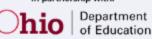


MedEd Connections Resource Guide

Deaf or Hard of Hearing





The purpose of this guide is to help families build their understanding and connect important medical and educational information to make more informed decisions, so that their children who are deaf or hard of hearing (D/HH) can grow and live their best lives. This guide is designed to support families and their children of all ages in Ohio.

Why Is This Information Important?

The information provided in this guide is important because clear and unbiased information about educational and medical options can empower families to make their own decisions and gather greater benefit from the systems designed to serve them. Being aware of multiple choices and perspectives is important. Options available may differ based on where you work or live, the unique needs of your child, and many other factors.

This booklet is a shortened version of an extended online resource. To see the full MedEd Connections Resource Guide: Deaf/Hard of Hearing, please visit our website: https://deafandblindoutreach.org/meded-connections-dhh.

If you have any questions about this MedEd Connections Resource Guide, or you would like further assistance, please contact the Outreach Center for Deafness and Blindness at OCALI:

Email: outreach_info@ocali.org

Phone: (614) 401-2969

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Steps from Screening to Service

Deaf/Hard of Hearing Birth to Age Three

Steps	Who	What	State Agency	Parts of the State Agency/ System
Step 1: Newborn Hearing Screening	Audiologist, hospital nurse, speech language pathologist (SLP), any trained allied medical professional	Infant Hearing Program: Performs required hearing screening for newborns before discharge. A second screening is performed prior to referring for audiological evaluation.	Ohio Department of Health (ODH)	Hospital
Step 2: Follow Up Audiological Evaluation	Audiologist	For newborns who did not pass the second screening, an audiologist performs diagnostic audiological evaluation, to identify whether a hearing loss or deafness is present.	Ohio Department of Health (ODH)	Hospital, clinic, children's hospital, or audiology diagnostic site
Step 3: After Identification	Audiologist, physician, family, or early intervention provider	Early intervention (El) receives referral, the Individualized Family Service Plan (IFSP) team determines eligibility and assesses the need for El services to support functional outcomes based on the family's priorities. Evaluates and plans any needed supports/services for child's physical, cognitive, social and emotional development.	Department of Developmental Disabilities (DODD)	Early Intervention service providers
Step 4: After Early Intervention	Individualized Family Service Plan (IFSP) team, and school personnel	Individualized Family Service Plan (IFSP) team supports child's transition into school.	Department of Developmental Disabilities (DODD) and Ohio Department of Education (ODE)	Early Intervention service providers, and local school district

Deaf/Hard of Hearing School Age (3-21)

Steps	Who	What	State Agency	Parts of the State Agency/ System
Step 1: Screening	Audiologist, school nurse, hospital nurse, or speech language pathologist (SLP)	Performs required school age screening, as mandated by Ohio state law	Ohio Department of Health (ODH) and Ohio Department of Education (ODE)	Local school district, hospital, clinic, or doctor's office
Step 2: After Screening, If Did Not Pass	Audiologist, school nurse, hospital nurse, or speech language pathologist (SLP)	For children who did not pass the school age screening, the performer of the screening sends a referral to the family, requesting further testing to be done by an audiologist.	Ohio Department of Health (ODH) and Ohio Department of Education (ODE)	Local school district, hospital, clinic, or doctor's office
Step 3: Follow Up Audiological Evaluation	Audiologist	An audiologist performs a diagnostic audiological evaluation to identify whether deafness or hearing loss is present.	Ohio Department of Health (ODH)	Hospital, doctor's office, or audiology diagnostic site
Step 4: Determining Eligibility and Services	School team	Once a request for an evaluation from a family member or school personnel is received, the school team conducts a comprehensive evaluation to determine the strengths and needs of the child. The team creates an Evaluation Team Report (ETR) and determines if specially designed instruction is needed. The ETR is reviewed at least one time every three years for children who are eligible for special education services.	Ohio Department of Education (ODE)	Local school district
Step 5: IEP Development	Individualized Education Program (IEP) team	If the ETR team (see above) determined that the child needs specially designed instruction, the IEP team will create an Individualized Education Program. The IEP includes any necessary services, accommodations, modifications, and supports needed to access the curriculum. At age 14, as transition planning begins, students can be referred to OOD for services and those services incorporated into the IEP. The IEP is reviewed and revised at annually.	Ohio Department of Education (ODE) and Opportunities for Ohioans with Disabilities (OOD)	Local school district services and those services incorporated into the IEP. The IEP is reviewed and revised at annually.
Step 6: Transition into Adulthood	Individualized Education Program (IEP) team (including the student), community service providers, state and community agencies	Create student centered plan for transition into adulthood including employment, further education (such as college, or trade school), and independent living skills. At age 14, as transition planning begins, students can be referred to OOD for services and those services incorporated into the IEP.	Opportunities for Ohioans with Disabilities (OOD), Ohio Department of Developmental Disabilities (DODD), and Ohio Department of Education (ODE)	Local school district with support from Vocational Rehabilitation (VR), and Ohio Department of Developmental Disabilities (DODD)

Terms and Definitions

Audiologist: A licensed health care professional who identifies and treats auditory (hearing) and balance conditions. They are trained to maintain and fit hearing assistive technology (HAT). They may also conduct listening rehabilitation therapy.

