AWARENESS OF STUDENTS WITH DIVERSE LEARNING NEEDS

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About this document

The principle of inclusion adopted by British Columbia schools supports equitable access to learning for all students and the opportunity to pursue their goals in all aspects of their education.

This resource book contains information intended to assist classroom teachers in understanding the implications for classroom instruction and management of a number of diverse learning needs. Some students may have more than one of these needs in combination. Each section includes a definition, recognition signs, classroom strategies and contacts for more information. The three ring binder format has been used so that new or updated sections can be inserted as they become available and so that the reader can insert other information pertinent to an individual district, school or classroom.

This resource book is meant to be a practical support, building awareness of specific needs. It is not intended that this document be used as a resource for the reporting of students for supplemental special education funding purposes. It is not intended to be used as the final resource for teachers in this area, but rather as an introduction. It is important to emphasize that teachers are not responsible for diagnosis. They may, however, be the first to recognize symptoms and behaviours in the classroom. The focus is on ways that teachers can modify the learning environment to facilitate learning. Many of the suggestions are of a general nature.

The needs of a student with a diverse learning need such as has been described in this document will vary, depending on the type of learning need, the severity and, in some cases, the length of the time that the student has had the learning need. Individual students have individual needs. It is important for teachers to be available to meet with a parent, and where appropriate, the student, to discuss any problems that may occur in the classroom, hopefully before they occur. The student may have already faced challenges in school and a solution may have already been found that works for him/her.

The strategies submitted are not, for the most part, suggestions of major changes to a teacher's style of teaching. However, it is hoped that the suggestions offered will help facilitate discussion and sharing of important information between the teacher and school-based team, teacher and parent and, as appropriate, teacher and student.

Acknowledgements

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In addition the Ministry would like to recognize the contributions of Alberta Education and the British Columbia Ministry of Health and Ministry Responsible for Seniors.

Allergies

An allergy is an overreaction in the body to a usually harmless substance called an allergen. The most common allergens are pollen, dust, insect bites, moulds, fur and feather bearing pets and a variety of foods.

Allergens enter the body through the nose, eyelids, bronchial passages, digestive system or even the skin. Subsequently these allergens stimulate the body to produce allergic antibodies which prefer to coat certain cells in the lining of the respiratory tract, skin and the gastrointestinal tract. When one of the allergens again enters the body, the reunion of the allergen and the allergic antibodies stimulate these cells to release certain chemical mediators such as histamines which in turn cause the symptoms such as sneezing, runny nose, hives, itchy eyes and wheezing that are associated with allergic reactions.

Recent studies show that one in every five school children has a major allergy. The tendency to become allergic is usually inherited, and will remain throughout the person's life. As children mature, they may outgrow certain sensitivities or the allergy may be controlled. With help from parents, physicians and school staff, the child will learn where the limits are to pursuing a normal lifestyle.

Allergies can be controlled and a child should not routinely display the symptoms and behaviours described below. If the child does, the teacher should talk with the parents about it. If the child is not allergic at home, look at the school environment. If the child is allergic at home as well as at school, the parent may wish to seek additional medical help.

Recognizing the Child with Allergies

- Excessive wheezing, itchy eyes, runny nose and sneezing.
- Intermittent hearing loss.
- Frequent, unexplained, brief absences from school.
- Inconsistent behaviour - occasional spells of hyperactivity and irritability in a usually well-adjusted child.
- Lethargy and sleepiness. This may be a result of allergic reactions, antihistamines or lack of sleep if the child has been restless at night.
- Occasional decrease in attention span and lack of concentration.
- Headaches (sinus).
- Weakness and pallor.
- Listlessness and withdrawal from classroom activities.
- Specific learning difficulties particularly in reading and listening skills.
- Itchy rashes.
- Hives.
- Dark circles under the eyes.

Allergens may include:

- certain odors from chemicals, smoke, cosmetics or perfumes,
- heavily chlorinated pools,
- dust,
- cold air,
- paints or magic markers, and
- clay or play dough.

Irritants may include:

- animals,
- plants,
- insect stings or bites,
- foods, especially nuts, seafood and dairy products,
- drugs, such as antibiotics, and
- preservatives and coloring additives.

During an Allergic Reaction

- Be Familiar with any treatment the child may be using; for example, bronchodilators, medication, adrenaline kits.
- Allow the child to rest in the position in which they have been taught or in which they are most relaxed. Sitting, not lying down, may be preferable as this helps keep the bronchia passages clear of mucus.
- If the child is responsible for self-administration of medication, obtain written consent of the parents and assist by monitoring the amount used.
- Remain calm and help the child to relax. Emotions do not trigger a reaction but may increase its intensity.
- If the attack continues, inform the parents and ensure that the child is not left alone or sent home unless accompanied by an adult.

Classroom Strategies

Parents should inform the school of known allergies, and all appropriate school personnel should be informed.

- If the condition is known or suspected, meet with the parents and the child early in the year to determine the child's individual needs.
- Be familiar with the specific substances to which the child is allergic. With the parents and the child, plan a program which avoids contact with known allergens and irritants as much as possible.
- Enlist support of the school nurse for staff training in how to deal with emergencies.
- Help the child lead as normal a life as possible. Encourage participation in regular classroom activities or ensure exemption if in the child's best interests.
- Make any necessary adjustments for participation in outdoor activities, or classes in art, chemistry or woodworking for any apparent or any potential reaction to environmental factors or materials the student may have to use.
- Explain to the class what any allergy is and how it is treated; support and understanding from peers will help overcome feelings of isolation, rejection or embarrassment.
- Encourage the child with food allergies to avoid swapping lunches.
- Some children with allergies are particularly sensitive to light. Tinted glasses or sitting away from direct light may help.
- Seat the child in a well-ventilated area.
- Remind the child to take prescribed medication, if so requested by parent.
- Keep furred and feathered pets out of the classroom. Establish them in a separate room, e.g. science room, so an allergic child can avoid contact.
- Understand potential dangers of allergies and know what to expect during an allergic reaction.
- Have an emergency plan for allergic reaction (anaphylaxis).

In the Case of an Insect Sting

- Put an ice pack on the sting or bite: some swelling is normal.
- If stung flick out the stinger with your fingernail, if possible. Do not squeeze as this will inject or spread the remaining venom.
- If stung and there is difficulty breathing, faintness, pallor, further swelling in other areas, or generalized itching, immediately send or take the child to the nearest hospital.
- If the child is anaphylactic to stinging insects, administer adrenalin immediately.
- Because this specific reaction may induce shock, unlike the bronchia passage difficulty, the child should lie down and be kept in a prone position.

Contacts

Further information can be obtained from an appropriate health care professional or a representative in the following agencies:

Allergy/Asthma Information Association
BC/Yukon Region
303 1212 West Broadway
Vancouver BC V6H 3V1
Tel: (604) 731-9884
Fax: (604) 730-1015

Allergy and Environmental Health Association
Box 1231
Logan Lake BC V0K 1W0
Tel: (604) 523-9965

For More Information:

The telephone number of the nearest branch of the Allergy/Asthma Information Association is listed in your local telephone directory.

Parents should speak to their family physician and ask for a referral to an allergist, a specialist in allergy.

Asperger's Disorder

Asperger's disorder is a lifelong developmental condition, characterized by a severe and sustained impairment in social interaction and the development of restricted, repetitive patterns of behaviour, interests and activities. Such characteristics are comparable to those of a child with autism.

In contrast to autism, however, a child with Asperger's disorder will experience no significant delays in the acquisition of language, adaptive behaviour (other than social interaction), cognitive development, and development of age appropriate self-help skills, or in curiosity about the environment.

A child with Asperger's disorder will display a lack of sensitivity, intuition and normal human understanding. The child will appear to live in the normal world but in a way that is uniquely his/her own. The child's speech, for example, is more a proclaiming than a two-way communication.

Asperger's disorder appears to have a somewhat later onset than autistic disorder, or at least to be recognized somewhat later. Motor delays or motor clumsiness may be noted in the preschool period. Difficulties in empathy and modulation of social interaction may become more apparent in the context of school. It is during this time in school that teachers will notice particular idiosyncratic or circumscribed interests (e.g. a fascination with train schedules) may appear.

Children with Asperger's disorder may develop many practical skills, but cannot tolerate the whirl of everyday life. They are capable of making important contributions to the success of their living environment and of living full lives.

Recognizing the Child with Asperger's Disorder

Individuals may display the following observable characteristics.
A diagnosis by appropriately qualified medical personnel is needed to verify the condition. Qualified personnel include the developmental/
assessment team at Sunny Hill Hospital for Children, B.C. Children's Hospital or Queen Alexandra Hospital or a pediatrician, psychiatrist or a registered psychologist.

- Inability to relate to people considered normal.
- Peculiarities of eye gaze and naive, abnormal behaviour.
- Speech is pedantic and perseverative, e.g., words and phrases are repeated over and over.
- Unusual language characteristics:
    - exaggerated length of utterances,
    - embedded sentences or locked in wording,
    - unusual prosody or minimal variation in stress, pitch or rhythm,
    - overly precise,
    - written text consists of continuous, unduly prolonged, declarations or statements,
    - impervious to the listener's needs, and
    - clumsy communication and interpersonal readiness.
- Poor non-verbal communication, e.g., reduced facial expression, monotonous intonation and limited and inappropriate gestures.
- Poor comprehension of other persons' verbal and non-verbal expression.
- Strong attachments to certain possessions, repetitive activities and distress at change of whereabouts.
- Clumsiness and poor coordination.
- Special interests and skills, usually dependent on excellent rote memory (e.g., marked eccentricity).
- Normal or high I.Q.
- Demonstrates several strengths, e.g., stamina, enjoys routines, good long term memory, accuracy.

Classroom Strategies

- Meet with parents, the student and professionals in the community to determine individual needs of the student.
- Develop an Individual Education Plan (IEP) specific to the student's needs.
- Prepare the student for all changes in routine and/or environment. Carefully organize daily situations. Teach the student the habit of moving from one step to the next.

