (Education Queensland 1998).

The information below provides some examples of how educational needs of students with speech–language impairment could be met. These examples will not suit all students with speech–language impairment and they are not exhaustive. It is important that the individual needs of each student with speech–language impairment are considered.

Some examples of modifications to teacher talk are:

- More and/or longer pauses during instruction, to provide more processing time than usual
- High redundancy instruction (specific information/vocabulary/sentence structures/text features encountered many times, but in different contexts)
• Simplified teacher talk, for example, using simpler sentence structures (shorter, more direct, less implied, less ambiguous), more concrete vocabulary, shorter units of instruction, restating often – emphasising key points and repeating frequently

• Activation of the student’s topic knowledge (especially vocabulary related to the topic) before introducing new topics or units of work

• Explicit topic shift cues in teacher talk so the student can easily follow topic changes made by the teacher, for example, the teacher may overtly teach the class that a key phrase such as, ‘okay, something new here,’ means that they are to listen and watch for new or different information

• More frequent and explicit opportunities to repair interaction breakdown, for example, the teacher may:
  o Give explicit instructions about what students should say if they lose the thread of classroom talk
  o Build a low-key, ‘checking for understanding’ routine into classroom talk, so that students become used to monitoring their own comprehension and asking for clarification if they ‘get lost’ or ‘don’t get it’

Teaching Strategies

• Instructional engagement : stress important information, check comprehension, link new to old experiences, allow for generalisation, use visual aids, preview and review, balance oral and written work, positive and explicit student feedback, give time for processing, a multisensory approach

• Develop an awareness and monitor levels of distraction – visual, auditory or other sense involvement, reduce them and organise the classroom to do so.

• Have set procedures and routines

• Assist student in getting organised eg time needed for task, materials through use of visual aids, self talk and physical organisation

• Have realistic expectations

• Utilise positive reinforcement giving explicit information about what the reward is for

• Explicitly teach essential skills required for decoding and encoding in literacy and numeracy

Links


http://education.qld.gov.au/curriculum/learning/students/disabilities/

www.afasic.org.uk/speechlang.htm
www.nichey.org/pubs/factshe/fslltxt.htm

Sources of Information

Teaching Students with Disabilities Resource Kit 1998, Griffith University and Education Queensland, Brisbane.

A kit containing six videos and six booklets. Contains an introduction, a section for administrators,
and sections on each of the following disability areas: hearing impairment, intellectual disability physical impairment and vision impairment.

This kit was distributed to State schools in March 1998.

*Teacher Aides Working with Students with Disabilities 1998*
Low Incidence Unit, Education Queensland, Brisbane.
A set of books developed for teacher aides.
Also available at: http://education.qld.gov.au/curriculum/learning/students/disabilities/

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Spina Bifida

Definition

Spina Bifida is a Latin term meaning split spine. It is the name given to a group of birth defects which interfere with the development of the central nervous system: the brain, the spinal cord and the nerve tissues.

The central nervous system begins to develop from the ectoderm (the layer of cells from which the brain and spinal cord develop) in the third week following fertilisation when the embryo is only 3-5 mm long. Prior to this the ectoderm resembles a flat group of cells running down the middle of the embryo. This flat sheet begins to change, however, and folds to form a groove. (Diagram (a) and (b).) The edges of the sheet eventually come together to form a tube which later develops into the spinal cord and the brain. (Diagram (c) and (d).) This structure is called the neural tube. Once the neural tube closes it sinks into the embryo and is covered by a layer of skin. The spinal vertebrae (bony covering) then begin to form around the tube.

Normally the neural tube closes by the twenty-eighth day after fertilisation. However, if the tube fails to close properly, a neural tube defect occurs. Neural tube defects include the conditions of anencephaly, encephalocele and spina bifida.

Features

In spina bifida, at some point along the spine the posterior part of the vertebrae (the bones of the spine) are not completely joined. Babies are born with the spinal cord and covering (meninges) protruding through the opening.

Within a few days of birth, the site of the lesion on the back is operated on to ensure that it has a good skin covering. This is performed to stop infection and also for cosmetic reasons.
Spina Bifida Occulta - literally means a hidden split in the spine. It is hidden because the deformity of the spine and any associated abnormalities are covered by skin. This is the least serious but most common type. The split in the vertebrae is usually so small that the spinal cord does not protrude, and so little or no damage is done. The skin at the site of the lesion may be normal, or it may have some hairs growing from it; there may be a dimple in the skin, or a birthmark. Someone with spina bifida occulta may not have any problems at all, and probably wouldn't know they had this unless an x-ray of the back was taken. Occasionally problems do arise, however, and medical advice is needed.

Meningocele - In this type of spina bifida, the meninges (covering of the spinal cord) protrude through the opening, causing a lump or sac on the back. The spinal cord is often undamaged and there are usually no long-term problems, although once again, problems can arise. This is the least common form of spina bifida.

Myelomeningocele - This is the most common form of spina bifida and also the most severe. The sac that has protruded on the back contains fluid, blood vessels, as well as the damaged spinal cord and meninges. There is almost always some degree of paralysis. Hydrocephalus may also occur. Spina Bifida most often occurs in the small of the back or lower down, but all three types can occur anywhere along the spine.
Adjustments

Classroom Management

The effect spina bifida (myelomeningocele) has on a person’s life depends on many things including the location and size of the lesion, and the degree of damage to the spinal cord and nerves. The most common occurrence of spina bifida is in the lumbar and sacral areas. The lumbar nerves control the muscles in the hip, leg, knee and foot, and help to keep the body erect. The sacral nerves control some of the muscles in the feet, bowel and bladder. Some degree of impairment can be expected in these areas. Problems may include lack of sensation and muscle function in the lower body and legs, an inability to control urination and bowel function, joint abnormalities and deformities of the back.

Teaching Strategies

Specific strategies for management of the effects of the condition will be collaboratively implemented with input from family and specialist expertise.

Links

www.spinabifida.asn.au/links.html
http://childrensnyp.org/mschony/neuro-spinbif.html
www.spinabifida.org

Sources of Information

http://childrensnyp.org/mschony/neuro-spinbif.html
www.spinabifida.org

Spina Bifida Hydrocephalus Queensland
PO Box 8022
Wooloongabba Qld 4102
Tel: 3844 4600
Fax: 3844 4601

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Tourette Syndrome

Definition

Tic Disorder

Tics are involuntary, rapid, repetitive movements of individual muscle groups. There are four categories:

- **Transient tics** – begin during early school years may be motor eg squinting, eye blinking or vocal eg humming, throat sounds. They last only a few months but child may have them in a series over some years.
- **Chronic tics** – these may persist unchanged for years
- **Chronic multiple tics** – child may have several motor tics

Tourette Syndrome (TS) is named after a French doctor, Gilles de la Tourette. In 1885 he described several people who had sudden and repeated movements of various parts of their bodies, repeated the words of others and also used very rude and vulgar language.

The diagnosis of TS depends on the presence of tics. Tics are the repeated and uncontrolled movements of the muscles of various parts of the body (motor or muscular tics) as well as various noises, utterances, words or phrases (vocal tics). In TS both types of tics are present at one time or another.

It is not only the types of tics but also the pattern of the tics that are used to make a diagnosis of TS. According to the manual produced by the American Psychiatric Association, the Diagnostic and Statistical Manual - revised version (DSM III-R, 1987), the criteria needed to diagnose TS are:

- Both motor and vocal tics are present for some time but these do not need to occur at the same time
- The tics occur many times a day or are repeated now and again throughout a single year
- The tics change over time in terms of the parts of the body involved, the number of tics involved, how complicated the movements are, how frequently they occur, and their severity
- Tics start before the person is 21 years of age
- The tics are not caused by other medical conditions

These are the basic requirements to make a diagnosis of TS. In many instances of TS the tics are all that are present. However, there are a number of other conditions that are seen commonly with TS, and often they are more of a problem than the tics themselves. They may need to be treated in their own right.

