

# HEARING IMPAIRMENT

## ■ Definition of Intellectual Disabilities under IDEA

Hearing impairment means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance. 34 CFR 300.8(c)(5)

### TYPES

Conductive hearing losses are caused by diseases or obstructions in the outer or middle ear (the pathways for sound to reach the inner ear). Conductive hearing losses usually affect all frequencies of hearing evenly and do not result in severe losses. A person with a conductive hearing loss usually is able to use a hearing aid well or can be helped medically or surgically.

Sensorineural hearing losses result from damage to the delicate sensory hair cells of the inner ear or the nerves that supply it. These hearing losses can range from mild to profound. They often affect the person's ability to hear certain frequencies more than others. Thus, even with amplification to increase the sound level, a person with a sensorineural hearing loss may perceive distorted sounds, sometimes making the successful use of a hearing aid impossible.

A mixed hearing loss refers to a combination of conductive and sensorineural loss and means that a problem occurs in both the outer or middle and the inner ear.

A central hearing loss results from damage or impairment to the nerves or nuclei of the central nervous system, either in the pathways to the brain or in the brain itself.

### EVALUATIONS

Full Audiological Evaluation which may include, but is not limited to;

- Auditory Brainstem Response (ABR) Test
- Otoacoustic Emissions (OAE)
- Behavioral Audiometry Evaluation

### POSSIBLE CAUSES

- Acquired, meaning that the loss occurred after birth, due to illness or injury; or
- Congenital, meaning that the hearing loss or deafness was present at birth

The most common cause of acquired hearing loss is exposure to noise (Merck Manual's Online Medical Library, 2007). Other causes can include:

- Build up of fluid behind the eardrum
- Ear infections (known as otitis media)
- Childhood diseases, such as mumps, measles, or chicken pox; and
- Head trauma

Congenital causes of hearing loss and deafness include:

- A family history of hearing loss or deafness
- Infections during pregnancy (such as rubella)
- Complications during pregnancy (such as the Rh factor, maternal diabetes, or toxicity)

### INCIDENCE

Each year in the United States, more than 12,000 babies are born with a hearing loss; often, the cause is unknown (Centers for Disease Control and Prevention, 2010). Profound deafness occurs in 4-11 per 10,000 children; in at least 50% of these cases, the cause is genetic (American Speech-Language-Hearing Association, n.d.). Through the Universal Newborn Hearing Screening program, many states now mandate that all newborns be screened for hearing loss within hours of birth (National Center for Hearing Assessment & Management).

### POSSIBLE SIGNS AND CHARACTERISTICS

- Speech is delayed/unclear
- Does not follow directions. This sometimes is mistaken for not paying attention or just ignoring, but could be the result of a partial or complete hearing loss.
- Often asks for things to be repeated
- Turns the TV volume up too high

### **TEACHING TIPS/INSTRUCTIONAL STRATEGIES**

- Provide handouts such as syllabus, lesson plans, and assignments.
- Write announcements and assignments on the board, proper names, technical vocabulary, formulas, equations, and foreign terms on the board.
- Always use captioned films/videos or provide a written manuscript.
- Help find seating near the front if requested by the student.
- Arrange for a written instead of oral test.
- Be aware of and know how to use assistive listening devices.

- Be familiar with oral, sign, and cued-speech interpreters and how to work with them in class.
- Provide copies of your class notes if a note taker is not available.
- Be familiar with computer-assisted real-time transcription (CART).
- Support the student in advocating for communication access in related academic activities such as study groups, labs, and internships.

### **THIS INFORMATION DEVELOPED FROM THE FOLLOWING RESOURCES:**

- **Pepnet**  
[www.resources.pepnet.org/files/359\\_2010\\_2\\_10\\_11\\_52\\_AM.pdf](http://www.resources.pepnet.org/files/359_2010_2_10_11_52_AM.pdf)
- **Centers for Disease Control**  
<http://www.cdc.gov/ncbddd/hearingloss/index.html>
- **American Speech Language Hearing Association**  
<http://www.asha.org/>
- **National Center for Hearing assessment and Management**  
<http://www.infanthearing.org/>