- The student will have a lot of trouble with organizational skills, regardless of their apparent intelligence and/or age. Use verbal cues, clear visual demonstrations and physical cues.
- The student will have problems with abstract thinking and concepts. Avoid abstract ideas where possible. When abstract ideas are necessary, use visual cues as an aid.
- An increase in unusual or difficult behaviours probably indicates an increase in stress, sometimes a feeling of loss of control in a specific situation. Try saying, "Do you have something to tell me?" The individual may need to go to a "safe place" and/or "safe person."
- Don't take misbehaviour personally.
- Most children with Asperger's Disorder use and interpret speech quite literally. Until you know the word processing capabilities of the student from personal experience, avoid: "cute" names such as Pal, Buddy, Wise Guy, etc.; idioms ("save your breath," "jump the gun," "second thoughts," etc.); double meanings; sarcasm; and teasing.
- Be as concrete as possible. Avoid using vague questions like, "Why did you do that?" Avoid essay-type questions. They rarely know when they have said enough or if they are properly addressing the core of the question.
- If the student doesn't seem to be learning the task or concept, break it down into smaller steps or present it in more than one way - visually, verbally and physically.
- Avoid verbal overload. Be clear. Remember that although they don't have a hearing problem, and they may be paying total attention to what you are saying, they may have difficulty understanding what you feel is important in what you are telling them.
- Behaviour management works, but if incorrectly used, or used without keeping the student's level of ability in mind, it can feed robot-like behaviour or be ineffective. Use with creativity.
- Consistent treatment and expectations from everyone is vital.
- Be aware that auditory and visual input can be extremes of too much or too little, depending on the individual.
- Do not rely on the student to relay messages to home about school events, assignments, school rules, etc., unless you are certain that the student is capable of relaying the message. A phone call home works best until this skill can be developed.
- Involve the parents in the work and techniques used at school. The child will function better in a structure common to home and school.
- If the student uses repetitive verbal arguments, and /or repetitive verbal questions, try requesting that s/he write down the question or argumentative statement. Then write down your reply. Or try writing their repetitive argument and/or statement yourself, and then ask the student to write down a logical reply. If your student does not read or write, try role playing the question and/or argument with you taking the child's part and the student answering you in a way they think would be logical.

Contacts

Autism Society of B.C.
1584 Rand Avenue
Vancouver BC V6P 3G2
Tel: (604) 261-8888
Fax: (604) 261-7898

B.C. Association for Community Living
300 30 East 6th Avenue
Vancouver BC V5T 3P3
Tel: (604) 875-1119
Fax: (604) 875-6744

Gateway Provincial Resource Program
4812 Georgia Street
Delta BC V4K 2S9
Tel: (604) 946-3610
Fax: (604) 946-2956

Asthma

Asthma is an illness which periodically causes breathing difficulties. It is caused by viral infections and exposure to allergens. It is not contagious and can be controlled. A child should be capable of participating in most school activities.

As many as 10 per cent of children may, at some time, suffer from asthma. It is the most common chronic disease of childhood and the cause of much time lost at school. Although no cure yet exists, current treatment allows an almost normal lifestyle for most people.

Asthma results from the constriction of airways in the lungs. A variety of factors may cause the muscles of the airways to tighten and the linings of these passages to swell and produce extra mucus. As the narrowing increases, breathing becomes more difficult and may range from persistent coughing to laboured wheezing.

The attack may last a few minutes or several days. An attack of asthma can be frightening for those unfamiliar with the condition. The child may be affected by the uncontrolled reactions of others.

An asthma attack may be triggered by:

- exposure to allergens (e.g., animals, pollen in summer and fall),
- irritants (e.g., chalk dust),
- infections,
- art/craft supplies,
- strong odors in winter, especially from carpeting,
- air pollution, especially indoor,
- cold air,
- aspirin,
- smoke,
- dust,
- weather,
- over-exertion, (e.g., running), and
- emotional exertion from excitement, anger, fear or laughing.

Recognizing the Child having an Asthma Attack

If the child exhibits the following symptoms, emergency measures should be taken:

- A hunched over posture, tight neck and shoulder muscles, with:
    - chronic, persistent coughing,
    - wheezing,
    - feeling of tightness in the chest,
    - chest discomfort after exertion, and/or
    - excessive breathlessness after exertion.
- Looks pale, sweaty and agitated.
- A frightened or anxious look.
- Difficulty walking or talking.

During an Asthma Attack

- Remain calm and help the child to relax. Emotions do not trigger an asthma attack, but may increase its intensity.
- Help the child to relax and to breathe slowly. The child should apply special exercises which have been prescribed by the doctor.
- Allow the child to rest in the position in which they have been taught or in which they are most relaxed. Sitting, not lying down, may be preferable as this helps keep the bronchial passages clear of mucus.
- If the attack worsens and the child is not responding to preliminary treatment (within five minutes or two bronchodilator treatments), call and ambulance/doctor or get the student to the nearest hospital. Notify the parents.

Classroom Strategies

- Parents should inform all relevant school personnel of the student's condition.
- Meet with the parents and the child as early in the school year as possible to determine the child's individual needs.
- Enlist the school nurse for training of staff on how to deal with emergencies.
- Prepare an action plan containing adequate information for each student with asthma: this should include specific information on the use of medications and their location, and specific steps for treatment when a child perceives that an attack is starting, e.g., use of a bronchodilator, relaxation techniques, use of peak flow meter.

- Your school physical therapist has expertise in chest conditions such as asthma and may be involved in therapy for the student.
- Be aware of the student who needs pre-exercise medication and give a reminder if necessary.
- Help the child lead as normal a life as possible - encourage participation in regular classroom activities or ensure exemption if in the child's best interest.
- Encourage the child to participate in exercise programs to improve physical fitness
- Explain to the class what asthma is and how it is treated. Support and understanding from peers will help overcome feelings of isolation, rejection or embarrassment.
- Inform parents of any asthmatic episodes.
- Encourage the child to take control of the asthma by using preventive measures to avoid a serious attack. It may be necessary at these times for the child to:
    - leave the class or gym quietly,
    - find a place to relax,
    - take additional medication as prescribed by a doctor, or
    - drink fluids.

Contacts

Asthma Society of Canada
425 130 Bridgeland Avenue
Toronto ON M6A 1Z4
Tel: (416) 787-4050
Fax: (416) 787-5807

Allergy/Asthma Information Association
B.C./Yukon Region
303 1212 West Broadway
Vancouver BC V6H 3V1
Tel: (604) 731-9884
Fax: (604) 730-1015

For More Information:

Contact the local health care professionals through your local health care unit.

Attention Deficit/Hyperactivity Disorder

Children with Attention Deficit/Hyperactivity Disorder (AD/HD) display a persistent pattern of inattention and/or hyperactivity/impulsivity.

These children often experience some impairment of their ability to address social, academic and vocational expectations. Common characteristics seen in children with AD/HD include: difficulty regulating attention, inability to follow through on instructions, school work, chores and/or duties; easily distracted and forgetful; constantly on the go and into everything, or "feels" very restless. Symptoms of these disorders will occur prior to age seven, but are often not readily observed because young children typically experience few demands for sustained attention. The prevalence of AD/HD is estimated at three to five per cent of school-aged children.

AD/HD is a neurologically-based disorder that impedes the learning process. Often academic achievement is impaired and devalued, typically leading to conflict with the family and school authorities. An early medical diagnosis is most important. Early medical and psycho-educational assessment will help ensure more positive and constructive experiences for the student and will benefit other students in the classroom.

In order to help the student achieve and to provide the best opportunity for learning, a teacher should focus on strengths rather than weaknesses. The student with AD/HD needs to be made aware of alternative strategies which draw on specific strengths for the acquisition of basic skills essential for further learning.

Early collaboration by professionals, including the classroom teacher, psychologist, counselor, learning assistance room teacher and physician, will help develop a precise learning strategy for the student with AD/HD. The teacher, the parent and the child (where appropriate) need to understand the child's neurological status and the strategy developed. A combination of medication, individual and family therapy, support groups and a school/work focused educational program is often recommended.

Recognizing the Child with AD/HD

Although children with AD/HD have symptoms of both inattention and hyperactivity-impulsivity, there are some children in whom one or the other pattern is predominant. The appropriate subtype should be medically diagnosed. The Diagnostic and Statistical Manual of Mental Disorders (fourth edition), more commonly referred to as DSM - IV, outlines three subtypes. The following information is not intended for diagnostic purposes; referrals are to be made to the appropriate school-based team member.

1. **AD/HD Combined Type**
   Six or more of the symptoms of inattention and six or more of the symptoms of hyperactivity-impulsivity persistently occur in a child's behaviour. Most children and adolescents with the AD/HD disorder have the combined type.

2. **AD/HD Predominantly Inattentive Type**
   Six or more of the symptoms of inattention, but fewer than six of the symptoms of hyperactivity-impulsivity, persistently occur in a child's behaviour.

3. **AD/HD Predominantly Hyperactive - Impulsive Type**
   Six or more of the symptoms of hyperactivity-impulsivity, but fewer than six of the symptoms of inattention, persistently occur in a child's behaviour.

Inattention

Often:

- fails to give close attention to details or makes careless mistakes in schoolwork, or other related activities, i.e., work is often messy and performed carelessly and without considered thought.
- has difficulty sustaining attention in tasks or play activities.
- does not seem to listen when spoken to directly.
- does not follow through on instructions and fails to finish schoolwork, chores, or duties. This is due to inattention and not due to a failure to understand instructions.
- has difficulty organizing tasks and activities.
- avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort, e.g., homework or paperwork.
- loses things necessary for tasks or activities, e.g., toys, school assignments, pencils, books, or tools.
- is easily distracted by extraneous stimuli that are usually and easily ignored by others, e.g., a car honking, a background conversation.
- forgetful in daily activities, e.g., missing appointments, forgetting to bring lunch.

Hyperactivity

Often:

- fidgets with hands or feet or squirms in seat.
- leaves seat in classroom or in other situations in which remaining seated is expected.
- runs about or climbs excessively in situations in which it is inappropriate. In adolescents or adults this may be limited to subjective feelings of restlessness.
- has difficulty playing or engaging in leisure activities quietly.
- Often is "on the go" or acts as if "driven by a motor."
- Often talks excessively.

Impulsivity

Often:

- blurts out answers before questions have been completed.
- has difficulty waiting turn.
- interrupts or intrudes on others, e.g., butts into conversations or games.

Key Behaviour Patterns

- Does not seem to listen when spoken to directly.
- Has difficulty organizing tasks and activities.
- Fidgets.
- Has difficulty regulating attention.
- Blurts out answers before questions have been completed.
- Is always “on the go.”