Features

Motor

- Simple motor tics eg blinking, grimacing, jerking
- Complex motor tics – more deliberate movements with a compulsive element
- Copropraxia – giving rude gestures
- Echopraxia – imitating gestures and movements of others
Vocal

- Simple vocal tics eg coughing, grunting, hissing
- Complex vocal tics – words and phrases which may interfere with the smooth flow of speech and may resemble a stammer
- Rituals – repeating a phrase til it sounds just right
- Speech Atypicalities – unusual rhythms, tone, accents, loudness and rapid speech
- Coprolalia – obscene, aggressive and socially unacceptable words or phrases
- Palilalia – repeats ones own words or part of words
- Echolalia – repeating sounds, words of others

Conditions Commonly Associated with Tourette Syndrome

- Obsessive Compulsive Disorder
- Attention Deficit Disorder
- Learning problems
- Mood disorders - 'lows' (depression ), 'highs' (hypomania and mania)
- Panic attacks
- Phobias
- Other stress reactions
- Conduct disorder
- Oppositional defiant disorder Sleep disturbances
- Schizoid / unreal ideas

These conditions also occur in people who do not have TS. They just happen to occur more frequently in people with TS than in the general population. Some doctors suggest that some of these conditions, especially Obsessive Compulsive Disorder (OCD) and Attention Deficit Disorder (ADD) may be a part of the spectrum of TS. OCD and ADD are more frequent in the families of TS sufferers than in the general population.

Adjustments

Classroom Management

The notion that TS is a degenerative or crippling condition and that it causes a deterioration in mental abilities is incorrect. Although some people with TS have 'hiccups' or difficulties in their lives, with the implementation of self management and coping strategies, most live long, full and useful lives.

Recognise the young persons struggle and encourage collaborative discussions with the family to gain an understanding of the tics, the implication for learning and school participation and the supports he or she feels are needed to work around the tics. Adjustments can be negotiated in response to the individual student.

As a guide to planning adjustments:

- Eye and head/neck tics frequently interfere with reading
- Eye and shoulder/arm/hand tics frequently interfere with math and written work
- Vocal tics might impact on reluctance to read aloud, ask questions, or participate in class
discussion

Remember that the tics you see in class are only the tip of the iceberg. You do not see the tics that the student is suppressing or how much mental and emotional energy the student may be expending trying to suppress the tics.

Remember that asking the student to stop ticcing or comments that might lead them to try to suppress their tics is like someone asking you to stop breathing.

Teaching Strategies

- Ignore the tics - in the sense that you don't comment on them publicly at all.
- Pointing out the student's tics or commenting on them may produce a worsening of the tics.
- Give the student a permanent pass to leave the classroom at his or her discretion to "get the tics" out in private or if the tics are becoming overwhelming.
- Do not direct or order the student to leave because of the tics, however, as that is essentially punishing the student for tics and will likely make the tics worse and/or lead to emotional or behavioral reactions.
- Provide extended time on reading assignments and handwritten work, exams if the student has eye, head/neck/shoulder, or arm tics. Some students also need testing in a separate location.
- Provide a peer education program if the student is being teased and/or rejected because of the tics. Permission of the student's parents and the student should be obtained before revealing the student's condition to peers.
- Close monitoring and supervision in playground if the student reports being teased or taunted
- If tics are directly interfering with student's ability to receive information, find alternative ways to present the material.
- If reading becomes too difficult due to eye or neck tics, use books on tape or have someone read to the student or record the reading for them.
- Be sensitive, however, to how the student may feel about having someone read to them.
- If a student has vocal tics, consult with them privately about whether you should call on them to read aloud to class.
- If a student cannot physically write without frustration or limitation due to tics, allow alternative means of production such as keyboarding, tape recording, or use of voice dictation software for older students and/or longer assignments - for younger students, you may need to use a scribe.
- If tics are frustrating or exhausting the student, break assignments up into shorter 'chunks,' with breaks and opportunities for movement or discharging tics between periods of work.
- Some settings may be stressful for the student. Students with loud or frequent vocal tics may find assemblies especially stressful since they will feel under greater self-imposed or other- suggested demands to "keep quiet." Under such conditions, the student should probably be permitted to excuse him/herself from that activity or setting.
- Students with TS frequently do not want to be "front and center" where others may stare at them as they tic. Consult with the student as to where they'd feel most comfortable. Seating near the door for graceful and unobtrusive exit works best for some students.
• Consider any medication effects in scheduling the student's academic classes. If the student is intellectually gifted, allow them to work ahead during periods when their tics have waned or remitted significantly. This will reduce any stress about falling behind during times when their tics are in a worsening (or “waxing”) cycle.

• Do NOT punish a student for a tic as it won’t help “teach” the student anything other than they are being punished for what they can’t help. If a student’s tics impose on others, problem solve collaboratively with the student what they can do to be considerate and protective of their peers and teachers.

• Model acceptance. If the students see you making faces or being distracted by the student’s tics, they will react, too.

• If the student has touching tic or compulsion, or large motor tics involving extremities, allow a larger “buffer zone” around them to reduce the stress for everyone. It may be helpful to have a second desk or library carrel in the room that the student can work at when tics are bad -- a screened area will make it easier (but not necessarily easy) to concentrate, particularly if they know their tics are not being observed.

• If tics are physically distressing or uncomfortable, allow the student to work in whatever position they feel comfortable.

Links
Refer also to: Anxiety Disorder

www.tourette.org.au
www.tourettsyndrome.net
www.brainaustralia.org.au

Sources of Information
http://www.tourettesyndrome.net/education.htm

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Visual Processing Learning Differences

Definition
There are lots of ways the brain processes visual information. A visual processing, or perceptual, disorder refers to a hindered ability to interpret and make sense of information taken in through the eyes. This is different from problems involving sight or sharpness of vision.

Features
Behaviors associated with Visual Learning Differences may include (but are not limited to):

- 'Careless' mistakes
- Sloppy handwriting
- Reading avoidance or fatigue
- Line or word skips while reading
- Poor eye contact
- Visual distractibility / 'inattention'
- Missed social cues, interrupting conversations
- R-L confusion, mirror reversals
- Avoidance or poor performance with sports
- 'Spacey' tendency to become lost, not know what's going on
- 'Clumsy' child, bump into things, easily hurt
- Forgets what's been shown
- Repeated spelling errors, different spellings same word

People with visual learning differences have normal sight but can experience difficulties such as:

Visual Closure
The ability to know what an object is when only parts of it are visible

Difficulties include:

- Recognizing a picture of a familiar object from a partial image. Example: a truck without its wheels, a single missing facial feature (a nose, eye, mouth) could render a face unrecognisable
- Identifying a word with a letter missing

Visual Discrimination
Using the sense of sight to notice and compare the features of different items to distinguish one item from another. Students experiencing visual discrimination disorders often mix up letters or numbers and have difficulty reading or scanning pictures for information.
Difficulties include:

- Seeing the difference between two similar letters, shapes or objects
- Noticing the similarities and differences between certain colors, shapes and patterns

**Visual Figure-Ground Discrimination**

Discriminating a shape or printed character from its background

Difficulties include:

- Finding a specific bit of information on a printed page full of words and numbers
- Seeing an image within a competing background

**Visual Sequencing**

The ability to see and distinguish the order of symbols, words or images

Difficulties include:

- Using a separate answer sheet
- Staying in the right place while reading a paragraph. Example: skipping lines, reading the same line over and over
- Reversing or misreading letters, numbers and words
- Understanding math equations

**Visual Motor Integration**

Using feedback from the eyes to coordinate the movement of other parts of the body

Difficulties include:

- Writing within lines or margins of a piece of paper
- Copying from a board or book
- Moving around without bumping into things
- Participating in sports that require well-timed and precise movements in space

**Visual Memory**

There are two kinds of visual memory:

- Long-term visual memory is the ability to recall something seen some time ago
- Short-term visual memory is the ability to remember something seen very recently

Visual memory is a critical part of academic skills. It allows us to recognise objects and to remember letters, numbers, symbols, words, and pictures. In cases of partial visual agnosia (visual access problems), what is learned on day one, "forgotten" on day two, may be remembered again without difficulty, on day three.

