Section 8

Physical Disabilities
PHYSICAL DISABILITIES

There are no spectators at life's banquet - everyone is at the table, no one is excluded.

President Mary McAleese speaking at Enable Ireland Cork Services on 16 July 2004, taken from Enable Ireland Newsletter Autumn 2004
http://www.enableireland.ie/info/publication.html
Physical Disabilities

Students may have physical disabilities arising from conditions such as congenital deformities, spina bifida and/or hydrocephalus, muscular dystrophy, cerebral palsy, brittle bones, haemophilia, cystic fibrosis or severe accidental injury. It is important to state that there is no necessary direct correlation between the degree of physical disability and the inability to cope with the school curriculum, apart from the elements involving physical activity. Students with severe physical disability may have minimal special educational needs, while those with minimal physical disability may have serious learning needs. Physical access can be a major concern for students who have physical disabilities as those who use wheelchairs, braces, crutches, rolators, canes or prostheses, or those who fatigue easily may have difficulty moving around a school campus.

The SESS is aware that the range of physical disabilities is wide, and while a selection is presented in this publication, it is envisaged that information pertaining to other disabilities will be presented in future issues of its newsletter, *CABHAIR*, which will be accessible from the main website [http://www.sess.ie/](http://www.sess.ie/).

It is to be noted that there is some repetition in this section with regard to tips for learning and teaching and the additional references and resources. Such repetition is unavoidable owing to the shared experiences of students with a range of physical disabilities.

**Tips for Learning and Teaching**

(Depending on the type and degree of physical disability some of the following may need to be considered.)

- Ensure physical access for students through the use of ramps into buildings, appropriate adjustments to toilets, etc.

- When considering seating needs foot-blocks, sloped desks, seat adjustors and customised cushions may have to be used for some students. Ensure that the student is able to sit comfortably and is in a good position to engage appropriately in curricular activities.

- Use assistive and augmentative technology appropriately in implementing students’ learning and teaching programmes.

- Students may require the use of mobility aids such as wheelchairs, crutches, walking frames, rolators, splints, adapted footwear or mobile standers.
- If the student cannot write, provide other means of recording work, such as tape or computer.
- Keep written activities short if completing these is time consuming and exhausting.
- The student can experience difficulties in the areas of personal and social development, so social skills and coping strategies may need to be explicitly taught.
- Adapt activities so that the student can participate in Physical Education.
- Note that typing may also be difficult owing to involuntary and uncontrolled movements.

- Allow more time to complete tasks and provide rest periods to prevent fatigue.
- Personalised settings may need to be considered for mouse, keyboard, speed of cursor, font size, etc when using the computer.
- Put sponge pieces on the corners of books/copies to make it easier for the student to turn.
- Tape/stick worksheets to the surface of the desk to minimise interference for the student in task completion.
- Maximise opportunities for language development.
- Study buddies may be used to help a student organise materials.
- For some students putting books on audio-tapes can be considered.
- Tables with rims around the edges may need to be considered to prevent items falling to the floor.
Additional Resources/References


2. Central Remedial Clinic, Ireland: provides a range of specialised services for children and adults with physical disabilities, website: [http://www.crc.ie/](http://www.crc.ie/)

3. Enable Ireland: provides services for children and their families, which cover aspects of a child’s physical, educational and social development from early infancy through to adolescence. Enable Ireland also provides services for adults, website: [http://www.enableireland.ie/](http://www.enableireland.ie/)


7. National Centre for Technology in Education (NCTE) offers advice on how to support students with physical disabilities, website: [http://www.ncte.ie/](http://www.ncte.ie/)

8. Special Education Support Service (SESS) offers general information pertaining to physical disabilities, website: [http://www.sess.ie/](http://www.sess.ie/)
Brittle Bone Disease

Most people with OI [Brittle Bone Disease], with support and specialized equipment, can lead active and fulfilled lives.

Patricia Minor author of What Life is Like Living with OI, PublishAmerica: Frederick, MD, (2006); taken from http://www.freewebs.com/sputnik490/mybooks.htm

Brittle bone disease is a skeletal disease characterised by an abnormal fragility of the bones. The collagen (a key component of bones, tendons and skin) is affected and this leads to bones breaking easily – consequently repeated fractures and weak bones may present. Students with brittle bone disease bruise easily and may be thought of as accident-prone. Many students with brittle bone disease are left-handed owing to a high frequency of fractures to the right hand. Students with brittle bone disease are no more likely to have learning difficulties than the rest of their peers.
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Tips for Learning and Teaching