Classroom Strategies

When the Student has not been Diagnosed

If you suspect a student in your class may have AD/HD but s/he has not been diagnosed, consider:

- Eliminating causal factors such as poor attendance, failure to understand instructions, under-stimulating environments, frequent family relocation, visual/hearing impairments and cultural deprivation. These may be contributing factors in delayed or poor learning habits and should be addressed in consultation with team members.
- Observing, describing and documenting behaviours across times and settings.
- Consulting with parents and the child on an information-sharing basis to encourage involvement and understanding and to provide consistency in behaviour.
- Refering to other professionals (school psychologist, doctor, psychiatrist) for a thorough assessment

When the Student has been Diagnosed

If a student in your class has been diagnosed as having AD/HD, consider the following strategies:

- Develop an Individual Education Plan (IEP) to ensure an effective approach to learning.
- Develop a model of behaviour management which is compatible with both the home and classroom environment, and which is clear in its expectations, e.g., consequences, rewards. Students with AD/HD can be trained to monitor their own behaviours.
- Recognize the issue of compliance versus comprehension and be able to discriminate between these two types of behaviour.
- Set predictable intervals of "no-work" periods which the child may earn as a reward for effort. This helps increase attention span and impulse control through a gradual training process.
- Be familiar with the resources in your school and your community.
- Plan for success: break tasks into manageable sequential steps the student can handle, with frequent breaks which can be seen as rewards for appropriate behaviour. Provide a sequential checklist for longer assignments and projects.
- Help the student get started with individual tasks.
- Supplement oral instructions with visual reinforcement, such that the student can frequently check that s/he is following instructions (e.g., write

the assignment on the board, photocopy printed instructions, use of an overhead, or have matched instructions on tape).

- Encourage the use of a homework journal so that the student with AD/HD has a record of assignments completed and those yet to be done. Another student could check to assure accuracy.
- If the student has difficulty taking notes, supply a copy of the notes from another student or from the teacher's notes.
- Frequent breaks can be created by allowing the student with AD/HD to compare responses with a strong student on assignments that require drill and practice such as math questions.
- Modify tests if necessary (e.g., provide extra time or divide the test into two parts to be completed at different times during the day).
- Modify assignments, if necessary (e.g., assign fewer questions in math, use contracts for longer assignments).
- Consider where the student with AD/HD is seated. A quiet seat in close proximity to the teacher could assist the student in staying on task.
- Offer a screened corner to your class as an earned privilege during scheduled times rather than a punishment. This avoids segregating the child who may need the screened corner to reduce distractions.
- Try a variety of teaching strategies including: assigning a peer tutor, class-wide peer tutoring, development of class meetings, and life-space interviewing.
- Give responsibilities that can be successfully carried out to help them feel needed and worthwhile.
- Work with the student to develop social interaction skills, e.g., interpreting non-verbal communication cues. Modeling and role playing along with reinforcement of appropriate skills tend to be most effective.
- When transitions or unusual events are to occur, try to prepare the child for what is to come by explaining the situation and describing appropriate behaviour in advance.
- Offer the student training in study skills, time management, organizational skills, communication skills and test taking.
- Assist the student in applying any new skills or strategies learned outside the classroom to all areas of classroom work.

Contacts

Learning Disabilities Association of British Columbia
203 - 15463 104th Avenue
Surrey BC V3R 1N9
Tel: (604) 588-6322
Fax: (604) 588-6344

Attention Deficit Disorder Support Association (ADDSA)
c/o 242 Osborne Avenue
New Westminster BC V3L 1Y8
Tel: (604) 524-9183
Email: **addsa@vcn.bc.ca**

Parent Support Group for Children and Adults with Attention Deficit Disorders - B.C. Chapter
Box 1707
Oliver BC V0H 1T0
Tel: (604) 498-4854
Fax: (604) 498-6266

Canadian Mental Health Association – B.C. Division
Suite 1200 1111 Melville Street
Vancouver BC V6E 3V6
Phone: (604) 688-3234
Fax: (604) 688-3236
Executive Director: Bev Gutray
Email: **office@cmha-bc.org**
Website: **www.cmha-bc.org**

For More Information:

The telephone number of the nearest branch of the Learning Disabilities Association of B.C. is listed in your local telephone directory and available through directory assistance.

Local family and community support services are a valuable resource.

Autism

Autism is a lifelong developmental condition that is treatable in varying degrees with early diagnosis and intervention.

Autism is caused by an underlying physical dysfunction within the brain or central nervous system, the exact nature of which is yet unknown. The result is unusual or abnormal behaviour, ranging from passivity to aggression. Autism is a lifelong developmental condition that is treatable in varying degrees with early diagnosis and intervention. Autism is caused by an underlying physical dysfunction within the brain or central nervous system, the exact nature of which is yet unknown. The result is unusual or abnormal behaviour, ranging from passivity to aggression.

Autism is four times more common in boys than in girls and occurs in all races and social and psychological backgrounds. It is usually diagnosed in pre-school years but may be confused with mental disability, deafness, epilepsy and/or other disorders.

The chief difficulty for a child with autism seems to lie with processing information. Abnormal responses to sensations as well as hearing irregularities may trigger unusual behaviours. It may require extreme efforts to make sense of a world that is not understood, to seek structure and routine in the midst of a confusing muddle. If the individual experiences confusion, the result may be withdrawal or an emotional outburst. Similarly, children with autism experience difficulties in communication and in establishing social relationships as they try to respond to overlapping messages. Any change to a known routine constitutes a challenge, and the individual may panic in an attempt to cope with sensory overload.

There are currently no medical tests for autism; diagnosis is based on observation of behaviour. Most children with autism do not explore and seem to lack curiosity. They may then fall back on what appears to be obsessive behaviour, trying to re-establish a routine. Unfortunately this does not break the log jam of unexpressed emotions.

A student with narrow interests or a preoccupation with one topic can be guided to use that interest to learn new skills. A strong focus on increasing communication skills and promoting a structured, organized environment increases the potential for children with autism to grow to their full potential.

Recognizing the Child with Autism

Although symptoms have been identified as a characteristic of people with autism, not all people display all symptoms. A diagnosis by appropriately qualified medical personnel is needed to verify the condition. Qualified personnel include the developmental/assessment team at Sunny Hill Hospital for Children, B.C. Children's Hospital, Queen Alexandra Hospital or a pediatrician, psychiatrist or a registered psychologist. Individuals display different combinations of the following observable symptoms:

- Wide variation in the ability to communicate. This may include a poor understanding of gestures, difficulties with abstract concepts, focusing on one topic: perseveration, or echoing what is said: echolalia.
- Gesturing, rather than speaking, to indicate needs.
- Serious difficulties in relating to other people - unusual social interactions.
- Apparent lack of fear of real danger, or a very real fear for no reason. e.g., going up and down stairs.
- Inappropriate laughing, giggling or screaming.
- Extreme mood swings for no apparent reason, from inconsolable crying to uncontrollable laughing.
- Apparent deafness.
- Unresponsiveness to simple commands.
- Unusual responses to stimuli and sensations. e.g., pain, touch, hearing, taste, smell and balance.
- Different rates of development of physical, social and language skills.
- Delayed speech and language.
- A wide range of behaviour, from repetitive and aggressive to extremely passive.
- Self-injurious behaviour.
- Self-stimulatory activities, e.g., rocking, hand flicking, spinning.
- Attachment to unusual objects, e.g., piece of string.
- Difficulty in changing routine.

Key Behaviour Patterns

- Gesturing, rather than speaking, to indicate needs.
- Apparent lack of fear of real danger.
- Delayed speech and language.
- Does not respond to simple commands.

Classroom Strategies

- Meet with parents, the student and professionals to determine needs of the student.
- Develop an Individual Education Plan (IEP).
- Work as a team. Keep in touch on new medication and possible side effects, and on mood, personality and environmental changes.
- The student with autism, like any other student, may be more alert in the morning or the afternoon. Whenever possible, structure the learning period according to the student's pattern of response.
- Allow the student time to become familiar with routines and environments. Try to maintain these with as few variations as possible.
- Understand that the student has a unique learning style and gear activities to the individual child, e.g., modify time limits.
- Choose activity-based learning; use concrete, tangible and visual aids. Processing abstract concepts is frequently very difficult.
- Help the student focus on learning: pre-teach, teach and post-teach.
- Strengthen communication skills. Focus on language processing in an ongoing language training approach.
- Help the student organize: use calendars, timetables, photos or pictures of activities in sequence. Remind the student what comes next.
- Cue changes to new activities: help the student anticipate changes before they take place.
- Be as familiar as possible with any specific aids.
- Incorporate and understand behavioural methods as learning strategies.
- Allow time to process information.
- Teach from a functional point of view, avoiding abstracts.
- Watch for over-stimulation: help the student settle down. This may require the substitution of an equally stimulating activity or a change of environment. If necessary, arrange for "time out."
- Integrate social skills, self-control and social problem-solving. Repeating a routine of chosen behaviour is your best resource.
- Incorporate a system of tangible rewards, e.g., a social outing.
- Encourage social interaction with peers, while still allowing access to "time alone" if necessary.
- Establish expectations and consequences. Expect acceptable and appropriate behaviour.
- Be realistic in your expectations. The student will function better in a structure common to home and school.
- Plan for success, constantly reinforce small steps, but be prepared for long periods with no apparent progress.
- Talk to the class about autism and have the student or parent explain any needs. Encourage other students to find out how they can assist and how they should assist.

- Develop a real understanding of the nature of autism - be informed. Read, research and visit other classrooms.

Contacts

Autism Treatment Services of Canada
404 94 Avenue SE
Calgary AB T2J 0E8
Tel: (403) 253-6961
Fax: (403) 253-6974

Autism Society of B.C.
1584 Rand Avenue
Vancouver BC V6P 3G2
Tel: (604) 261-8888
Fax: (604) 261-7898

B.C. Association for Community Living
300 30 East 6th Avenue
Vancouver BC V5T 3P3
Tel: (604) 875-1119

Gateway Provincial Resource Program
4812 Georgia Street
Delta BC V4K 2S9
Tel: (604) 946-3610
Fax: (604) 946-2956

Cerebral Palsy

Cerebral Palsy is a disabling condition. "Cerebral" refers to the brain and "Palsy" refers to a lack of muscle control. The condition is neither hereditary nor contagious.

Cerebral Palsy results from damage to the brain, usually caused by a lack of oxygen. The damage interferes with messages sent from the brain to the body or from the body to the brain and may cause involuntary movement and/or speech, hearing or sight disorders. The condition is not progressive, nor is it medically curable, but a positive attitude and acceptance of the condition by others will enhance the quality of life for the child with cerebral palsy.