Difficulties include:

- Remembering the spelling of familiar words with irregular spelling
- Reading comprehension
- Using a calculator or keyboard with speed and accuracy
• Remembering phone numbers

**Visual Spatial Relationships**

The ability to understand how objects are positioned in space in relation to oneself. This involves the understanding of distance (near or far), as well as the relationship of objects and characters described on paper or in a spoken narrative.

The ability to perceive the location of objects in relationship to other objects is a critical skill in reading, math and handwriting, where a child must be able to recognize the different symbols, perceive their direction, tell the difference between similar shapes and determine where these are located in relationship to each other. Individuals who have difficulty with spatial relationships may seem unusually clumsy or accident prone may have difficulty reading or may refuse to read, or may have poor handwriting (dysgraphia).

Difficulties include:

• Getting from one place to another
• Spacing letters and words on paper
• Judging time
• Reading maps

**Vision and Math**

Visual processing problems commonly affect math learning and achievement. Some common visually-based problems in math learning include:

"Careless" Mistakes:

Careless mistakes may result from missing visual details, skipping words while reading word problems, or accidentally missing numbers or problems. Children with unrecognized visual problems often also have sloppy writing so that numbers may not line up in the correct columns and errors in calculation result.

**Number & Symbol Reversals:**

Confusion with similar letters and symbols - number reversals of '2' and '5', mistakes with > and <, and other math operations.

**Errors of Math Quantity:**

Dyscalculia is often seen in association with spatial difficulties. Students with dyscalculia may have problems associating numbers with quantities. This may mean being able to count automatically (rote memory), but work hard to remember which numbers are bigger or smaller than others.

**Struggles with Multi-stepped Math:**

Children with visual memory problems often struggle a great deal with multi-stepped math problems. It's because they may quickly forget spatial order (working from right to left? or left to right?) and make mistakes of sequence and place value. Automatically remembering the spatial flow of steps in problem solving. Long division can be very difficult for students. Geometry can also be very challenging.

**Problems with Graphs, Diagrams:**

Children with visual perceptual problems may really struggle with graphs and diagrams. Depending on the sort of problem a child has, errors of omission, part-to-whole or whole organization may
lead to learning errors. If visual memory is poor, graphs and diagrams may need to translated into words or the language of numbers and mathematical relationships.

**Vision & Reading**

Visual processing problems commonly affect reading. Some of the most common ways visual problems present:

**Late Readers:**

Sometimes children with visual memory difficulties, dyslexia, or visual perceptual problems start reading later than we might expect based on interest, general vocabulary, or letter recognition. Because fluent reading requires moving the eyes precisely across a line, recognition of letter clusters and whole words, and there are visual demands of reading beyond simple letter identification or language.

**Word & Line Skips:**

Word and line skips are extremely common in children, but although usually these improve with reading practice, some children and adults require more specific intervention. When untreated, missed words and lines take a serious toll on reading comprehension and endurance.

**Moving Letters, Doubling:**

Many children and adults don't think to mention problems with moving letters or intermittent doubling unless they're asked about it specifically (again because we don't really think about how different our vision is from somebody else's). Problems with moving letters or double can occur as the result of weak gaze fixation or poor coordination of the images coming from each eye. Problems of this sort slow down reading, increase the likelihood of reading and spelling errors, and reduce reading endurance.

**Wild Guesses or Trouble Reading Long Words:**

Children who make wild guesses with words often have trouble seeing the wholes of words due to trouble moving the eyes smoothly across a word or a limited visual span. Visual span refers to the amount a person can "see" at one time. This is can be a surprise to many people, but many weak student readers can only see 1 to 3 letters at a time when they look at individual words. Limited visual spans can run in families, or be associated with dyslexia, premature birth, or even mild prenatal stress or birth injury.

"Careless" Mistakes:

Students with undiagnosed vision problems will often underachieve on tests because of missed words on test questions or instructions as in "Please mark the answer that is not true..."

**Vision & Writing**

Visual processing problems commonly affect writing. Some of the most common ways visual problems present:

**Sloppy Handwriting:**

Because handwriting requires constant feedback from vision and fine motor activity, unrecognized vision problems can contribute significantly to poor handwriting. Children may struggle with keeping letters well spaced or on the lines, and be confused about how letters are written. Spatial problems and motor problems also contribute to writing difficulties, but because these systems all work together, a breakdown at any one point may result in near-illegible work.
Large Letters:
Sometimes we see children trying to write in very large letters - it may be because they can't see normally sized letters (for their age) as they write them.

Looking Up Frequently While Copying Words or Sentences:
Children who look up frequently when writing words or sentences have problems remembering how letters look (visual letter form weakness) or a small visual memory span. A small visual memory span means that one can only "see" a small bit at one time. For reading words, this might mean only seeing two or three letters at a time. Children with small visual memory spans have more difficulty becoming fluent readers because they read letter-by-letter and may have trouble quickly recognizing the whole shape of words.

Spelling Errors:
If you can't see every letter in a word, it affects spelling and it's hard to learn which sounds go with which letters or letter combinations. Visually-based spelling errors more commonly affect the middle parts of word because visual crowding makes it difficult to make out individual letters.

Eyes Close to Page:
Students bring their eyes close to the page for a variety of reasons. Sometimes a child may need glasses, but other times it may because it's hard to switch focus from far-to-near, or they have visual overload from a brain-based visual impairment. It's important to distinguish these causes because each is treated differently.

Adjustments

Classroom Management
Being aware and monitoring progress of the child's skills and abilities will help dictate what adjustments in classroom structure and/or materials are appropriate and feasible to address differences with visual processing. Use the student’s strengths in learning to compensate for the difficulties being experienced. Be aware of the weakness but don't overemphasize it. While helping a child work on the difficulty is important it is just as important to build other skills that will contribute to successful functioning in any setting.

Because there will be a variety of learning styles evident in the students in all classrooms, teachers should aim to vary their teaching style to include the diverse range of learners. While children without learning differences will probably cope adequately whatever the teaching method, it is essential that those children experiencing visual processing problems get as much support as possible.

