

Chapter 10 - Orthopedic Impairment

Definition under IDEA of Orthopedic Impairment

Under IDEA, orthopedic impairment:

“means a severe orthopedic impairment that adversely affects a student's educational performance. The term includes impairments due to the effects of congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments due to the effects of disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures)”

Overview of Orthopedic Impairment

Although IDEA uses the term orthopedic impairments, educators typically use the term “physical disabilities” when referring to these same conditions (Turnbull, Turnbull, & Wehmeyer). A physical disability is a condition that interferes with a student’s ability to use his or her body. Physical disabilities are conditions that affect movement, that is, an individual’s motor control (e.g., walking, standing) and fine motor control, e.g., writing, holding, or manipulating small objects using the hands, oral motor skills (Friend).

Many, but not all, physical disabilities are orthopedic impairments (Kirk, Gallagher, & Anastasiow). According to Heward, although IDEA uses the term orthopedic impairments, students with physical disabilities may have orthopedic impairments or neuromotor impairments. An orthopedic impairment involves the skeletal system—bones, joints, limbs, and associated muscles. A neuromotor impairment involves the central nervous system, affecting the ability to move, use, feel, or control certain parts of the body. Although orthopedic and neurological impairments are two distinct and separate types of disabilities, they may cause similar limitations in movement.

Students with orthopedic impairments, although few in number, comprise one of the most diverse group of exceptional individuals due to the many types of diseases and disorders that interfere with the normal functioning of the muscles or bones (Colarusso & O’Rourke). Individuals with physical disabilities often require highly specialized interventions to realize their maximum potential. Moreover, “the range of medical services, educational placements, and therapies is extremely diverse and highly specific to the person and his or her needs” (Hardman, Drew, and Egan).

Prevalence of Orthopedic Impairment

According to the U.S. Department of Education, Orthopedic Impairments represent approximately 1.0 percent of all students having a classification in special education.

Characteristics of Students with Orthopedic Impairments

The characteristics of students with physical disabilities are so varied that attempting to describe them is nearly impossible (Heward). The reality is that it is difficult to generalize about such a broad spectrum of limitations (Bowe).

Orthopedic impairments are often divided into three main areas. These are:

1. **Neuromotor impairments**-An abnormality of, or damage to, the brain, spinal cord, or nerves that send impulses to the muscles of the body (Gargiulio).
2. **Degenerative diseases**- These are diseases that affect motor movement (Gargiulio).
3. **Musculoskeletal disorders**-Defects or diseases of the muscles or bones (Hallahan & Kauffman)

Procedures and Assessment Measures used to diagnose Orthopedic Impairments

If a student is suspected of having an orthopedic impairment, the following evaluation shall be conducted:

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(A) A medical statement or a health assessment statement indicating a diagnosis of an orthopedic or neuromotor impairment or a description of the motor impairment;

(B) A standardized motor assessment, including the areas of fine motor, gross motor and self-help, when appropriate, by a specialist knowledgeable about orthopedic or neuromotor development;

(C) Assessments to determine the impact of the suspected disability:

- (i) On the student's educational performance when the student is at the age of eligibility for kindergarten through age 21, or
- (ii) On the student's developmental progress when the student is age three through the age of eligibility for kindergarten; and

(D) Additional evaluations or assessments that are necessary to identify the student's educational needs.

Besides these assessment measures, the following should be considered:

If a student is suspected of having an orthopedic impairment under the definition set forth in IDEA, the following assessment measures should also be considered:

- An observation by a team member other than the student’s general education teacher of the student’s academic performance in a general classroom setting; or in the case of a student less than school age or out of school, an observation by a team member conducted in an age-appropriate environment
- A developmental history, if needed
- An assessment of intellectual ability
- Other assessments of the characteristics of speech and language impairments if the student exhibits impairments in any one or more of the following areas: cognition, fine motor, perceptual motor, communication, social or emotional, and perception or memory. These assessments shall be completed by specialists knowledgeable in the specific characteristics being assessed:
- A review of cumulative records, previous individualized education programs or individualized family service plans and teacher collected work samples
- If deemed necessary, a medical statement or health assessment statement indicating whether there are any physical factors that may be affecting the student’s educational performance
- Assessments to determine the impact of the suspected disability:

On the student’s educational performance when the student is at the age of eligibility for kindergarten through age 21

On the student’s developmental progress when the student is age three through the age of eligibility for kindergarten

- Additional evaluations or assessments necessary to identify the student’s educational needs

Eligibility for a Diagnosis of an Orthopedic Impairment

In general, States use two different methods to determine whether a student meets the eligibility criteria as a student with an orthopedic impairment under IDEA. We present a synopsis of these two options for an IEP Committee to consider.