- Allow extra time for completion of tasks.
- Remove clutter from classrooms or access areas to reduce the risk of falling.
- Remember that students may need to catch up on missed work due to periods of hospitalisation. If possible liaise with parents/carers in this regard.
- It may be necessary for the student to experiment with different types of pen and paper.
- Participation in games, Physical Education and other physical activities will be difficult and tasks will have to be modified. Perhaps use lighter bats and balls, foam javelins, etc.
- Consult with the occupational therapist with regard to the most suitable type of seating and desk for the student.
- Aids for mobility may be required.
- Aids for writing may have to be utilised.
- As writing will perhaps be slow for the student, handouts of notes will be helpful.
- Schedule study buddies to help students to organise learning materials, while also remembering to promote students’ independence as much as possible.
- Consider using assistive technology.
- If students are mobile, arrangements need to be made to minimise the risk of being bumped into or knocked over (e.g. the student may have to wait until peers have left the classroom before he/she leaves).
- If students use wheelchairs, where possible place yourself at their eyelevel when talking to them.
- Table-type desks with adequate leg space may need to be considered if the student has a wheelchair.
- The black/white board in the classroom may have to be lowered if the student is in a wheelchair.
- To facilitate students’ reading, use easels, portable reading racks or adjustable desks.
Additional Resources/References


3. Central Remedial Clinic, Ireland: provides a range of specialised services for children and adults with physical disabilities, website: [http://www.crc.ie/](http://www.crc.ie/)

4. Enable Ireland: provides services for children and their families, which cover aspects of a child's physical, educational and social development from early infancy through to adolescence. Enable Ireland also provides services for adults, website: [http://www.enableireland.ie/](http://www.enableireland.ie/)


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Cerebral Palsy

I realize that I can do things and I can do them very well. Some things I can’t do ... but I will have to live with that. At 16, I believe, I’ve learned more than many people will learn in their whole lives.

Taken from ‘It’s OK to be different’, by Angie Erickson, (student with Cerebral Palsy) Newsweek 24 October 1994

Cerebral palsy is a term used to refer to a group of complicated conditions that affect movement and posture because of damage to or failure in the development of the part of the brain that controls movement. This happens before birth, during birth or during early childhood before the brain’s growth has reached a certain level of maturity. The condition itself does not normally change but individuals with cerebral palsy can become increasingly better at managing their difficulties as they get older. Generally speaking cerebral palsy is characterised by involuntary jerking movements, a poor sense of balance, spastic muscles and speech impairment. Many forms of cerebral palsy are now recognised and it is described either:
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(a) in terms of the part of the body affected:
- **Hemiplegia**: affecting one side of the body.
- **Diplegia**: affecting the whole body.
- **Quadriplegia**: affecting both arms and legs.

Or

(b) in terms of how the body is affected:
- **Spasticity**: difficulty moving limbs and problems with posture and general movements.
- **Athetosis**: involuntary movements such as twitches or spasms.
- **Ataxia**: difficulty co-ordinating muscle groups and problems with balance, walking, etc.

It is sometimes the case that students present with a mixture of these conditions, as well as other associated difficulties, so the term embraces a wide spectrum. The associated difficulties include difficulties with constipation, epilepsy, general/specific learning disabilities, sleeping, speech and understanding the spoken word, and visual perception.

It is estimated that 1 in 400 students are affected by cerebral palsy and it is important to note that there is a huge variation in the manner in which cerebral palsy affects each individual. Some but not all students will have communication difficulties (including social mixing difficulties), movement and control difficulties, difficulties in processing and in ordering information, and spatial and perceptual difficulties.

**Tips for Learning and Teaching**

- Encourage independence.
- Remove obstacles so that the student can move freely from lesson to lesson.
- Encourage support for the student from classmates.
- Consider physical access issues such as ramps, toilets, lifts and classroom layout.
- Incorporate advice from the occupational therapist in the student’s programme.
- Use computers and audio-visual aids in the student’s learning and teaching programme.
- Specialised equipment may also be necessary such as adapted keyboards, page turners, word boards or special desks.
- If writing is difficult consider using a tape recorder.
- Encourage communication to prevent isolation.
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- Teach social skills if necessary.
- Allow students extra time to complete tasks.
- If teaching Physical Education, note that slower-paced activities are better than those requiring a fast response. Students will do better catching a bounced ball than a thrown one; kicking a stationary ball than a moving one.
- Students may have a low self-image, therefore it is important to ensure that the student feels included and is encouraged and praised.
- As students tend to become distracted quite easily minimise distractions in the classroom environment.
- If students use wheelchairs, where possible place yourself at their eye level when talking to them.
- Table-type desks with adequate leg space will need to be considered if the student has a wheelchair.
- The board in the classroom may have to be lowered if the student is in a wheelchair.
- To facilitate students’ reading, use easels, portable reading racks or adjustable desks.
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Additional Resources/References


2. Central Remedial Clinic, Ireland: provides a range of specialised services for children and adults with physical disabilities, website: [http://www.crc.ie/](http://www.crc.ie/)

3. CHASA: Children’s Hemiplegia & Stroke Association (US); support for children with Hemiplegia, Hemiplegic Cerebral Palsy, Infant Stroke or Childhood Stroke, website: [http://www.chasa.org/](http://www.chasa.org/)

4. Enable Ireland: provides services for children and their families, which cover aspects of a child’s physical, educational and social development from early infancy through to adolescence. Enable Ireland also provides services for adults, website: [http://www.enableireland.ie/](http://www.enableireland.ie/)


Spina Bifida

Our vision is that people with Spina Bifida and/or Hydrocephalus will participate to their fullest potential in all aspects of life.