Teaching Strategies

- Use books, worksheets and other materials with enlarged print to make tasks much more manageable.
- Reading improves fewer items on page or use of a marker to exclude a portion of page
- Encourage student to keep focused and not become overwhelmed when using printed information. A "window" made from cutting a rectangle in an index card helps keep the relevant numbers, words, sentences, etc. in clear focus while blocking out much of the peripheral material which can become distracting. Reduce the prompt to using a ruler as a reading guide (to keep focus on one line at a time) and a highlighter (to immediately emphasize important information)
- Read written directions aloud varying teaching methods (written and spoken words, images and sounds) to help promote understanding and provide an additional means for obtaining the information.
• Break assignments and chores into clear, concise steps. Often multiple steps can be difficult to visualize and complete.
• Give examples and point out the important details of visual information (the part of a picture that contains information for a particular question).
• Provide information about a task before starting to focus attention on the activity.
• Allow student to write answers on the same sheet of paper as the questions or offer opportunities for student to explain answers orally.
• Provide paper for writing and math work that has darker or raised lines to make the boundaries more distinct.
• Provide scaffolding outline to simplify and organize ideas.
• Organize assignments to be completed in smaller steps instead of one large finished product.
• Provide a tape recorder to supplement note-taking and when getting important information.
• Have a proofreading buddy for checking written material, notes and essays.
Visual Processing Learning Differences

<table>
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<tr>
<th>Processing Deficits</th>
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<th>Strategies</th>
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<td>Difficulty in remembering what was seen. Reading comprehension. Poor at sight words Difficulty with math equations. Poor recall of information.</td>
<td>Provide handouts that are clearly written. Provide oral instructions.</td>
</tr>
<tr>
<td>Visual Motor integration</td>
<td>Mechanical problems in test taking. Difficulty copying off blackboard or book. Spaces poorly. Poor written work. Unorganised.</td>
<td>Allow use of computer. Auditory recording of lessons. Substitute oral reports. Provide individual written outlines so there are fewer steps to process. In maths/science require answers only for calculations. Use graph paper. Lower standards of acceptable writing</td>
</tr>
<tr>
<td>Visual Figure ground</td>
<td>Trouble seeing an image within a competing background. Picking one line of print from another when reading</td>
<td>Use an index card or marker when reading to blot out distracting words</td>
</tr>
<tr>
<td>Visual Discrimination</td>
<td>Seeing the difference between two similar objects. Confuse similar looking words, confuse some letters b/d/p/q/, h/n, u/y</td>
<td>Lots of phonics and structured multisensory reading, spelling, direction writing. Sit student close by for monitoring and support.</td>
</tr>
<tr>
<td>Visual Spatial Orientation</td>
<td>Flip letters, flip place of letters within words, flip whole words. Loses materials. Late to class. Difficulty with oral reading. Unorganised homework. Difficulty judging time.</td>
<td>Provide more time for assignments or shorten them. Encourage silent reading. Provide help in organisation.</td>
</tr>
</tbody>
</table>

Links
Refer also to: Visual Discrimination, Visual Memory, Visual Motor Integration, Visual Sequencing, Visual Spatial

http://www.ldonline.org/article/Understanding_Processing_Deficits


Source of Information

http://www.ncld.org/ld-basics/related-issues/information-processing/visual-processing-disorders-by-age-group
Click here to return to the contents page.
Visual Processing Learning Differences:
Visual Discrimination

Definition
Visual discrimination refers to the ability to differentiate objects based on their individual characteristics and attributes such as color, form, shape, pattern, size, and position. It also includes the ability to recognize an object as distinct from its surrounding environment. Visual discrimination is vital in the recognition of common objects and symbols.

Features
In terms of reading and mathematics, visual discrimination difficulties can interfere with the ability to accurately identify symbols, gain information from pictures, charts, or graphs, or be able to use visually presented material in a productive way. One example is being able to distinguish between an /nl and an Imp, where the only distinguishing feature is the number of humps in the letter. The ability to recognize distinct shapes from their background, such as objects in a picture, or letters on a board, is largely a function of visual discrimination.

Students who have difficulties in this area may:

- Be unable to identify similarities and differences between shades of colour and texture in pictures
- Confuse shapes, patterns and symbols in maths
- Confuse letters, words and objects that look similar
- Reverse numbers and letters when writing
- Have problems with learning sight vocabulary
- Find simple scanning activities difficult (eg. Wordsearches, dictionary work, using an index)
- Have problems with comparative language (eg. Taller than, shorter than, longer than)
- Have difficulty completing jigsaw puzzles
- Have problems with copying from the board
- Prefer to use multisensory strategies when learning
- Work with small amounts of visual material at a time
- Predominantly use phonic strategies when reading
Reading difficulties could include include:

- Reversals: b for d, p for q
- Inversions: u for n, w for m
- Yawns while reading
- Complains eyes hurt, itch/rubs eyes
- Complains print blurs while reading
- Turns head or paper at odd angles
- Closes one eye while working

**Adjustments**

**Classroom Management**

Be aware that a student with Visual Discrimination difficulties will require close monitoring and support to successfully access information and complete written, spelling and maths class work.

Consider negotiating adjustments on an individual basis in each of the following areas:

**Access to the learning environment:**

Anticipate that they will experience fatigue due to the confusions with letters, words, digits and symbols. Have the students sit close by for ease of instruction, monitoring / clarifying understanding and pointing out examples of correct responses.

**Presentation of information by teacher:**

Slow the rate of presentation and deliver in multi modal ways.

**Responding by student:**

Allow for ‘brain breaks’ for 1-2 mins during working close eyes and relax.

Special provision related to assessment.

**Teaching Strategies**

Activities to develop visual discrimination skills from an early age include:

- Sorting – colour, shape, size and texture
- Post-a-shape – matching shapes to the correct opening
- Matching silhouettes 1 – pictorial
- Matching silhouettes 2 – shapes
- Pairs 1 – matching objects, shapes and pictures
- Odd one out 1 – colour, shape, size
- Odd one out 2 – pictorial (apple, orange, banana, cup)
- Pairs 2 – matching letters, using a choice of only four to six at first. Try to avoid the letters that are easily confused like b, d and p. Introduce those letters gradually
- Pairs 3 – matching numerals, using a choice of only four or five at first
- Matching sequences – colour, shape and size
• Spot the difference – searching for visual similarities and differences between two pictures
• Mix and match – making three-part flip-books where heads, bodies and tails of animals can be interchanged
• Match the detail – matching a picture of a detail (such as a window to a house
• Shapewords – matching high frequency words to a shape outline
• Snap – matching a range of pictorial cards
• Lotto – matching word to word
• Dominoes – matching picture to picture or word to word
• Words to sentence matching
• Spot the difference – searching for visual similarities and differences in words
• Letter change (eg. cat, cot, cut)
• Onset change (eg. sent, tent, went)
• Odd word out – both oral and written (eg. hand, land, lend, stand)
• Pelmanism 1 – rhyming picture pairs
• Pelmanism 2 – rhyming word pairs
• Wordsearches – using high frequency words or rhyming words

**Links**

Refer also to: [Visual Processing Learning Differences](http://www.ldonline.org/article/Understanding_Processing_Deficits)


**Source of Information**


▲ [Click here to return to the contents page](#)
Visual Processing Learning Differences: Visual Memory

Definition
There are two kinds of visual memory:

- Long-term visual memory is the ability to recall something seen some time ago
- Short-term visual memory is the ability to remember something seen very recently

Visual memory is a critical part of academic skills. It allows us to recognise objects and to remember letters, numbers, symbols, words, and pictures. In cases of partial visual agnosia (visual access problems), what is learned on day one, "forgotten" on day two, may be remembered again without difficulty, on day three.

Features
Difficulties include:

- Remembering the spelling of familiar words with irregular spelling linking sounds to letters
- Reading comprehension
- Using a calculator or keyboard with speed and accuracy
- Remembering phone numbers, times tables
- Find mental maths almost impossible

Adjustments

Classroom Management
General awareness that students with Visual Memory difficulties will require close monitoring and support to successfully access information, complete tasks and participate in activities in the school setting.

Consider negotiating adjustments on an individual basis in each of the following areas:

Access to the learning environment:
Anticipate that they will experience frustrations due to difficulty recalling and retaining information.

Presentation of information by teacher:

Responding by student:
Encourage use of assistive technology

Special provision related to assessment
Teaching Strategies

- provide handouts that are clearly written
- provide oral instruction to reinforce written directions

Links

Refer also to: Visual Processing Learning Differences

http://www.ldonline.org/article/Understanding_Processing_Deficits


Source of Information


http://www.ncld.org/ld-basics/related-issues/information-processing/visual-processing-disorders-by-age-group

▲ Click here to return to the contents page
Visual Processing Learning Differences:

**Visual Motor Integration**

**Definition**
Visual Motor skills involve using feedback from the eyes to coordinate the movement of other parts of the body.

