

Orthopedic Impairment

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What is Orthopedic Impairment?

“A severe orthopedic impairment that adversely affects a child’s educational performance. The term includes impairments caused by a congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).”





Causes of Orthopedic Impairment

Students may be born with or acquire problem with their bones, their joints and/or their muscles.

-Orthopedic problems may result from deformities, diseases, injuries, or surgeries.

-Problems a child might be born with include cerebral palsy,

Osteogenesis Imperfecta, joint deformities or muscular dystrophy.

-Injuries or surgeries may result in the loss of a bone and/or muscle tissue and may include the amputation of a limb.

Burns and broken bones can also result in damage to both bones and muscles.

Prevention of Orthopedic Impairments

The main ways to prevent orthopedic impairments is to ensure maternal healthcare and education on orthopedic impairments





Characteristics

The IDEA category of orthopedic impairments contains a wide variety of disorders. These can be divided into three main areas: neuromotor impairments, degenerative diseases, and musculoskeletal disorders. The specific characteristics of an individual who has an orthopedic impairment will depend on the specific disease and its severity, as well as additional individual factors.

A neuromotor impairment is an abnormality of, or damage to, the brain, spinal cord, or nervous system that sends impulses to the muscles of the body. These

impairments are acquired at or before birth, and often result in complex motor problems that can affect several body systems. These motor problems can include limited limb movement, loss of urinary control, and loss of proper alignment of the spine. The two most common types of neuromotor impairments are cerebral palsy and spina bifida.

Cerebral palsy refers to several nonprogressive disorders of voluntary movement or posture that are caused by malfunction of or damage to the developing brain that occurs before or during birth or within the first few years of life. Individuals with cerebral

palsy have abnormal, involuntary, and/or uncoordinated motor movements.

Spina bifida is a developmental defect of the spinal column. Spina bifida is characterized by an abnormal opening in the spinal column and frequently involves some paralysis of various portions of the body. It may or may not affect intellectual functioning.

Degenerative diseases are composed of various diseases that affect motor development. The most common degenerative disease found in the school population is muscular dystrophy. Muscular dystrophy is a group of inherited

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diseases characterized by progressive muscle weakness from degeneration of muscle fibers.

Musculoskeletal disorders are composed of various conditions that can result in various levels of physical limitations. Two examples of musculoskeletal disorders include juvenile rheumatoid arthritis and missing limbs.



Instructional Strategies

In order for the student to access the general curriculum, the student may require these accommodations:

- Special seating arrangements to develop useful posture and movements
- Instruction focused on development of gross and fine motor skills
- Securing suitable augmentative communication

and other assistive devices

- Awareness of medical condition and its affect on the student
- Other specialists may be involved in developing and implementing an appropriate educational program for the student. These specialists can include:

- Physical Therapists who work on gross motor skills

- Occupational Therapists who work on fine motor skills
- Speech-Language Pathologists who work with the student on problems with speech and language
- Adapted Physical Education Teachers, who are specially trained PE teachers who work along with the OT and PT to develop an exercise program to help students with disabilities
- Other Therapists



Current Trends

Assistive technology and inclusion in the general education classroom, and an increasing awareness of orthopedic impairments.



Effects of Disability

On Adolescents:

Some students with physical disabilities may lack common experiences and knowledge or common places, items, and activities as compared with general education students. This is due to a lack of mobility and, if their condition has existed since birth, the lack of typical childhood play and exploration. These students' social interactions often are limited because of limited motor, self-help, and self-care skills. Sometimes, standard instructional materials includes mention of objects and experiences or assumes comprehension that is beyond the experience and background of the child with an orthopedic impairment. Children with orthopedic impairments may have pain and discomfort, may sleep poorly and therefore be fatigued in class, and may be on medications. They also may miss school more frequently than other students because of their medical conditions.

Poor self-concept and poor self-advocacy skills may affect an individual student's performance or behavior. Some students with orthopedic impairments feel helpless or depressed as a result of their physical disability.

On Adults:

Because orthopedic impairments may not cause intellectual disabilities, adults may find they can perform well intellectually in adulthood, but need help with getting places and ensuring the facilities they work at are handicap accessible to meet their needs. While some adults with orthopedic impairments may need more structured transition plans before leaving the public school system to allow for supported employment opportunities and housing and transportation needs.



Online Resources

<http://projectidealonline.org/orthopedicImpairments.php>

<http://www.ci.maryville.tn.us/mhs/MCSped/orthop.htm>

<http://www.education.com/reference/article/orthopedic-impairments/>

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