



# Sensory Impairments: Hearing Impairments/Deafness

## What is Hearing Impairments/Deafness?

The Individuals with Disabilities Education Improvement Act (IDEA, 2004), includes "hearing impairment" and "deafness" as two of the categories under which children with disabilities may be eligible for special education services and/or related services.

**"Deafness" is defined as "a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification" (K.A.R. 91-40-1(p)).**

**"Hearing impairments" are defined as "an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance, but that does not constitute deafness in this regulation" (K.A.R. 91-40-1(dd)).**

"Hard of Hearing" or "hearing loss" often are terms used interchangeably with the term "hearing impairment" depending on the audience or reader, such as preferred use in conversations with individuals who are hard of hearing with or without amplification (e.g., hearing aids, cochlear implants, etc.).

## Prevalence of Hearing Impairments/Deafness

The Center for Disease Control and Prevention (CDC) (2019) reported 14.7% of students who receive special education services have a

unilateral or bilateral hearing loss with or without correction.



## Characteristics of Hearing Impairments/Deafness

The major causes of hearing loss are categorized by the location of the loss or disorder in the auditory system. Hearing disorders often are attributed to; (a) genetic or hereditary factors, (b) infections, (c) environmental, and/or (d) physical trauma. Each cause results in one or more type of hearing loss depending on how the auditory information is transmitted through the outer, middle, and inner ear to the auditory nerve (cortex).

## Types of Hearing Loss

- **Conductive Hearing Loss:** This type of loss is the result of obstruction, absence, or damage to the outer ear or middle ear that disrupts the passage of sound to the eardrum. Some conductive hearing losses can be treated medically; however, this type of loss can affect oral language development and interpretation of environmental sounds, depending on the type and cause of temporary or permanent hearing loss.
- **Sensorineural Hearing Loss:** This type of loss is the result of obstruction or damage to the inner ear (e.g., cochlea) or auditory nerve that interrupts impulses to the auditory cortex. A sensorineural hearing loss often is permanent, and affects the interpretation of environmental sounds and/or oral language development.
- **Mixed Hearing Loss:** This type of loss is a combination of both a conductive and a

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## SENSORY IMPAIRMENTS: Deaf/Hearing Impairments

sensorineural hearing loss. Mixed hearing losses will most likely affect the interpretation of environmental sounds and oral language development.

- **Processing Disorders:** This type of disorder results in the disruption of transmitting sound between the brainstem and the auditory cortex. A processing disorder may often be referred to as a “Central Auditory Processing Loss”, because of limits to the auditory cortex ability to interpret sounds in oral language and/or learning.
- **Auditory Neuropathy:** This type of disorder is when sound is able to flow through the inner ear. The transmission of sound is from the section of the inner ear to the nerves in the auditory cortex are not received. Children may have normal hearing, inconsistencies in hearing, or hearing losses from moderate to severe.

## Intensity and Frequency of Sounds

Sound is determined by loudness or intensity (i.e., decibels, dB). Sound also is determined by the frequency of sound waves transmitted in air (i.e., hertz, Hz). Severity of a hearing loss is measured on a scale from mild to profound relating to the intensity and across the frequency of sound.

For more information, contact:

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## Resources

Kansas Special Education Process Handbook  
<http://www.ksde.org/Default.aspx?tabid=598>

KSDE Eligibility Indicators  
<https://www.ksde.org/Portals/0/SES/misc/iep/EligibilityIndicators.pdf>

Kansas Technical Assistance System Network (TASN)  
<https://ksdetasn.org/>

Kansas Commission for the Deaf and Hard of Hearing (KCDHH)  
<http://www.dcf.ks.gov/services/rs/pages/kcdhh.aspx>

Kansas School for the Deaf  
<http://www.ksdeaf.org>

Alexander Graham Bell Association for the Deaf, Inc.  
<http://www.agbell.org>

American Speech-Language Hearing Association  
<http://www.asha.org/>

Language Equality and Acquisition for Deaf-Kids in Kansas (LEAD-K)  
<https://www.deafkansas.org/lead-k>

National Institute on Deafness and Other Communication Disorders Clearinghouse  
<https://www.nidcd.nih.gov/>

Sound Beginnings  
<http://www.soundbeginnings.org/>