**Features**
Difficulty in the ability to use visual cues (sight) to guide the movements impacts on both gross motor and fine motor tasks. Often children with difficulty in this area have a tough time orienting themselves in space, especially in relation to other people and objects. These are the children who are often called "clumsy" because they bump into things, place things on the edges of tables or counters where they fall off, "miss" their seats when they sit down, etc. This can interfere with virtually all areas of the child’s life: social, academic, athletic, pragmatic. Difficulty with fine motor integration effects a child’s writing, organization on paper, and ability to transition between a worksheet or keyboard and other necessary information which is in a book, on a number line, graph, chart, or computer screen.

Difficulties include:
- Writing within lines or margins of a piece of paper
- Copying from a board or book
- Moving around without bumping into things
- Participating in sports that require well-timed and precise movements in space

**Adjustments**

**Classroom Management**

General awareness that students with Visual Motor Integration difficulties will require close monitoring and support to successfully access information, complete tasks and participate in activities in the school setting.

Consider negotiating adjustments on an individual basis in each of the following areas:

*Access to the learning environment:*
Anticipate that they will experience fatigue and frustrations due to difficulty with motor tasks.

*Presentation of information by teacher:*

*Responding by student:*
Encourage use of assistive technology / Special provision related to assessment
Teaching Strategies

- Encourage use of assistive technology / laptop or alphasmart notetaker
- Allow use of a tape recorder for recording lessons, homework expectations
- Negotiate task adjustments for assessment e.g. Substitute oral reports for written ones
- Provide a "note buddy" to check that topic notes are clear and well-organized
- Provide individual written outlines so there are fewer steps to process
- In math or science require answers only for calculations
- Use graph paper or turn exercise book on side for ease of copying numerals and keeping rows straight
- Minimise copying from the board, provision of photocopy of teacher notes, ‘note-buddy’

Links

Refer also to: Visual Processing Learning Differences

http://www.ldonline.org/article/Understanding_Processing_Deficits


Source of Information


http://www.ncld.org/ld-basics/related-issues/information-processing/visual-processing-disorders-by-age-group

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Visual Processing Learning Differences: Visual Sequencing

Definition
Visual Sequencing involves the ability to see and distinguish the order of symbols, words or images.

Features
Difficulty with visual sequencing impacts on daily living and academic functioning in many ways.

A child might hear or read a story, but in recounting it, start in the middle, go to the beginning, then shift to the end. Eventually the whole story comes out, but the sequence of events is wrong.

Students might see the math problem as $16 - 3 = ?$ on the blackboard, but write it as $61 - 3 = ?$. Or a child might see $2 + 3 = ?$ and write $2 + 5 = 3$. They knows the right answer but gets the sequence wrong.

Spelling words with all of the right letters in the wrong order can also reflect difficulties with visual sequencing.

Sequences may be memorized; the days of the week, for example, and then the student may be unable to use single units out of the sequence correctly. If you ask what comes after Wednesday, the child cannot answer spontaneously, but must go back over the whole list, "Sunday, Monday, Tuesday, Wednesday..." before she or he can answer.

Difficulties in the classroom include:
- Problems in using a separate answer sheet
- Staying in the right place while reading a paragraph. Example: skipping lines, reading the same line over and over, frequently losing the place makes reading fatiguing and problematic
- Reversing or misreading letters, numbers and words
- Understanding math equations
- Copying from board or books accurately
- Sequencing errors can include: was I saw on I no

Adjustments

Classroom Management
General awareness that students with Visual Sequencing difficulties will require close monitoring and support to successfully access information, complete tasks and participate in activities in the school setting.

Consider negotiating adjustments on an individual basis in each of the following areas:

Access to the learning environment:
Anticipate that they will experience fatigue and frustrations due to difficulty with sequencing information. Allow breaks from writing and reading or provide a scribe/reader to assist.
Presentation of information by teacher:

Responding by student:

Special provision related to assessment:

Be aware of fatigue and may need more time for assignments or tests. Be aware that errors in reading, mathematics and copying may be due to misreading letters and symbols.

Teaching Strategies

- Combine reading with oral presentation.
- Color code written instruction when writing questions on the board, change colour every question.

Links

Refer also to: Visual Processing Learning Differences

http://www.ldonline.org/article/Understanding_Processing_Deficits


Source of Information


http://www.ncld.org/ld-basics/related-issues/information-processing/visual-processing-disorders-by-age-group

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**Visual Processing Learning Differences:**

**Visual Spatial**

**Definition**

This refers to the position of objects in space and the ability to accurately perceive objects in space with reference to other objects. Visual-spatial learners gather their information best through their eyes and think in pictures rather than in words.

**Features**

Visual-Spatial difficulty, ie. processing what the eye sees, is one of the prime causes of students experiencing difficulties in math, reading and writing.

These subjects rely heavily on the use of symbols (letters, numbers, punctuation, math signs) and presuppose an ability and understanding of spatial relationships.

Words and numbers have to be perceived as separate units, and the importance of being able to perceive objects in relation to other objects is necessary. One must be able to associate that certain digits go together to make a single number (ie, 14), that others are single digit numbers, that the operational signs (+,x,=) are distinct from the numbers, but demonstrate a relationship between them. The only cues to such math problems are the spacing and order between the symbols.

Accurate perception and understanding of spatial relationships is also very necessary for reading directionality problems and confusion of similarly shaped letters, such as b/d/p/q can occur.

Visual Spatial learners frequently experience huge difficulties with organization, orientation and getting from one place to another, judging time and reading maps.

**Dyscalculia**

Dyscalculia is a broad term for severe difficulties in math. It includes all types of math problems ranging from inability to understand the meaning of numbers to inability to apply math principles to solve problems.

**Young Children with Dyscalculia Experience:**

- Difficulty learning to count
- Trouble recognizing printed numbers
- Difficulty tying together the idea of a number (4) and how it exists in the world (4 horses, 4 cars, 4 children)
- Poor memory for numbers
- Trouble organizing things in a logical way - putting round objects in one place and square ones in another
School-Age Children with Dyscalculia Experience:
- Trouble learning math facts (addition, subtraction, multiplication, division)
- Difficulty developing math problem-solving skills
- Poor long term memory for math functions
- Unfamiliarity with math vocabulary
- Difficulty measuring things
- Avoidance of games that require strategy

Teenagers & Adults with Dyscalculia Experience:
- Difficulty estimating costs like groceries bills
- Difficulty learning math concepts beyond the basic math facts
- Poor ability to budget or balance a cheque book
- Problems with concepts of time, such as sticking to a schedule or approximating time
- Problems with mental math
- Difficulty finding different approaches to one problem

Dysgraphia
Dysgraphia is the term for severe difficulties with the act of writing. It includes the ability to recognize forms in letters and to organize to letters, numbers and words on a line or page.

Early Writers with Dysgraphia Experience:
- Tight, awkward pencil grip and body position
- Avoidance of writing or drawing tasks
- Difficulty forming letters shapes
- Inconsistent spacing between letters/words
- Poor understanding of upper and lowercase letters
- Inability to write or draw in a line or within margins
- Tire quickly while writing

Middle Years writers with Dysgraphia Experience
- Illegible handwriting
- Mixture of cursive and print writing
- Saying words out loud while writing
- Concentrate on writing so much that they don't comprehend what they've written
- Difficulty thinking of words to write
- Unfinished or omitted words in sentences
**Adolescents and Adults with Dysgraphia Experience**

- Difficulty organizing thoughts on paper
- Trouble keeping track of thoughts already written down
- Difficulty with syntax structure and grammar
- Large gap between written ideas and understanding demonstrated through speech

**Adjustments**

**Classroom Management**

General awareness that students with Visual Sequencing difficulties will require close monitoring and support to successfully access information, complete tasks and participate in activities in the school setting.