OPTION 1

A student suspected of having an orthopedic impairment, is eligible and in need of special education instruction and services if the pupil meets the criterion in item A and one of the criteria in item B.

A. There must be documentation of a medically diagnosed physical impairment.

B. The pupil's:

(1) need for special education instruction and service is supported by a lack of functional level in organizational or independent work skills as verified by a minimum of two or more documented, systematic observations in daily routine settings, one of which is completed by a physical and health disabilities teacher; or

(2) need for special education instruction and service is supported by an inability to manage or complete motoric portions of classroom tasks within time constraints as verified by a minimum of two or more documented systematic observations in daily routine settings, one of which is completed by a physical and health disabilities teacher; or

(3) physical impairment interferes with educational performance as shown by an achievement deficit of 1.0 standard deviation or more below the mean on an individually administered, nationally normed standardized evaluation of the pupil's academic achievement.

OPTION 2

One condition from each criterion below must be judged to have been met in order to be eligible for the category “Orthopedic Impairment.”

A. Physical Criteria for Eligibility

The student has a diagnosis from a medical doctor of one or more of the following orthopedic conditions which is temporary or permanent in nature and may require adaptations in the physical plant:

1. Impairments caused by congenital anomaly, e.g. clubfoot, absence of some member, etc., or
2. Impairments caused by disease, e.g. poliomyelitis, bone tuberculosis, etc., or
3. Impairments from other causes, e.g. cerebral palsy amputations, and fractures or burns that cause contractures.

B. Academic Criteria for Eligibility

An assessment of motor function in the educational environment (conducted by the physical and/or occupational therapist) must demonstrate the following adverse affects upon educational performance that requires specialized instruction because of:

1. a lack of meaningful and productive participation;
2. reduced efficiency in school work; and
3. inability to access educational environment despite environmental modifications.

Exclusionary Factors

An individual will not be considered eligible for services under Orthopedic Impairment if one or more of the following exist:

1. The adverse effect is from a lack of instruction in reading or math that is not related to the health impairment.

2. The adverse effect is from environmental, cultural, or economic disadvantage as a result of such factors as: Second language, limited English proficiency, other cultural values and experiences and experiential differences.
3. The adverse effect is judged to result from absenteeism (unrelated to health) or change in residence or schools.
4. The disability is more accurately described by another category of eligibility.
5. The adverse effect is primarily due to active substance abuse.

Final Thoughts

A critical educational consideration for students with orthopedic impairments is placement. Educational services for these students may be provided in a variety of settings depending on the type and severity of the condition, the services available in the community, and the medical prognosis for the condition (Hallahan & Kauffman). Educational placement options include general education classrooms, resource rooms, special classes, and other, more restrictive settings (e.g., special classrooms, special schools, residential facilities, and/or hospital and homebound programs).

Most students with orthopedic/physical impairments spend at least part of the day in general classrooms (Bowe). According to the U.S. Department of Education, approximately 46% of all school-age students who received special education services under the disability category of Orthopedic Impairment were educated in general classrooms. Twenty-three percent received resource room services. Finally, almost 1/3 received their education in a special classroom or more restrictive environment (U.S. Department of Education).

It is often necessary to modify and adapt the school environment to make it accessible, safe, and less restrictive. Accessibility guidelines are readily available, and when these guidelines are followed the environment becomes easier for the student to manage independently. Environmental modifications include adaptations to provide increased access to a task or an activity, changing the way instruction is delivered, and changing the manner in which the task is done (Best, Heller, & Bigge; Heward; Heller, Dangel, & Sweatman).

In conclusion, it is impossible to specify the content of the educational curriculum for learners with physical disabilities because there is so much variation with regard to need. Some students will need only minor modifications while others with more severe disabilities will require extensive adaptations. However, it should be emphasized that teachers will need to work closely with professionals from other disciplines to meet the needs of these learners. In most cases, educating students with physical disabilities is not so much a matter of special instruction for students with disabilities as it is of educating the nondisabled population (Closs).