The extent of cerebral palsy can vary from mild speech impairment or no obvious signs, to no speech at all and a severe lack of muscle coordination.

Many children with cerebral palsy have normal learning skills and intellectual development; they are able to care for themselves and to walk unaided. Others require very specialized treatment including multi-disciplinary care from physicians, physical therapists, occupational therapists, speech pathologists and teachers with special training in learning disabilities.

Three Main Types of Cerebral Palsy

- **Spastic:** stiff and difficult movement, as muscles are contracted all the time and limbs feel stiff.
- **Athetoid:** involuntary and uncontrolled movement, as messages from the brain to the muscles are not coordinated. These movements occur all the time and, in particular, may interfere with speech.
- **Ataxic:** disturbed sense of balance and depth perception, resulting in awkward and unsteady movements of the hands and feet.

There may be a mixture of these types in any one individual who has diagnosed cerebral palsy. In addition, the lower limbs or one side of the body may be affected more than the other. The severity of the disability caused by cerebral palsy will determine expectations and the lifestyle of the student.

Recognizing the Child with Cerebral Palsy

Except in rare cases, such as an accident resulting in brain injuries, an individual with cerebral palsy will have any or all of these indications from birth.

- Spasmodic, uncontrolled or jerky movements of the limbs, head or face or rigid, postured limbs.
- Contracted muscles. May not be able to get the foot flat, with heels down, when standing or walking.
- Difficulty in speaking, swallowing and/or chewing.
- Inconsistent and uneven attention span.
- Deficiencies in reading skills and language comprehension.
- Spells of staring.
- Speech impairment which makes understanding difficult.
- Some hearing loss which may result in delayed language development.
- Impairment of vision and perception. Students with this difficulty may not be aware that what they are seeing is any different from what others see.

Key Behaviour Patterns

- Spasmodic, uncontrolled or jerky movements.
- Spells of staring.
- Inconsistent attention span.

Classroom Strategies

- Meet with the parents and the child as early as possible in the school year to determine individual needs. Student records should reveal special programming in previous years/placements.
- Work with other professionals as a team to help the student lead a productive life. Include parents, health-care professionals, occupational and physical therapists, speech, sight and hearing specialists and para-professionals.
- Determine specific learning requirements on the basis of an up-to-date educational assessment.
- Develop an Individual Education Plan (IEP) if necessary to meet the child's needs.
- Encourage the student to complete assignments, even if extra time is necessary. A feeling of accomplishment will do much to enhance self-esteem.
- Be familiar with specialized equipment, such as adapted typewriters, pencil holders, book holders, page turners, word boards or special desks.
- Remind the student to take any prescribed medication. Arrange for any required assistance.
- Talk to students about cerebral palsy, and if the child is comfortable with the situation, have the child or parent explain any adaptive needs. Encourage other students to find out how they can assist and when they should assist.
- Expect acceptable and appropriate behaviour. Students with disabilities are accountable for their behaviours in the classroom.
- If necessary, schedule bathroom breaks for the child who needs assistance (from a para-professional) just before class breaks.
- For special activities scheduled outside the school, ensure that appropriate arrangements are made so the student can participate.
- Orient the child to the school, especially ramps, bathrooms with modifications and access to elevators.
- Assist the student to form and maintain meaningful interpersonal relationships. A sense of acceptance is important to all students of all ages.
- Talk about and assist with the development of social skills.
- Encourage communication to prevent isolation. This may mean early recognition of alternative means of communication if the child has a speech or hearing loss. Patience and understanding in listening will help build communication skills.
- Encourage the student to participate in as many classroom activities as possible, depending on the extent of the cerebral palsy. Some students will need a modified form of the curriculum in some or all subject areas.

Contacts

Cerebral Palsy Association of B.C.
#102 317 Columbia Street
New Westminster BC V3L 1A7
Tel: (604) 515-9455
1-800-663-0004
Fax: (604) 515-9466
Website: **http://www.bccerebralpalsy.com/**

Special Education Technology - B.C. (SET - B.C.)
#105 1750 West 75th Avenue
Vancouver BC V6P 6G2
Tel: (604) 261-9450
Fax: (604) 261-2256
Website: **http://www.setbc.org/**

Sunny Hill Health Centre for Children
3644 Slocan Street
Vancouver BC V5M 3E8
Tel: (604) 453-8300
Website: **www.bcchildrens.ca/Services/SunnyHillHealthCtr/default.htm**

Cerebral Palsy Sports of B.C.
6225A 136th Street
Surrey BC V3X 1H3
Tel: (604) 599-5240
Fax: (604) 599-5241
Website: **http://www.cpsports.com/**

For More Information:

Contact health care professionals through your local Child Development Centre and/or public health centre.

Crohn's Disease and Ulcerative Colitis

Crohn's disease and ulcerative colitis are chronic inflammatory bowel diseases of the gastrointestinal tract. Since at least 20 per cent of those affected will develop one of these forms of inflammatory bowel disease (IBD) before 20 years of age, it is likely that teachers will have a student with Crohn's disease or ulcerative colitis in their classroom at some time in their career.

The majority of children with these conditions will be diagnosed between 10 and 18 years of age. Boys and girls are equally affected. The majority, 75 per cent of children and adolescents, do not have a family history of either of these conditions. Therefore, when the diagnosis is confirmed, it is often the family's first awareness that these conditions exist. Crohn's disease and ulcerative colitis are not contagious and are not caused by stress.

Abdominal pain is the most frequent symptom described by children with inflammatory bowel disease. At first, the discomfort may be infrequent and of short duration. As the inflammation progresses, the pain increases in intensity, frequency, and duration. Crohn's disease may affect any part of the gastrointestinal tract. Also known as "Ileitis," Crohn's disease causes an inflammation of the entire thickness of the bowel wall in the areas where it is present. Ulcerative colitis is a disease which affects only the large bowel (colon). Also known simply as "colitis," its extent will vary from child to child. The inflammation is confined to the inner lining of the large bowel. Present medical treatment used for children and adolescents with inflammatory bowel disease needs to be considered as it impacts on the classroom participation of the student. This treatment takes three basic forms: medication, nutritional therapy and surgery. **These are described on page 36.**

At present, there is no known cause or cure for IBD. With medical treatment and supervision, the young person with IBD may enjoy long periods of good health. Many children and adolescents with chronic conditions attain a sense of maturity and sensitivity far beyond their years. The fact that they have been forced to handle both the normal challenges of growing up as well as their physical care have given them extra doses of self-discipline as well. Through tact, understanding and support, a teacher can help the child to cope with their unique stresses induced by IBD and to develop emotionally, socially and academically to their full potential.

Recognizing the Child with Crohn's Disease or Ulcerative Colitis

Both Crohn's disease and ulcerative colitis are characterized by alternating periods of "flare-up" and remission. Some or all of the following characteristics may be present in varying degrees of severity:

- Pain.
- Episodes of fever or night sweats.
- Extreme fatigue.
- Lack of ability to concentrate.
- Nausea.
- Headaches.
- Lack of appetite.
- Problems affecting the skin, liver, eyes or joints.
- Bloody diarrhea and abdominal cramping.
- May grow at a slower rate. May appear younger and smaller than their classmates.
- Due to the use of cortisone-like drugs to control inflammation, the student may:
    - gain excessive weight,
    - develop a round face or puffy appearance,
    - have severe acne or become moody or restless, and/or
    - experience emotional stress and anxiety because of fear of sudden symptoms.

Implications of Treatment

- Medications may include: sulpha drugs, cortinsone-like drugs, antibiotics, immunosuppressive drugs, pain killers, vitamins, minerals, and may be taken at various times. These medications can themselves cause discomfort and may have to be taken intravenously.
- Nutritional Therapy may include avoiding certain foods which make symptoms worse. There is no special “IBD diet.” A student may be required to undertake alternative feedings. One method of bowel rest is called total parenteral nutrition (TPN). While on TPN, a student is not allowed to eat or drink anything. Although generally administered in a hospital, occasionally students may receive it at home at night, so they can function as normally as possible during the day.
- Surgery may be required where the duration of symptoms is extended and remains poorly controlled over long intervals. Surgery may result in an ileostomy which results in body fluid wastes being emptied through a surgically prepared opening in the abdomen. Waste material collects in a plastic bag which is periodically drained.

Classroom Strategies

- Meet with parents, the student and professionals in the community to help determine individual needs of the student.
- Ask the school nurse, or a doctor for information and assistance.
- Develop an Individual Education Plan (IEP) specific to the student's needs.
- Keep in touch on new medication and possible side effects, on moods and personality changes.
- Be aware that a student may sometimes be regulating medication levels and may be experiencing varying side effects (e.g., alertness, concentration, physical discomfort) during this regulation. It is the responsibility of the parents to inform the school of these and any other changes.
- Talk with the student about whether s/he wishes to discuss his/her illness in the classroom. The student may not wish to be seen as "different" by either peers or teachers.
- Allow the child to leave the classroom as needed in an independent manner without drawing attention to themselves.
- Be aware and accepting that your student may be late for class, since diarrhea and cramps tend to be worse in the early morning and after meals.
- Be sensitive to the emotional needs of the student who is adjusting to a change of lifestyle (e.g., anger, depression, disappointment).
- Young children may experience fear of examinations and invasive procedures. Adolescents may struggle over the issue of independence and responsibility for medications, as well as resentment of a condition that sets them apart from their peers.
- Help the student to stay organized and informed as to assignments and activities. Provide copies of instructions and expectations for assignments and provide extra help where necessary. Provided the student is not too ill, s/he can often do homework brought to her/him.
- Be flexible with tests and classwork. Periodic absences because of illness, hospitalization and clinic visits may be necessary.
- School trips, outings and long bus rides can present problems with washroom facilities. The student may have to miss these occasions especially during times of "flare-up."
- Limit or skip strenuous physical education programs. Suitable activities can be determined in consultation with the student's parents and the student.

Contacts

Crohn's and Colitis Foundation of Canada
2377 Ash Street
Vancouver BC
V5Z 3C3
Tel: (604) 877-1007
Fax: (604) 875-6371

For More Information:

Contact local doctors and hospital staff or your local Health Unit.

Diabetes

Facts about Diabetes

Diabetes results from the failure of the body to produce insulin or the body's failure to effectively use the insulin it produces. The exact cause of this condition is unknown; however, genetic and environmental factors both play a part. Diabetes is not contagious.