Students with dyscalculia and dysgraphia experience much more difficulty with math and writing than others, but their abilities in other areas is usually average or better, and they have amazing strengths and gifts. They are at-risk for being seen as lazy and careless with their work because of the frustration and fatigue they experience when putting forth the effort it takes for them to complete seemingly easy tasks. Provision of positive learning experiences to help students access their learning, achieve success and maintain their self-esteem and motivation is required.

**Teaching Strategies**

To address Maths difficulties:

- Use large graph paper for math calculation to keep ideas, columns and rows organized
- Work on finding different ways to approach math facts i.e., instead of just memorizing the multiplication tables, explain that $8 \times 2 = 16$, so if 16 is doubled, $8 \times 4$ must = 32
- Practice estimating as a way to begin solving math problems
- Introduce new skills beginning with concrete examples and later moving to more abstract applications
- For language difficulties, explain ideas and problems clearly and encourage students to ask questions as they work
- Provide a place to work with few distractions and have pencils, erasers and other tools on hand as needed
- Practice estimating distance with ball games and using a tape measure
- Create maps and travel logs

To address writing difficulties:

- Allow use of print or cursive - whichever is more comfortable
- Allow extra time for writing assignments
- Begin writing assignments creatively with drawing, or speaking ideas into a tape recorder
- Alternate focus of writing assignments - put the emphasis on some for neatness and spelling, others for grammar or organization of ideas
- Explicitly teach different types of writing - expository and personal essays, short stories, poems, etc
- Do not judge timed assignments on neatness and spelling
• Have students proofread work after a delay - it's easier to see mistakes after a break
• Help students create a checklist for editing work - spelling, neatness, grammar, syntax, clear progression of ideas, etc
• Encourage use of a spell checker - speaking spell checkers are available for handwritten work
• Reduce amount of copying instead, focus on writing original answers and ideas
• Have student complete tasks in small steps instead of all at once
• Negotiate alternative means of assessing knowledge, such as oral reports or visual projects
• Encourage practice through low-stress opportunities for writing such as letters, a diary, making household lists or keeping track of sports teams
• Provide tape recorders to supplement note taking and to prepare for writing assignments
• Create a step-by-step plan that breaks writing assignments into small tasks
• When organizing writing projects, create a list of keywords that will be useful
• Provide clear, constructive feedback on the quality of work, explaining both the strengths and weaknesses of the project, commenting on the structure as well as the information that is included
• Use assistive technology such as voice-activated software if the mechanical aspects of writing remain a major hurdle

To address difficulties with organisation:
• Create an organization system that is meaningful for the user
• Use colour coding and document wallets with pockets for storage
• Maintain a consistent schedule
• Encourage, model, prompt effective use of school diary and calendar for recording due dates
• Practice social skills that focus on judging appropriate physical proximity to others

Links
Refer also to: Visual Processing Learning Differences
http://www.ncld.org/ld-basics/ld-aamp-language/written-expression/dysgraphia

Additional information on Dysgraphia
http://www.ncld.org/ld-basics/ld-aamp-language/ld-aamp-math/dyscalculia

Additional information on Dyscalculia
http://www.ldonline.org/article/Organizational_Problems_and_the_Beginning_of_the_School_Year
http://www.ldonline.org/article/Understanding_Processing_Deficits

Source of Information
Vision Impairment

Definition

Vision impairment is any diagnosed condition of the eye or visual system that cannot be corrected to within normal limits. Disease, damage or injury causing vision impairment can occur to any part of the visual system, such as the eye, the visual pathway to the brain or visual centre of the brain.

A vision impairment can:

- Be present at birth
- Occur at any time from disease or accident
- Be part of a medical condition or syndrome

Most visual conditions in children are stable and vision remains relatively unchanged. Some conditions, however, are progressive, resulting in reduced vision over varying periods.

The following conditions are not recognised as vision impairment according to DET criteria:

- Normal vision in one eye (with no disease in that eye)
- Colour vision defect and normal vision measurement
- Visual perceptual problems and normal vision measurement

Features

Students with vision impairment have a diagnosable condition of the eye and/or visual system that produces a vision loss, which, even with correction, is so severe that it affects the ability to learn through the usual visual sensory channels. There is a range of vision impairment from low vision through to blindness.

The following information outlines some general characteristics and needs of students within each of the categories of vision impairment.

Students with low vision:

- Have a significant vision loss
- Are eligible for advisory visiting teacher: vision impairment (AVT-VI) support
- Are mostly able to read regular size print
- May need some specialised equipment
- May require tactile instead of colour references
- May require large print

Students with moderate or severe vision:

- Have significant vision loss
- Require some specialised equipment
• Require teaching strategies with varying amounts of modification and special consideration
• Are mostly able to read large print
• May read braille

Students who are **blind**:
• Have no useable vision
• Require more specialised equipment
• Require teaching strategies with varying amounts of modification and special consideration
• Will require braille and tactile diagrams

Vision impairment has a variety of causes and presents differently in each case. Some conditions are progressive while others are stable. Some students are born with vision impairment, while others acquire vision impairment some time after birth. Some causes are:

**Albinism**
A genetic condition in which there is a lack of pigment in the eyes. There are some cases where the skin and hair pigment is affected. These students have reduced vision but are not braille users. Students are very sensitive to light.

**Optic Atrophy**
The optic nerve from the back of the eye (retina) to the brain is affected. Vision is not clear and colour vision also may be affected. Most students with optic atrophy are not braille users.

**High Myopia (severe shortsightedness)**
The eyeball is misshapen and while objects at a very short distance from the eye are seen clearly, distant vision is poor. Correction to normal vision with spectacles is not possible in these severe cases. It can be degenerative. Medical opinion should be sought with regard to the playing of contact sport as the retina can tear and reduce sight further.

**Adjustments**

**Classroom Management**
Three areas for consideration when addressing the needs of students with a visual impairment:
• Mobility skills to move safely and negotiate the environment
• Orientation
• Braille as an alternative communication medium

Assistive devices that may be useful in assisting the student with a vision impairment access the curriculum, cope with the medium of print and participate more effectively in daily life include:
• Magnification aids
• Closed–circuit television (used to enlarge an image)
• Microfiche readers
• Talking calculators
• Speaking clocks
- Dictionaries with speech outputs
- ‘compressed speech’ recordings
- Thermoform duplicators used to reproduce braille pages or embossed pictures and maps
- Modified furniture such as desks with bookstands with angled tops to bring materials closer to the child’s eyes without the need to lean over
- Lamp attachments for increased illumination of the page

**Teaching Strategies**

- Allow the student who is partially sighted to use a fibre-tip black ink pen that will produce clear, bold writing
- Prepare exercise paper with dark ruled lines
- Enlarge all text, notes and handouts to 24, 36, or even 48 point size
- Allow additional time for students with impaired vision to complete their work
- Read written instructions to students with impaired vision to reduce the amount of time required to begin a task and to ensure that the work is understood
- Use very clear descriptions and explanations verbal explanation will have to compensate for what the student cannot see
- Train other students, and teacher aide to support the student with impaired vision (e.g. For note taking, repeating explanations)
- Speak to blind students frequently by name during lessons to engage them fully in the group-learning processes make sure they contribute and value their contributions
- Call upon other students clearly by name so that the blind student knows who is responding
- Get all the advice you can from the visiting support teacher and other advisory personnel
- Make sure that any specialised assistive equipment is always at hand and in good order
- Note that almost all students with impaired vision in mainstream classes will have partial sight rather than total or legal blindness. It is essential to encourage them to use their residual vision effectively. Using the remaining vision is helpful, not harmful to these students
- If the student with impaired vision uses assistive equipment such as magnification aids, lamps, or adjustable bookstand, make sure that (a) you know when and how the equipment needs to be used (b) you ensure that the student does not avoid using the equipment
- Use a photocopier when necessary to make enlarged versions of notes, diagrams and other handouts for the student. Use large type size when preparing materials on the word processor or for powerpoint presentations
- Seat the student in the most advantageous position to be able to see the blackboard or screen
- Ensure that your own material on the blackboard or screen is neat and clear, using larger script than usual. Keep the blackboard surface clean to ensure clarity of words against background
- Avoid overloading worksheets with too much information and heavy density of print
- Some forms of vision impairment respond well to brighter illumination but in some other conditions very bright light is undesirable. Obtain advice on illumination from the visiting teacher or other support personnel who are aware of the student’s characteristics
- If the student has extremely limited vision, make sure that any changes to the physical arrangement of the room are explained and experienced by the student to avoid accidents. The student needs to develop orientation each time an environment is changed.
- Try to ensure that the student establishes a network of friends within the class. Social interaction is often not easily achieved without assistance.