Taken from IASBAH’s (Irish Association for Spina Bifida and Hydrocephalus) Goals
http://www.iasbah.ie/about.htm

Spina bifida is a defect in the spinal column in which one or more vertebrae fail to form properly, leaving a gap that can result in damage to the central nervous system. Those born with spina bifida may need surgery and other extensive medical care owing to the paralysis that may result from damage to the spinal cord. Spina bifida may also be associated with bowel and bladder complications. A large percentage born with spina bifida also present with hydrocephalus (an accumulation of fluid in the brain).

There are three main types of spina bifida: \textit{spina bifida occulta} (hidden); \textit{spina bifida cystica} (cyst-like); and \textit{cranium bifida}. The one most likely to present with physical disability is \textit{spina bifida cystica}. There are two forms: \textit{meningocele}, the least common form of spina bifida, where the nerves are usually not badly damaged and are able to function, and \textit{myelomeningocele}, the most common form of spina bifida and also the most serious, where there is always some degree of paralysis and loss of sensation. With \textit{myelomeningocele}, the amount of disability depends on where the spina bifida is and the amount of nerve damage involved. Students with this condition are invariably wheelchair users and many experience problems with bowel and bladder control.

The student with spina bifida can have co-ordination and perception difficulties that will affect his/her learning. Short-term memory, speech and vision difficulties may also be present. However, one must remember that wide variations exist with regard to the needs of each individual student.
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Tips for Learning and Teaching

- Explicit teaching of skills for these students, such as skimming and scanning and how to use eye movements, may have to be considered. Difficulties often arise with such skills owing to co-ordination and/or perception difficulties.

- Consider allowing the student to audio-record lessons.

- If students use wheelchairs, where possible place yourself at their eyelevel when talking to them.

- Refer to the occupational therapist for assistance.

- Motor, perceptual and spatial problems may cause delays in learning reading, writing and Mathematics.

- Poor motor co-ordination may affect the student’s access to the Physical Education curriculum, and activities should be adapted to take this into consideration.

- Table-type desks with adequate leg space will need to be considered if the student has a wheelchair.

- Use a ‘Buddy system’ for tasks such as Science experiments.
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- Allow the student adequate time to complete activities.
- The white/black board in the classroom may have to be lowered if the student is in a wheelchair.
- To facilitate students’ reading, use easels, portable reading racks or adjustable desks.
- Encourage active participation in the classroom.
- Foster social relationships.

Additional Resources/References


3. Central Remedial Clinic, Ireland: provides a range of specialised services for children and adults with physical disabilities, website: [http://www.crc.ie/](http://www.crc.ie/)


5. Enable Ireland: provides services for children and their families, which cover aspects of a child’s physical, educational and social development from early infancy through to adolescence. Enable Ireland also provides services for adults, website: [http://www.enableireland.ie/](http://www.enableireland.ie/)


8. Irish Association for Spina Bifida and Hydrocephalus, website: [http://www.iasbah.ie/](http://www.iasbah.ie/)


**Muscular Dystrophy**

Everyday Thom endures a great deal of pain, but he never complains. He just lives each day to the fullest ... he has taught me so much ... He is truly a hero in my eyes and I love him so very much.

Taken from *Living with MD* by Leslie, whose husband has muscular dystrophy


Muscular dystrophy is a collective term for a variety of neuromuscular conditions characterised by the progressive deterioration and wasting of muscle fibres. There are two main types of muscular dystrophy: Duchenne muscular dystrophy and Myotonic muscular dystrophy. The main characteristic of muscular dystrophy is a progressive weakening of the muscles; the child at birth appears quite normal but as growth occurs and muscles deteriorate the child becomes noticeably weaker. *Duchenne muscular dystrophy* is a progressive, life-limiting condition in which a significant change in the student’s abilities is seen over the years. While intellectual impairment may occur with some students with *Duchenne muscular dystrophy*, it only affects a minority of students.
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Tips for Learning and Teaching

- Thought needs to be given to physical access and safety around the school building.
- Specialised seating may be utilised. Consult with the occupational therapist in this regard.
- Encourage the student to be as active as possible to keep healthy muscles in condition as long as possible.
- Utilise different strategies such as computers, handouts, tapes, etc, to allow the student to keep pace with the rest of the class.
- Adapt Physical Education activities so the student can participate (e.g. use lightweight equipment).
- Orientate the student towards ramps or lifts if necessary.
- Consult with the physiotherapist for guidance and assistance.
- Be alert for signs of withdrawal and depression, the student may feel less part of the class as the condition progresses.
- Allow extra time, if necessary, for the student to complete tasks.
- Ensure appropriate seating and that tables are suitable for a wheelchair.
- Utilise a ‘Buddy system’.
- Provide consistent encouragement and support for students.
- If students use wheelchairs, where possible place yourself at their eye level when talking to them.
- Table-type desks with adequate leg space will need to be considered if the student has a wheelchair.
- The board in the classroom may have to be lowered if the student is in a wheelchair.
- To facilitate students’ reading, use easels, portable reading racks or adjustable desks.
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