Insulin is a hormone produced by the pancreas. Carbohydrate (starch and sugar) from the food we eat is broken down into glucose in the digestive system. This glucose then moves into the bloodstream to be used by the cells of the body to provide energy. Insulin enables glucose to move from the bloodstream into the cells of the body. Without insulin, glucose builds up in the bloodstream (high blood sugar), and the body's cells are deprived of their energy source.

Types of Diabetes

Type 1 Diabetes

- Occurs when the pancreas produces no insulin
- Usually develops in childhood or adolescence
- Affects 10% of people with diabetes
- Affects approximately 1 in 500 children
- Daily administration of insulin (via injection or insulin pump) is required for life

Type 2 Diabetes

- Occurs when the pancreas does not produce enough insulin to meet the body's needs and/or the insulin produced is not processed effectively by the body
- Usually occurs in adulthood, however is now being seen in a growing number of children/teens. Contributing factors may include obesity, lack of exercise, poor eating habits, family history of type 2 diabetes, and some particular racial backgrounds

Often managed through diet and exercise; however, some people also require medication (hypoglycemic pills or insulin by injection)

Blood Glucose Monitoring

Monitoring blood glucose is an essential component of diabetes management, as it indicates whether insulin, food intake and activity are appropriately balanced.

Monitoring of blood glucose should take place before meals and any time low or high blood sugar is suspected.

Ways of Administering Insulin

Injection

Most individuals with type 1 diabetes are administered a combination of long acting and short acting insulin by injection two or more times/day. Individuals must eat snacks and meals at the same time each day to avoid low blood glucose when long-acting insulin peaks. Some individuals may require insulin injections at school.

Insulin Pump

More and more individuals with type 1 diabetes are using insulin pumps to regulate their blood sugar. An insulin pump is a small computer which feeds insulin directly into the body 24 hours a day, via a small tube ending in a needle (called an infusion set) that is inserted just under the skin on the abdomen. The insulin pump provides a pre-programmed amount of insulin set to maintain blood sugar at a desired range when not eating. The wearer calculates and administers extra insulin (a bolus) to the pump when eating, or to correct high blood sugar. Individuals who use insulin pumps typically do not need to eat at exactly the same time each day, as an insulin bolus can be administered whenever the individual eats.

Diabetes in School

With appropriate planning, an individual with diabetes can participate in all school activities. Individuals with diabetes may, at times, require assistance and support from teachers and school staff. Individuals should be encouraged to manage their diabetes care in the school setting, to the extent that is appropriate for their maturity and experience with diabetes. The extent of an individual's ability to participate in self-care tasks should be agreed upon by the parent/guardian, school personnel, health care team and student if appropriate. When all team members work together, concerns relating to diabetes management of the individual, family and school staff can be effectively addressed. It should be noted that there is no expectation that school staff administer insulin.

Potential Impact of Diabetes on Education

Well managed diabetes will likely have minimal impact on an individual's education. However, all individuals with diabetes will have occasional high or low blood sugar. Individuals whose diabetes is more challenging to manage may experience some disruption of their education. Teachers and school staff should discuss concerns regarding diabetes and its impact on an individual's education with parents/guardians.

Some common impacts may include:

- Inability to concentrate or manage behaviour during incidents of high or low blood sugar
- Missed class time related to the need to test for and treat high or low blood sugar
- Frequent trips to the washroom/water fountain related to high blood sugar
- Absence from school related to medical appointments
- Because exercise increases the rate of use of sugar by the body, more active individuals are prone to low blood sugar. Most individuals with diabetes require nourishment before physical activity. Parents can provide information about the appropriate degree of activity for the individuals and the specific need for more or fewer snacks

Recognizing Symptoms

For a comprehensive list of symptoms of both low blood sugar and high blood sugar, please see the following BC Children's Hospital **link**.

Roles and Responsibilities

Parent/Student Responsibilities

- Inform the school that the individual has diabetes
- Inform the school of the individual's unique care needs, including usual symptoms of low blood glucose and the presence of any additional health concerns that may impact diabetes management
- Make provisions for the administration of insulin while the student is at school
- Ensure the individual is wearing a diabetes identification tag
- Keep all emergency contact information, medical information and details of the individual's care and treatment at the school up to date
- Provide and maintain all supplies required by the individual at the school, including, if necessary, a supply of glucagon and the safe disposal of sharps
- Inform the school of any relevant changes to lifestyle, health or diabetes management
- Participate in development of the child's school medical/care plan including planning for natural disasters

School Responsibilities

Individual school districts will have policies in place that outline responsibilities of school boards, administrators and staff which will apply to students with diabetes. Individual board policies can be viewed at the British Columbia School Trustees Association (BCSTA) **site** or you may contact your local school board office. Further guidelines about roles and responsibilities can be found under **Planning and Coordinating of Community Services in Section C of Special Education Services: A Manual of Policies, Procedures and Guidelines**.

School districts routinely consult with Nursing Support Services (NSS) regarding individual students with diabetes in schools. For more information about NSS **click here**.

The following school practices are suggested;

- Be familiar with district policies and procedures
- Communicate with caregivers and keep up to date information about the individual's condition to maintain level of support needed
- Report any changes to an individual's usual behaviour, health, eating habits, etc to parents/guardians
- Participate in development of the individual's school medical/care plan including planning for natural disasters
- Where applicable, engage Nursing Support Services or Public Health to assist in developing a medical/care plan, staff training and instructions in case of emergency. For more information about NSS care see the resource section of this document. Public health nurses may assist with children who are not eligible for Nursing Support Services delegated care. For information about Public Health Nurse supports, contact your local district.
- Familiarize staff of details, symptoms of low blood sugar, and how to respond appropriately
- Familiarize staff with the names and faces of individuals with diabetes
- Provide, where appropriate, a detailed emergency response for each individual
- Inform all school personnel of the individual's condition, medical/care plan and location of each individual's personal supplies
- Post emergency care instructions in strategic areas of the school where they will be accessible by all staff and respect the individual's right to privacy
- Have emergency kits available in strategic areas of the school such as the individual's homeroom or classroom, sick room, office, earthquake supplies, gymnasium and for use on fieldtrips
- Establish with parents a system to monitor stored supplies for quantity and potential spoilage
- Make use of the BC Children's Hospital informational pamphlets on diabetes

Emergency Care

Emergency care for a student with diabetes should be outlined in the medical care plan. For general information on emergency care, please see the BC Children's Hospital (BCCH) **web site**.

For planning for a natural disaster, see **Diabetes Emergency Survival Pack** on the BC Children's Hospital site.

Strategies for Teachers

Parent/Teacher Communication

- Hold conferences with the parents at the beginning of the school year to determine the needs of the individual
- Discuss with the family whether or not it is appropriate to share information about the individual's condition with classmates
- Notify parents, in advance, of any special events involving food and/or extra activity
- Develop a plan to respond to unexpected food or activity related events
- Inform parents immediately of all low blood sugar episodes and vomiting

School and Class Communication

- Provide information for teachers-on-call regarding the individual's treatment, routines and emergency plans
- Explain to classmates the dangers of sharing food because of specific dietary needs. Consider any meal as a timed release capsule and the necessity of maintaining a balance for the individual with diabetes
- Recognize and acknowledge individual concerns and promote understanding and respect for the condition

Providing for the Needs of a Student with Diabetes

- Provide an appropriate place for an individual to check blood glucose
- Allow individuals to test or eat at any time
- Allow frequent trips to the bathroom or water fountain
- Monitor closely for change in bathroom frequency (If high blood sugar is suspected you may ask the individual to test.)
- Ensure that meals and snacks are eaten at specific times as advised by parents with considerations for field trips, changed school hours and detentions (This may not be necessary where an insulin pump is used.)
- Permit the individual to have, at any time, juice or other fast-acting sugar (such as glucagon) for treatment of low blood sugar

Resources

- BC Children's Hospital **Endocrinology & Diabetes Unit**
- **Juvenile Diabetes Research Foundation**
- **British Columbia School Trustees Association (BCSSTA)**
- **Insulin pumps**
- **"Kids with Diabetes in Your Care"**, a document by the Canadian Diabetes Association (PDF, 256KB)
- **Management of blood and body fluids**
- **Medic Alert® identification**
- **Nursing Support Services**
- **Poster about managing seizures** (PDF, 1.96MB)
- **Role of glucagon in providing emergency care** (PDF, 76KB)

Down Syndrome

Down syndrome is a genetic defect causing limitations in physical and cognitive development. It is the result of a chromosomal error, not of any fault of either parent. One in every 700-800 live births will be affected by Down syndrome. Though the likelihood of having a child with Down syndrome increases to some degree with the age of the mother, three-quarters of all children with the syndrome are born to mothers under 35.

A child with Down syndrome demonstrates a wide variety of characteristics - some of these are inherited family traits and others are specific to the syndrome. A syndrome is a condition distinguished by a cluster of features occurring together. In Down syndrome, certain physical features will probably be apparent, though these are not exclusive to Down syndrome and may appear elsewhere in the unaffected population.

Recent studies show that, though all children with Down syndrome have some degree of intellectual disability, other factors such as environment, misinformation and low expectations have a considerable impact on their learning potential. Generally, progress will be slow and certain complex skills may be difficult; each individual has unique strengths and weaknesses.

Physically, children with Down syndrome have low muscle tone and a generalized looseness of the ligaments. The Canadian Down Syndrome Society recommends that children be assessed by x-ray at age three to four (before kindergarten) and again at age 10-12 to look for instability at the top two neck vertebrae. This instability must be carefully considered during any planning for physical activity to avoid serious injury. There is also a strong susceptibility to hearing and vision difficulties. Fifty per cent of these children will require monitoring in these areas. At least one-third of the children will have heart defects.

Behaviour problems are no more specific to children with Down syndrome than to any other group of students. Any perceived reaction to a request may actually be only a difficulty in transition from one activity to another, going from the known to the unknown. Developmentally, these children will reach different stages at later times than the average child. Chronological age is not an indicator of achievement, but serves only to raise unrealistic expectations.

Remember, this is a person, not a syndrome.

Recognizing the Child with Down Syndrome

Usually the condition is recognized at birth, on the basis of characteristic features or through chromosome testing.

Common observable physical features may be:

- A round face with a flat nasal bridge.
- A small head, somewhat flattened at the back.
- Upward slanting eyes.
- Deterioration of walking ability, staggering, neck pain, muscle weakness and spasm.
- A small mouth cavity.
- Small ears, folded at the top.
- Stubby hands, feet and short fingers.
- Low muscle tone. Muscles appear relaxed and "floppy".
- A stocky build.