Links

QSA Information sheets on disabilities and learning difficulties accessed through:

http://education.qld.gov.au/curriculum/learning/students/disabilities/


Sources of Information

*Teaching Students with Disabilities Resource Kit* 1998, Griffith University and Education Queensland, Brisbane.

A kit containing six videos and six booklets. Contains an introduction, a section for administrators, and sections on each of the following disability areas: • hearing impairment • intellectual disability • physical impairment • vision impairment.

This kit was distributed to State schools in March 1998.

*Teacher Aides Working with Students with Disabilities* 1998, Low Incidence Unit, Education Queensland, Brisbane.

A set of books developed for teacher aides.

Also available at:
http://education.qld.gov.au/curriculum/learning/students/disabilities/

There is a range of personnel within the school systems who could be approached for information and assistance.

Education Queensland employs advisory visiting teachers: Vision Impairment (AVT:VI) to work with students with vision impairment whose educational needs have been identified through the verification process. They support students from birth to exiting school, across a range of educational settings including non-governmental schools, usually within a geographical cluster. Their role is to support program development and provision for students with vision impairment.

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Williams' Syndrome

Definition
Williams Syndrome is a neurobehavioral congenital disorder. It is quite a rare chromosomal condition occurring in about 1 of every 20,000 births.

Features

Physical
- Characteristic facial features including a small upturned nose, curly hair, full lips, full cheeks, small teeth, a broad magnetic smile and often especially bright eyes.
- Musculoskeletal issues - fine motor, strength and coordination difficulties
- Cardiovascular - heart, kidney problems, elevated calcium levels
- Neurological differences - limited spatial skills and motor control, difficulty with arithmetic, low cognitive functioning (between 50 – 70 IQ), hypersensitivity to sounds

Personality Characteristics Include:
- An outgoing social nature
- An exuberant enthusiasm
- A sense of the dramatic
- Overfriendliness

Strengths Include:
- Incredible skill in learning songs - revealing a good auditory memory as well as musical sense
- Good vocabulary
- Engaging smile
- Enthusiastic manner
- Socially engaging and conversational

Adjustments

Classroom Management
Williams Syndrome impacts on several areas of development including cognitive, behavioral and motor areas.

The following characteristics can pose challenges in classrooms:
- *Short attention span and distractibility*
- *Difficulty modulating emotions*
  
  E.g. extreme excitement when happy, tearfulness in response to apparently mild distress, terror in response to apparently mildly frightening events
• **Heightened sensitivity to sounds (hyperacusis)**
  
  This characteristic in combination with a tendency toward anxiety sometimes causes behavior problems around noise related activities such as fire drills, vacuum cleaners, ceiling fans, heating or plumbing systems, and school bells.

• **Perseverating on certain "favorite" conversational topics**
  
  Some children with Williams Syndrome have “favorite” topics that they want to talk about more often than is socially appropriate. Sometimes these favorite topics have to do with things that make them anxious or with which they show overwhelming fascination. Sometimes favorite topics are simply areas the child is confident discussing, and the child may be relying on that topic to ensure that he/she will be a competent participant in the conversation.

• **Anxiety around unexpected changes in routine/schedule and upcoming events**

• **Rocking, nail biting or skin picking**
  
  Usually these behaviors are fairly mild and may not pose a problem.

• **Difficulty building friendships**
  
  In spite of a tendency to have a very sociable nature, children with Williams Syndrome often have difficulty building friendships. This is probably due to difficulties around sustaining attention, and impulsivity, as well as developmental and learning difficulties

• **Learning differences** – can have intellectual disability

**Teaching Strategies**

**Attention problems:**

• Flexibility in requirements for time spent working
• Frequent 'breaks' in work time
• A "high success," high motivation curriculum
• Minimal distractions
• Auditory as well as visual
• Rewards for attending behaviors and, when possible, redirection around 'off task' behaviors or ignoring same
• Allowing some degree of choice for the child in terms of activity
• Small groups

**Emotional modulation:**

• Support to develop increasingly effective internal control strategies
• Adapt the environment to minimize situations of extreme anxiety and frustration
• Anticipate beginning buildup of frustration
• Redirection from the frustrating situation
• Alternate activity before the frustration escalates
• Minimize unexpected changes in schedule, plans, etc.

**Heightened sensitivity to sounds:**

• Provide warning just before predictable noises when possible (fire drills, hourly bells
• Allow the child to view and possibly initiate the source of bothersome noises (e.g. Turn the fan on and off, see where the fire alarm is turned on)
• Make tape recordings of the sounds and encourage the child to experiment with the recording (playing it louder/softer etc.)

Perseverating on conversational topics:
• Social skills building  use role play, stories, discussion and small group experiences to teach alternative appropriate topics, and expand the child’s repertoire
• Respond sufficiently (once) to repetitive asking of the same question, then ignore the subsequent repetitions, while offering other topics and activities
• Avoid a discussion of whether or not the topic will continue to be discussed as this prolongs the perseveration
• Include time for discussion of the child’s favorite topic as appropriate within relevant context
• Capitalize on the favorite interest as a curriculum topic to motivate

Anxiety:
• Provide a predictable schedule and routine with specific warnings
• Minimize unexpected changes
• Use digital watches and date books to manage changes to routine
• Ignore inappropriate behaviors when possible
• Redirect to alternate appropriate
• Minimize environmental stress

Friendship building:
• Social skills building within the relevant context
• Facilitate social interaction opportunities through class group work

Intellectual disability:
• Refer to strategies for ID

Links
Refer also to: Intellectual Disability
www.williams-syndrome.org

Sources of Information
Williams Syndrome Association
Information for Teachers

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**Word Finding Difficulties**

**Definition**
People who constantly have problems saying a known word at the right time and place in talking have word retrieval difficulties. The person will know and have used the word correctly before. Word retrieval difficulties sometime occur in isolation but are often part of a language impairment.

**Features**
*How do you know there is a problem?*

The child may:
- Talk lots but not get to the point
- Over use fillers such as "ummm, you know"
- Use gestures to help say a word eg. Click fingers, tap head
- Over use empty words such as "thing, thingamygig, stuff"
- Over use pronouns eg "he, she they" - resulting in difficulty knowing who the child is talking about
- Over use general action words such as "do, is" rather than specific words such as "cut, stand"

**Adjustments**

**Classroom Management**
Imagine words are like spiders on a web. Each strand of the web helps keep the spider in place and lets the spider move to where it wants to go.

We can imagine each strand of the web is like a description of the word eg. What the object does, What it looks like, What it sounds like, What it feels like, Where you find it etc.

Words describing objects, animals or people are, therefore, much easier to learn and use than abstract words. Abstract words represent actions, events, emotions, ideas and knowledge that cannot be seen or touched.

**Teaching Strategies**
The following is a list of 'general rules' for helping children think of the words they want to say. They are tried and true strategies for assisting word retrieval. Not all of them will suit all children - be selective and find the ones that work for you and the child. Strategies are aimed at helping the child retrieve known words - not at getting them to learn new words.

- Use visual cues (Imagine what it looks like, can you think of what it is?)
- Provide / give a sound or letter cue (eg., What sound/letter does it start with? OR Say the first sound or syllable of the word for them)
- Provide a verbal clue (eg. "it rhymes with...")
- Give extra time but don't leave it too long that they are struggling to find the word by themselves
• Tell the answer rather than letting them persist unsuccessfully
• Say the topic of the conversation, lesson or problem first so they can have time to 'tune in' and get access to words that might be useful for that subject
• Encourage describing by saying:
  o Its function eg. "You sit on it in the kitchen"
  o What it goes with eg "goes with a table"
  o The group it belongs to: eg its furniture
  o An opposite eg. "not down"
  o A like object eg. "Like a sofa"
  o State the desired word eg "You sit on it, like a chair"
• Talk about words and word-meanings: Try to work these conversations in around topics of genuine interest to the child
• Adapt the tasks to suit the child’s age and interests
• As opportunities arise talk about such topics as:
  o People being named after other people
  o "Why is Big Bird called Big Bird?"
  o Why certain names might have been chosen for pets and TV characters (Cookie Monster, Rugrats, Inspector Gadget, Uncle Scrooge, The Fat Controller, etc)
• Read, read, read, and read! Here are some suggestions:
  o Just about every book in the "Beginner Books"/Dr Seuss series, including "I'll Teach my Dog 100 Words" and "Hop on Pop"
  o Books about rhymes
  o Books about opposites
  o Books about word classification (i.e., semantic classes): e.g., vehicles, tools, occupations, etc, involving knowing the names of objects or entities within a class
  o Books about animals and their young, involving knowing the precise names for animals' offspring (e.g. horses have foals, cows have calves, etc), and the correct names for some common animals according to gender (horse: mare, stallion. filly, colt)
  o Books about names
  o Books that rhyme e.g. The Diggingest Dog, One Duck Stuck e.g. The Cat in the Hat, Robert the Rose Horse
  o Books that contain silly rhymes*, for example "There's a Wocket in my Pocket" by Dr Seuss
  o Books that tell a story
• Play impromptu word-games: Games involving transforming one part of speech to another are particularly helpful, e.g.:
  Today I am riding, yesterday I ... (rode)
  Today I am driving, yesterday I ... (drove)
  Today I am sleeping, yesterday I ... (slept)
  Yesterday I rode, tomorrow I will ... (ride)
• Read riddle books and tell jokes
Choose knock-knock jokes, riddles, etc that rely upon accurate word-retrieval to make them funny.

Make up silly words for familiar rhymes, e.g.: "Baa baa black sheep have you any spaghetti?" "Humpty Dumpty had a great grandmother".

Play word-classification games.
Games might include ones such as: "See how many boys' names you can think of in one minute. Time yourself while you do it". Other categories that might be fun or interesting include:

- tools
- games
- drinks
- toys
- animals
- vegetables
- makes of car
- sports
- clothes
- flowers
- colours
- tools

When you read stories, recite rhymes or sing songs, include "obvious" sentence completion routines, eg.

'Little Jack Horner sat in a ... (corner)
'Baa baa black sheep, have you any... (wool).

Play "name the category"
This can be done like a cloze task, for example,
"red, blue, green, orange and pink are all ...
'lions, tigers, monkeys and elephants are all ...

Play "pick the word that does not belong" eg.
"Which one is the odd one out: cat dog tree mouse?"

Play "which two words go together?" eg.
"watch pig nail clock"

Play sentence completion ("cloze") games eg.
"A house is a place to live. An office is a place to ..."
"A nursery is a place to buy plants. A Post Office is a place to buy..."

Play games involving synonyms eg.
"Can you think of another word that means big?"
"Can you tell me another word for smart?"

Play word-association games eg.
"pilot goes with... (plane),
"cab goes with... (driver),
"ship goes with... (sailor)

Devise simple games involving similarities eg.
"What is the same about a sheep and a cow?"
"A train and a plane are both..."

Play games involving antonyms eg.
- use a sentence completion (cloze) activity e.g., "The opposite of hot is ..."
- use a question-and-answer format e.g., "What is the opposite of hot?"
- use a confrontation naming task using pictures in which the child has to name "opposites pictures" as rapidly as they can e.g., hot cold, wet dry, big little, fast slow, deep shallow, apart together

- Play word games involving differences eg.:
  - "What is different about a bird and a plane? They can both fly, but they are different because..."
  - Play "What comes next?"
  - Monday Tuesday Wednesday ...
  - Summer Autumn Winter ... 123 ...
  - First second third ...

**Links**

Refer also to: Communication Difficulties, Receptive Language Disorder, Pragmatic Language Disorder

**Sources of Information**

Mater CYMH Speech Pathology Handout developed by N Anger
Handout Word Retrieval Word Finding" "On the Tip of my Tongue"

Suggestions for activities are taken from an article by Caroline Bowen on the Word Finding Web Site.

http://www.speech-language-therapy.com/wordretrieval.html

http://www.speech-language-therapy.com/txresources.html

http://members.tripod.com/Caroline_Bowen/home.html

The Word Finding Web Site provides information about word finding for professionals, parents, and learners with word finding difficulties. It includes references, materials, a virtual help section, and internet resources. The Word Finding Web Site is the creation of Dr. Diane German, a professor in the Special Education Department at National-Louis University, Chicago.

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XYY Syndrome

Definition

XYY Syndrome is a rare genetic disorder affecting approximately 1 in 1,000 males. It is caused by the presence of an extra Y chromosome and affects only males. Males normally have one X and one Y chromosome. Individuals with XYY Syndrome have one X and two Y chromosomes. No definite causes of this chromosome abnormality have been identified.

Features

The features of the XYY syndrome are often subtle and not overtly suggestive of a chromosomal abnormality disorder (an extra Y chromosome). However, a pattern of variable abnormalities has come to be appreciated, which may allow for clinical suspicion of the XYY syndrome in childhood.

As the boys develop, the most common traits and symptoms include:

- Increased height and growth acceleration in mid childhood
- Increased physical activity
- Developmental delay
- Relative weakness, with poor fine motor coordination and sometimes a fine tremor
- Development of severe acne at adolescence
- Prominent facial features - long face, ears and teeth
- Thin stature, long fingers
- Cognitive underachievement and academic performance
- Learning differences
- Explosive behavior, sometimes antisocial
- Behavioral problems, especially temper tantrums and aggressive or defiant activity, start in early childhood
- Physically and sexually aggressive behavior

Adjustments

Classroom Management

It is important to recognize that each student is unique with individual strengths and needs and management of the implications of their condition is individualised.

Teaching Strategies

The following strategies are recommended:

- A structured, consistent approach with clear boundaries and expectations to address behavioural issues
- Excessive physical activity be channelled into sports, play and other appropriate physical outlets
- A supportive educational environment which addresses learning problems
• A highly structured, stimulating, motivating and reinforcing approach to teaching
• Establish consistent, familiar routines which provide safety and security
• Specific behavioural interventions to facilitate progress in developing pro-social behaviours and reducing undesirable, aggressive or antisocial behaviours
• Focus on skills for internalized control over impulsive or aggressive behaviours.
• Social skills building to develop appropriate peer and adult relationships and improve social interaction
• Facilitate skills building in all areas of functioning and independent living skills

Links

Sources of Information
http://www.odtc.com/odtc/XYYSyndrom10.htm

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