Most children with Down syndrome exhibit only a few of these and many other possible features. The only feature common to all is some degree of intellectual disability.

Classroom Strategies

- Prior to enrolment, meet with the parents and the student for assessment and mutual understanding of goals, possibilities and limitations.
- Consider placement on the basis of individual needs and program availability. Help the parents choose the best alternative. This may be a regular class, a special class or a combination of the two.
- Develop an Individual Education Plan (IEP) to include modified learner outcomes as well as essential and supportive skills.
- Maintain ongoing communication with other members of the team, including: para-professionals and health care professionals, speech and hearing therapists, occupational therapists, physiotherapists and psychologists.
- Through continuing communication between home and school, ensure consistency of behaviour and expectations and understanding of setbacks and successes.
- Be aware of any specific medical problems or medication. It is the responsibility of the parents to keep the school informed.
- Communicate any marked changes, physical or behavioural, to the parents. A medical assessment may be required.
- Discuss what will happen before it does: use wall charts, calendars, photos of a single activity or a single day. These activities reinforce structure and sequencing.
- Allow time to finish a task.
- Help the student to structure play as well as work - or the activity may become confusing.
- Break up tasks into small steps; use short blocks of time.
- Avoid the abstract in favor of the concrete and the visual.
- Phrase questions simply, and allow response time. Use short sentences.
- Encourage speech by having the student express wants, rather than forming simple "yes" or "no" responses.
- Gain attention by using simple commands, e.g., use eye contact. Be precise.
- Help the child focus on the task - remove items that might distract.
- Expect appropriate behaviour. All students are accountable for their behaviour.
- Help the student develop independence: this will both increase self-esteem and improve social relationships.
- Help the student and others understand Down syndrome. Initiate open discussion, considering individual differences and wide variations of abilities. Your own behaviour and acceptance will serve as a model.
- Cooperate with the parents in integrating learning activities, e.g., shopping, banking, renting a video, travel. Be mutually aware of what the student knows and is learning.
- Encourage interaction and involvement with other students through play and classroom activities.

- Include the student in physical activities, following a medical assessment.
- Provide assistance if necessary to help overcome the muscular weakness and joint instability. Stairs, slippery floors may pose problems.
- Be aware of the available specialized computer software especially designed to facilitate reading and communication.
- Read, research and investigate: the contacts suggested (overleaf) will be pleased to furnish current material.
- Beware of outdated books and research.

Contacts

Canadian Down Syndrome Society
Box 52027
Edmonton Trail R.P.O.
Calgary AB T2E 8K9
Tel: (403) 220-9224
BC Contact: Debbie Clark
Tel: (604) 652-6911

B.C. Association for Community Living
#300 30 East 6th Avenue
Vancouver BC V5T4P4
Tel: (604) 875-1119
Fax: (604) 875-6744

For More Information:

Contact local health care professionals through your local health care unit.

Epilepsy

Epilepsy is a general term for more than 20 different types of seizure disorders. Epilepsy is not a disease, nor is it a mental disorder.

Temporary disruptions of electrical impulses in the brain result in seizures. Cells working together in the brain communicate by means of electrical signals. Abnormal discharges of electrical energy from a particular group of cells to different parts of the brain result in seizures. The brain controls motor movements, thought, sensations, and emotions. It also regulates the involuntary functions of the heart, lungs, bowels, and bladder. Some disruption of any or all of these may be expected during an epileptic seizure.

The number of seizures per day varies greatly from one individual to another. Some children may experience seizures daily while other children may experience them only occasionally. Some childhood seizure disorders are more difficult to control than others, but chances are good that prescribed medicine will work well if it is taken regularly. Seizures may last from 10 seconds to five minutes. If a seizure lasts longer than two minutes, medical attention may be needed.

Today's medicines do not yet cure epilepsy, however, research has shown that many children who have complete control of seizures for a few years with medication have an excellent chance of being able to live free of the seizures and the medicine in the future.

Types of Seizures

Seizures are mainly categorized as partial or generalized. If the excessive electrical discharge is limited to one area of the brain, the seizure is partial; if the whole brain is involved, it is considered to be generalized.

Partial Seizures

Teachers may notice brief interruptions of consciousness (e.g., staring spells or daydreaming), decreased awareness of the environment, small muscular facial movements, irregular eye movement, purposeless activity (e.g., wandering about, talking nonsensically, smacking the lips, picking at clothes). The seizure usually lasts five to 15 seconds. Complete consciousness is not lost, and the child may be confused and not know what has happened.

During a Partial Seizure

- No first aid is required.
- Protect the student from danger, but do not forcibly restrain.
- Do not give the student anything to drink.
- Gently talk to the student.
- Be comforting and helpful.

Generalized Seizures

Teachers may notice convulsive movements, muscles stiffening and jerking with some breathing difficulty and saliva appearing around the mouth. If the tongue has been bitten, the saliva may show traces of blood. The convulsion lasts two to five minutes.

During a Generalized Seizure

- Keep calm. You cannot stop a seizure.
- Let the seizure run its course; do not try to restrain the child.
- Ease the person to the floor and loosen clothing.
- Try to remove any hard, sharp, or hot objects that might injure the child and provide a blanket, coat or cushion under the head to soften the impact of the seizure.
- Turn the student on his/her side, so that saliva can flow freely from the mouth.
- After the seizure, allow the student to rest or sleep and then resume usual classroom activities.
- After resting, most people can carry on as before; however, be attuned to the student's emotional state before assuming s/he will carry on as before.

- The student should not be allowed to leave unaccompanied if grogginess, weakness, or convulsive behavior persists.

Factors Influencing Control

Epilepsy is controllable through medication. However, there are a number of factors that influence the degree to which it is controlled.

- While the student is growing mentally and physically, it is difficult to find the right level of medication. It also takes time for the student to adjust to the medication, particularly during periods of growth spurts.
- It takes time for the student, family, friends, and the school to adjust to a recently diagnosed case of epilepsy.
- Usually students with epilepsy are able to participate in all classroom activities. In some situation of risk (e.g., involving physical activities), participation may be limited by a physician.
- By observing and recording behavioural changes and frequency of seizures, the teacher will be able to assist the student in understanding his or her epilepsy. Some children eventually come to recognize the onset of a seizure and are able to inform the teacher of an impending seizure.

Classroom Strategies

Most people have a sense of panic or fear the first time they seen an individual having a seizure. Students will look to the teacher for a sense of guidance. It is important that the teacher serve as the model in calmly responding to the needs of the student with epilepsy. Other students will attempt to follow this lead.

- At the beginning of the year, meet with the parent and the student if the student is still having seizures. Plan ahead, prepare for the student's special needs, and understand unusual behaviour in the context of the student's medical condition. Seizures are very individual in nature. Therefore, discuss with the parent and student what is normal and what is not for any student with epilepsy. Talk about how the seizure will be handled should it occur in the school.
- Work with a team - teacher, student, parents, professionals. Seek and provide help in observations of performance, if requested. Inform parents of any seizure symptoms or episodes.
- Discuss the most appropriate ways to let other children know about epilepsy. Talk about epilepsy with the class. Explain what it is and what may happen

during a seizure. It may be a good idea to call in a community health nurse to give an explanation, if necessary.

- Involve the students in the actual process; once they know what to expect, they can be more helpful. A student may be assigned to act as a "buddy" while the student with epilepsy is readjusting to the classroom after the seizure.
- As some interruption of classroom learning may result from either administering medication or the seizures themselves, some special educational help may be required. In some cases of severe disruption, it may be necessary to develop an Individual Education Plan (IEP).
- Be aware that a student may sometimes be regulating medication levels and may be experiencing varying side effects (e.g., alertness, concentration) during this regulation. It is the responsibility of the parents to inform the school of these and any other changes.
- Foster an attitude of understanding and acceptance. The emotional and educational needs of students with epilepsy are the same as those of any other student who is adjusting to a change in lifestyle. The student with epilepsy needs support; the other students need to know how to give it.

Contacts

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B.C. Children's Hospital
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Tel: (604) 875-2121
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Epilepsy in the Schools Program
Victoria Epilepsy & Parkinson's Centre
813 Darwin Avenue
Victoria BC V8X 2X7
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For More Information:

Contact local doctors and hospital staff or your local Health Unit.

Fetal Alcohol Syndrome/Effects

Fetal alcohol syndrome/effects (FAS/E) is a neurological disorder caused by significant prenatal exposure to alcohol. The medical diagnosis of FAS is made when there is known, significant prenatal exposure to alcohol and the child exhibits three criteria:

- Prenatal and/or postnatal growth delay (height and/or weight below the tenth percentile,
- Central nervous system (brain) involvement (conditions such as head circumference below the third percentile, intellectual impairment, learning disabilities, attention deficit/hyperactivity or other neurological abnormalities),
- Characteristic facial features (short eye slits, flat mid face, long/indistinct space between nose and upper lip, and thin upper lip).

The term possible fetal alcohol effects (FAE) is often used when there is a documented history of significant maternal drinking during pregnancy and some, but not all, of the diagnostic criteria for FAS are present. FAE is not a "milder" form of FAS. For both FAS and FAE there is a continuum of effects on physical development and learning that depends on the amount of alcohol consumed, the timing of the drinking, and other metabolic and genetic factors. The effects range from severe problems requiring major adaptations of the curriculum to minor difficulties requiring minimal extra support. The collective term FAS/E is often used because the learning and behavioural disabilities that are of concern to teachers are found for both fetal alcohol syndrome and fetal alcohol effects.

Prenatal exposure to alcohol increases the risk for other birth defects such as spina bifida, cleft palate, and heart abnormalities requiring medical intervention. FAS may be seen concurrently with other conditions described in this resource book: allergies, autism, attention deficit/hyperactivity disorder, cerebral palsy, epilepsy, and Tourette Syndrome. This combination of growth delay, central nervous system involvement and facial features is not unique to FAS and may be due to other conditions. Often children are prenatally exposed to other drugs along with the alcohol ("poly-drug exposure") which may further compromise their development. The young child with FAS/E is often endearing, chatty and affectionate. These characteristics, however, may mask significant learning and behavioural disabilities.

Recognizing the Child with Fetal Alcohol Syndrome/Effects

The diagnosis of FAS/E requires the skilled, clinical judgment of a doctor with specialized training in the recognition of birth defects. Observations made by the classroom teacher can lead to an appropriate referral for the early diagnosis of FAS/E, or perhaps another neurological disorder. As FAS/E is a lifelong disability, a diagnosis made at any age can lead to better self-understanding, and an understanding of this student by his family and teachers.

Children with FAS/E are often identified by their teachers, not because of their physical characteristics, but because of their learning and behavioural needs. If FAS/E, or any other neurological disorder is suspected, it should be suggested to the parents that they consult with their family physician to find out if there is a medical reason for their child's difficulties. This needs to be done in a sensitive manner, respectful of the family's situation - whether the child lives with his/her birth, adoptive, or foster family. A comprehensive medical and psychological assessment should be undertaken when follow-up support can also be offered.

While each child with FAS/E is unique, with his or her own strengths and needs, a typical profile of the child with FAS/E can be described using the acronym LLAMA:

- Learning disabilities:
    - Reading disabilities: early reading difficulty, later problems with comprehension.
    - Written language disabilities: spelling, creative writing.
    - Mathematics disabilities: difficulty learning math facts, telling time, solving problems.
    - Difficulty with abstract concepts.
    - Difficulty generalizing information from one situation to another.
- Language delay/disorders:
    - Immature speech/language.
    - Overly "chatty," but with no substance.
    - Difficulty following oral instructions.
    - Slow to process language.
    - Overly concrete or literal in understanding of language. Difficulty with abstract concepts. Misinterprets language messages.
- Attention Deficit/Hyperactivity:
    - Restless and fidgeting.
    - Short attention span and easily distracted in the middle of the task.
    - Easily over stimulated and overwhelmed, leading to outbursts.
    - Impulsive - acts without thinking of possible consequences, doesn't anticipate danger.
- Memory
    - Good long-term memory for past events, but can't remember what happened this morning.

  - Concepts learned one day are forgotten by the next.
  - Established daily routines may be forgotten.
  - Difficulty with sequential thinking.
  - Weak short-term memory.
  - Difficulty with retrieval of information unless prompted.
- Adaptive behavioural concerns
  - Difficulty understanding cause/effect - thinking seems "illogical."
  - Requires more repetitions than normal to learn from consequences.
  - Difficulty perceiving social "cues", thereby alienating peers.
  - Social skills are immature.
  - Easily manipulated and led by others.
  - Blames others - egocentric.
  - Seems to not accept that rules apply to him/her.
  - Mood swings.
  - May over- or under-react to situations.
  - Overly tactile, beyond the age where acceptable.
  - Difficulty adapting to changes, perseverative or "stubborn."
  - Difficulty making choices.
  - Overly friendly and affectionate - easily approached by strangers.

Key Behaviour Patterns

- Overly concrete.
- Restless and fidgety.
- Impulsive.
- Weak short term memory.
- Difficulty understanding cause and effect.
- Overly tactile.

Classroom Strategies

- If the condition has been diagnosed, meet with the parents, other professionals involved in the assessment and the student as early as possible in the school year to determine the student's individual needs.
- In general, the following classroom management strategies can be considered:
- Establish and maintain contact between parents, school and other professionals in the community to provide a structured and stable support system.
- Ensure a thorough assessment to establish the student's strengths and weaknesses.
- Be realistic in your expectations of the student. Establish these through discussions with the parents; the student will function best in a structure common to home and school.
- Develop an individual education plan (IEP) specific to the student's needs.
- If acceptable to both student and parents explain the nature of Fetal Alcohol Syndrome/Fetal Alcohol Effect to the class.
- Provide a calm, quiet environment, e.g., a room that is not over-stimulating or cluttered.
- Reduce stress. Be alert to physical symptoms: irritability, agitation, over reactions to minor occurrences.
- Maximize structure and routine: predictability and consistency in activities, avoid placement with multiple teachers, prepare and rehearse for special events. Provide transition between activities, and keep changes to a minimum.
- Seat the student consistently in the same place at a desk where distractions by other students will be minimized.
- Have a few simple rules with consistent enforcement and immediate consequences, e.g., a very short "time-out," preferably inside the classroom, not the hall unless supervised.
- Use a combination of teaching strategies to capitalize on the student's strengths. Use visual and/or oral presentations to supplement printed materials.
- Break up concentration activities with physical activities.
- When doing group activities, pair the child with a high tolerance child.
- Assist the student to become involved with others of the same age group. Encourage involvement in classroom and playground activities.
- Encourage the student to move from dependence on you and others to personal independence. This will assist in the growth of as much independence as possible.
- Be precise and concise in your instructions. The student needs to understand and grasp each step in a task one step at a time.
- Use visual time lines to help develop time-management skills.

- Help the student succeed by using simple aids such as: arrows to indicate direction in reading and writing, a dot in the top left hand corner to show where to start, use wide spaced paper, help keep the desk clear except for what is required for the task at hand, use a ruler or plain sheet of paper under each line being read.
- Do a lot of work with money.
- Teach calculator skills and allow the child to use the calculator in class.
- Allow extra time for tests or assignments.
- Refer to information on learning disabilities and/or emotionally disturbed students for further strategies for classroom assistance.

Contacts

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Surrey Community Resource Society
Fetal Alcohol Syndrome/Neonatal Abstinence Syndrome
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Learning Disabilities Association of B.C.
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Surrey BC
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For More Information:

Contact local health care professionals through your local health care unit, regional hospital, or child development centre.

Muscular Dystrophy

Muscular dystrophy is not a single condition. It is the name of a group of approximately 20 muscle disorders characterized by progressive degeneration of muscle fibres. Each particular disorder has specific differences related to the severity of the symptoms, the rate of deterioration, the age group most affected, the extent of the damage and the muscles involved.

Muscular dystrophy is not contagious. It is a genetic disorder caused by a faulty or missing gene, either inherited or occurring as a spontaneous mutation. Through a process not yet understood, the muscles themselves begin to die. As muscle cells break down and fat cells form in their place, the muscle weakens and loses the ability to contract. Usually the voluntary muscles are the most vulnerable, but some forms of muscular dystrophy may also weaken the heart and respiratory (involuntary) muscles.

There are two major types of muscular dystrophy:

- Myotonic muscular dystrophy: inability to relax a muscle after it has contracted. Muscles far from the body's trunk (hands and feet) are affected first.
- Duchenne muscular dystrophy: false growth of muscles, beginning with the thighs and pelvic girdle, give the outward appearance of health and strength while the muscles are actually being replaced by fatty tissue.

Recently new technology and further research have given insight into the causes and diagnosis of muscular dystrophy. At present there is no cure. Early detection and genetic counseling offer greater choice of treatment.

Recognizing Muscular Dystrophy

Myotonic Muscular Dystrophy

Myotonic muscular dystrophy is the most common adult dystrophy. It affects both men and women. It generally appears between age 10 and 30. An inability to relax a handshake is one of the first signs a child will experience. In later life, the muscles of the face, neck and hands may become wasted and weak. This may spread to the legs and feet. Other medical problems that may develop are: early development of cataracts, baldness, and respiratory and digestive problems. Wide variations in the course of this condition make it impossible to predict its severity or progress. Some individuals become totally disabled while others live a normal life, hardly aware of the symptoms.

Duchenne Muscular Dystrophy

Duchenne muscular dystrophy is the most common and the most rapidly progressive of the disorders. About one in 3000 males inherit the disease through a recessive gender-linked gene. Normally only males are affected and only females can pass on the disease. In most cases, the first sign of the disease is difficulty in walking at an early age, from ages two to five.

The disease starts with weakness of the thighs and pelvic muscles making standing, walking and climbing difficult. It progresses to the neck, shoulders and back which may lead to deformities of the spine and to difficulties in breathing. The heart, which is also a muscle, may become involved. The combination of difficulties in breathing and heart function can lead to death in young adulthood. The disease progresses steadily and rapidly, and requires use of braces, a walker, and/or a wheelchair by late childhood. Fewer than 30 per cent of males affected will have any degree of intellectual impairment. Others will display a wide range of cognitive abilities.

General Characteristics

Some, but not necessarily all, of the following characteristics may be present in varying degrees of severity:

- Progressive difficulty in every day activities, e.g., writing tires hands easily.
- Muscle weakness and wasting.
- Joint stiffening.
- Spinal curvatures.
- Clumsiness in walking.
- Enlarged calf muscles as fatty tissue replaces healthy muscle.
- Tendency to walk on the toes as heel cords shorten.
- Difficulty or inability in lifting arms or legs.
- Cannot get up from the floor without pushing with hands on thighs or supports.
- Heart problems.
- Respiratory impairment.
- Slurring of words as mouth and tongue muscles weaken.

Key Behaviour Patterns

- Tendency to walk on toes.
- Difficulty or inability in lifting arms or legs.
- Cannot get up from the floor without supports.
- Slurring of words.

Classroom Strategies

- Meet with the student and the parents early in the school year to help determine the student's individual needs.
- From this meeting and from previous school records, assess the need for an individual education program and develop an IEP if required.
- Work as a member of a team to help the student lead a productive life. Include parents, para-professionals, health care professionals and possibly peers.
- Talk to the class about muscular dystrophy, and if the student is comfortable with the situation, have the student or parents explain any specific needs. Encourage other students to find out how they can assist and when they should assist.
- If necessary, schedule bathroom breaks for the student who needs assistance, from a para-professional, just before class breaks.
- Encourage the student to remain as active as possible, to keep healthy muscles in condition as long as possible. Inactivity contributes to loss of muscle action.
- Try different strategies: use computers, handout, tapes, overheads, to allow the student to keep pace with the rest of the class.
- Orient the student to elevators and ramps, if necessary.
- In consultation with a physiotherapist, encourage as much physical activity as possible, not only for muscle therapy but also to foster social relationships. This gives the student a break from the seated position. Standing for two to four hours per day may have both physiological and psychological benefits.
- Be alert for signs of withdrawal and depression. The student may feel less a part of the class as the condition progresses.
- Build self-confidence by encouraging active participation in classroom activities. Some subject areas such as physical education, science or industrial education may need certain modifications or alternative assignments.
- Allow time to finish assignments and exams. Even if extra time is necessary, completing a task will do much to develop the feeling of self-confidence.
- Ensure appropriate seating - this may be near the board, near the front, near the door or at a table suitable for a wheelchair.
- Expect group participation in cooperative learning groups to overcome specific difficulties in subject areas.
- Ensure an exchange of information between the home and the school for mutual understanding and consistency of expectations.

Contacts

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For More Information:

Contact health care professionals through your local health care unit or regional hospital.

Spina Bifida

Spina Bifida is a birth defect affecting the spine and nervous system. Occurring in the first four weeks of pregnancy, the vertebrae fail to close over and protect the spinal cord. Instead of being enclosed and protected by the vertebrae, the cord and its covering membranes bulge out through the spinal column. The damage is always below the lesion. As this happens nerves are damaged and no messages from the brain are transmitted. This results in a variety of disabilities.

The degree of weakening or paralysis depends on the location and extent of spinal cord damage. The opening may occur anywhere on the spinal cord causing lack of bladder and bowel control, paralysis, and lack of feeling or sensation.

Little is known about the cause of spina bifida. Until medical advances of the 1960s, little could be done to treat infants born with this birth defect. Both genetic and environmental factors may trigger the impairment. Surgery immediately after birth will close the opening and is intended to prevent infection and further damage.

Eighty-five per cent of children with spina bifida have hydrocephalus, accumulation of spinal fluid around the brain, which must be treated. A shunt (tube) is surgically implanted to drain the excess fluid to another part of the body. Some learning ability may be impaired as a result of this procedure.

At present, spina bifida is not preventable, but the symptoms can be treated. Recent research indicates that the addition of the B-vitamin, folic acid, to the diet of women of child-bearing age may significantly reduce the incidence of birth defects such as spina bifida.

Most children with spina bifida will perform successfully in a regular classroom. Others will require some support service, usually a teacher assistant. People with spina bifida can learn to cope, achieve independence and lead fulfilling lives.

Classroom Considerations

A number of factors may contribute to slow progress in school:

- Long absences from school over the years for medical treatment.
- Poor mobility and poor hand control.
- Sensory impairment e.g. visual, tactile.
- Little effort to extend muscle use.
- Varying degrees of learning disabilities, particularly in arithmetic, or any subject area requiring good visual-spatial skills.
- Lack of confidence and lack of interaction with other children.
- Distractibility.

Classroom Strategies

- Meet with the parents and the student early in the school year or even in June before enrolment to help determine individual student needs.
- Determine specific learning requirements based on recent assessment.
- Develop an Individual Education Plan (IEP).
- Recognize that the student requires extensive medical service which may be time-consuming and frustrating. The teacher is part of a team helping the student in learning to cope with minimal assistance.
- If the student is comfortable with it, and depending on the age of the group, talk to the class about spina bifida. Encourage other students to find out how they can assist and when they should assist.
- Ask the school nurse, an occupational therapist, physiotherapist, a doctor or someone from the Spina Bifida Association for information and assistance.
- Accommodate absences from school for medical purposes by providing information and assistance for school liaison teachers and parents.
- Expect appropriate behaviour. Students are accountable for their behaviour whether disabled or not.
- Expect the same effort from all students in the class. If there are things the student with spina bifida cannot do, give an equivalent task.
- Be as fair with the student with spina bifida as with other students, e.g., intervening in teasing. The teacher's attitudes and actions set an example in fostering feelings of self-respect and dignity to grow.
- Assist the student to develop organizational skills by keeping books and school materials within easy reach, and by making lists and schedules of assignments, tests, special events, etc.
- Encourage the use of computers, typewriters and other aids to increase speed and to overcome any difficulties of hand control. Refer to the school occupational therapist for assistance.
- Orient the student to the school, especially for ramps, bathrooms with modifications and access to elevator. The school occupational therapist or physiotherapist can assist with adaptations to the environment.
- Work closely with the parents to reinforce both what is happening at school and at home.
- Make sure that others in the school (a teacher, administrator, counselor, substitute...) are familiar with the student's routine and requirements.
- As lack of bowel and bladder control is one of the greatest blocks to social acceptance for the student, ensure privacy and encourage independence. It is essential to ask the parents or health professionals about the student's routine.
- For activities outside the school, ensure that appropriate arrangements are made so the student can participate as much as possible.
- Encourage active participation in the classroom. Some subjects may need modification such as physical education and technology.

- Assist the student in forming social relationships. Students with spina bifida need positive social interactions as much as other students.

Contacts

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or (204) 925-3650
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Spina Bifida and Hydrocephalus Association of B.C.
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For More Information:

The Spina Bifida Association is willing to furnish teaching kits and individualized information.

Contact health care professionals through your local health care unit or regional hospital.

Tourette Syndrome

Tourette Syndrome is neurological or neurochemical disorder characterized by tics - involuntary muscular movements, uncontrollable vocal sounds, and/or inappropriate words. The symptoms usually appear between the ages of two and 21. Symptoms wax and wane, often with one type of tic replacing another, and the syndrome is often mistaken for a psychological disorder.

Current research suggests that the disorder stems in part from abnormally low levels of neurotransmitters in the brain. Neurotransmitters are chemicals which carry signals from cell to cell and regulate movement and behaviour. There are indicators of an hereditary component and a higher incidence of Tourette Syndrome among males than females. As yet there is no cure, although medication will often help control symptoms. In some cases, remission or a marked improvement may occur as the student grows older. Generally, Tourette syndrome is chronic, but not fatal.

Tics may be suppressed for a short time, however, the urge for movement often becomes irresistible and must be released. During periods of stress the tics become more evident. Symptoms will change, may appear in a different form, and increase or decrease over time. Tics are classified as simple and complex.

Simple

Motor: eye blinking, head jerking, facial grimaces and shoulder shrugging.
Vocal: barking noises, throat clearing, sniffing, coughing and tongue clicking.

Complex

Motor: jumping, touching, twirling and sometimes self-injurious actions.
Vocal: repeating phrases or words (palilalia), uttering socially unacceptable words (coprolalia) and repeating words of others (echolalia).

Students may function well in school depending on the severity of the disorder. A growing number of individuals with Tourette Syndrome have achieved success in such diverse fields as medicine, engineering, law, journalism and computer science. Some students may require special help at times in particular subjects. They do require a compassionate environment with strong support from classmates and teachers to help them cope with cognitive, social and emotional problems which may arise. The need to accept themselves, and to have others accept them as they are, is of paramount importance.

Recognizing the Child with Tourette Syndrome

If the condition is suspected, advise the parents to consult with their physician. A comprehensive medical and psychological assessment should be undertaken. Early diagnosis and treatment are crucial. Treatment ranging from simple support and understanding to medications and psychological counseling may be required. Some, but not necessarily all, of the following symptoms may be evident:

- Involuntary muscular movements (tics), simple or complex, including neck stretching, arm movements, facial twitches, imitating movements of others.
- Vocal tics, simple or complex, including: grunting, humming, snorting, burping and other inappropriate sounds and words.
- Obsessive-compulsive behaviour: the student feels that something must be done over and over, or always in a particular order, and therefore, needs more time to prepare for an activity e.g., texts and notebooks must be arranged in a particular sequence, clothing must be put on in a particular order.
- Difficulty in concentrating, easy distractibility, not seeming to listen, failing to finish what is started, needing a great deal of supervision.
- General fidgeting and restlessness.
- Impulsive behaviour, or shifting from one activity to another without thinking.
- Poor academic performance, not in keeping with abilities.
- Poor self esteem and difficulty getting along with peers and adults.
- Short attention span.
- Forgetfulness.
- Poor coordination.
- Difficulty in acquiring basic skills for learning to read (the student may get "stuck" on a word or phrase), spell, write and do arithmetic.
- Frustration from trying hard and not succeeding, sudden intense flare-ups of anger at minor stimuli.

Classroom Strategies

- If the condition has been diagnosed, meet with the parents and the student as early as possible in the school year to determine the student's individual needs.
- If significant adaptations/modifications are required, develop an Individual Education Plan (IEP) specific to the student's needs.
- Accept the student "as is." The tic is not deliberate nor an attempt to get attention or disrupt the class. Similarly, other behaviour that is not related should not be excused.
- Establish and maintain a mutual support system between the student, the parents and the school. Frequent feedback from all sources is necessary to help the student cope with the erratic nature of this disorder.
- Observe and record behaviour on both a short and long term basis.
- If it is acceptable to parents and the student, explain to the class what Tourette syndrome is, using films, videos and speakers available from sources listed on page 71.
- Maintain the same expectations for the student as for the rest of the class. A student with Tourette syndrome may sometimes need extra time for assignments or a separate room for tests. The student may have a compulsive ritual, such as setting out materials in a certain order, before beginning an assignment.
- Work out various strategies to enhance learning capabilities. For example, because handwriting is frequently difficult, use a tape recorder, give oral tests, use recorded books or provide notes written by another student as necessary.
- Use the "buddy" system to help the student overcome difficulties as they arise. A "buddy" is a responsible student who may assist with copying notes, reading, etc.
- Help the student through stressful experiences. Explain in advance what is expected, particularly in timed activities.
- Give instruction in stages. Too many items to be remembered at one time cause extra stress.
- Use tape recorders, typewriters or computers for reading and writing problems and untimed exams, in a private room if vocal tics are a problem.
- Be aware of any medication the student is taking and help maintain a schedule. There may be side effects, e.g., sleepiness, fatigue, restlessness, depression and unusual difficulty in learning.
- Allow the student to leave the room whenever the tic becomes overwhelming. If possible provide a "safe place" where the expression of the tic will be less noticeable, i.e., a counselor or nurse's office.
- Give positive and immediate feedback for a task well done or a social situation handled well. With so much of their behaviour socially unacceptable, these students need to know when they are doing well.

- Seat the student, with mutual understanding and agreement, near the back of the room. Older students should seat themselves wherever they feel most comfortable. This not only allows for leaving if necessary, but is less disruptive.
- Help the student understand and interpret social situations. Misunderstandings can cause feelings of isolation and rejection. Encourage participation in classroom activities.
- Establish a classroom atmosphere which is tolerant and accepting. It is important that the teacher serve as a role model for the students in promoting understanding.

Contacts

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Fax: (604) 877-1123
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TSFC Victoria Chapter
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For More Information:

Contact local health care professionals through your local health care unit, regional hospital or child development centre.

How to improve this resource book

We hope that this Resource Book addresses most of your initial questions and concerns regarding providing appropriate programs for students with special needs. Since the users of any resource are often the ones best able to identify its strengths and weaknesses, let us know how this document can be improved. When the resource book fails to assist, or if you have any suggestions and comments, please print and complete a copy of this page and send it to the Special Education Branch of the Ministry of Education.

How do you rate Awareness of Students with Diverse Learning Needs, What the Teacher Needs to Know, Volume 1?

	Yes	**No**	**If no, please explain:**
Useful?			
Easy to understand?			
Well organized?			
Complete?			
Other comments:			

Return to:

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