Early Intervention (EI): Early Intervention known as EI, is a statewide system that provides coordinated services to eligible children below the age three with developmental delays or disabilities and their families. The federal Individuals with Disabilities Education Act (IDEA) establishes EI programs in all 50 states. In Ohio, the Department of Developmental Disabilities (DODD) serves as the lead agency for the EI program. EI services are typically provided in the child's home or other community settings.

Evaluation Team Report (ETR): The report created after a comprehensive evaluation has been completed by school personnel. It documents the current performance of the student, as well as strengths and needs of the student. The results in this document are used for special education eligibility determination and help to plan an Individualized Education Program (IEP), if necessary.

Hearing Screening: A quick hearing test designed to identify whether a person is at risk for hearing loss and needs a further, more in-depth examination by an audiologist. State law requires that children at certain grade levels are screened.

Individualized Education Program (IEP): A team-developed written program that identifies therapeutic and educational goals and objectives needed to appropriately address the educational needs of a student with a disability, qualifying for special education services, ages 3 through 21 years.

Individuals with Disabilities Education Act (IDEA): A federal law that details the educational rights and requirements applicable to students with disabilities.

Individualized Family Service Plan (IFSP): The IFSP is a written plan for providing Early Intervention (EI) services to an infant or toddler with a disability and to the child's family in EI.

Newborn Hearing Screening: An automatic hearing screening performed at the hospital after the baby's birth. The hearing screening shows risk for hearing loss or deafness. The baby may have one or two hearing screenings. If the baby does not pass the second hearing screening, a referral is made for a more detailed test with an audiologist.

Ohio Department of Developmental Disabilities (DODD): A state agency that offers support across the lifespan to people with developmental disabilities and oversees a statewide system of supportive services that focus on ensuring health and safety, supporting access to community participation, and increasing opportunities for meaningful employment. In Ohio, DODD serves as the lead agency under the Individuals with Disabilities Education Act (IDEA) for the state's Early Intervention Program.

Ohio Department of Education (ODE): A state agency that is responsible for the education of students in Ohio.

Ohio Department of Health (ODH): A state agency that oversees the Infant Hearing Program and the School Age Hearing Program. This program includes newborn hearing screening and diagnostic audiology follow up for babies and children birth to three.

Opportunities for Ohioans with Disabilities (OOD): A state agency that partners with Ohioans with disabilities to achieve quality employment and independence.

Speech-Language Pathologist (SLP): A professional who works to prevent, assess, diagnose, and treat speech, language, social communication, cognitive-communication, and swallowing disorders in children and adults.

Transition: The time between two phases. This term is used in various situations. Early transition refers to the time when students are moving from home or early intervention services into the school system at age three for early childhood services. The secondary transition is the time when a school age student moves from school to post school activities. The secondary transition consists of a coordinated set of activities that may address, among others, the assessment, planning process, educational, and community experiences for youth with disabilities as they turn age 14. It is also, the period of time when a student exits the K-12 education system and is no longer eligible for school-based services. The student enters the "real world" where he may qualify for adult services.

After the Hearing Screening

If My Child Does Not Pass a Hearing Screening, What Happens Next?

If your child does not pass a hearing screening either in the hospital or at school, you will be referred to a pediatric audiologist. A pediatric audiologist is a professional who diagnoses and treats hearing and balance problems in children. The audiologist will perform a diagnostic evaluation, which will determine whether your child has hearing loss and why. The audiologist will explain the results of the evaluation in an audiogram. You can request these results at any time. These results will be needed for your child to receive services inside and outside of school.

If your child has been identified with a hearing loss, the audiologist will make a diagnosis and identify the cause of hearing loss. The audiologist will also provide you with information about communication, language, treatment options, and next steps. All of these are discussed throughout this guide.

Hearing screenings are completed at an early age because it is important for your child and your family to begin planning for language and communication access as soon as possible when a child has a hearing loss. This is especially critical for young children. The typical time period for speech, language, and communication development is between birth and three years of age. The earlier a child's hearing loss is identified or found, the earlier a child can begin developing communication skills.

Hearing screenings don't catch everything, so if you suspect your child has hearing loss, trust your intuition and follow up with your family doctor.

Here are some milestones to look for in the first year of life:

- Most newborn infants startle or "jump" to sudden loud noises.
- By 3 months, a baby usually recognizes a parent's voice and may smile or show some form of recognition.
- By 6 months, a baby can usually turn his or her eyes or head toward a sound.
- By 12 months, a baby can usually imitate some sounds and produce a few words, such as "mama," or "bye-bye."

If you feel as though your child is missing milestones, contact your child's pediatrician and consider contacting Ohio Early Intervention.

Ohio's Early Intervention

Website: https://ohioearlyintervention.org

Phone: (800) 755-4769

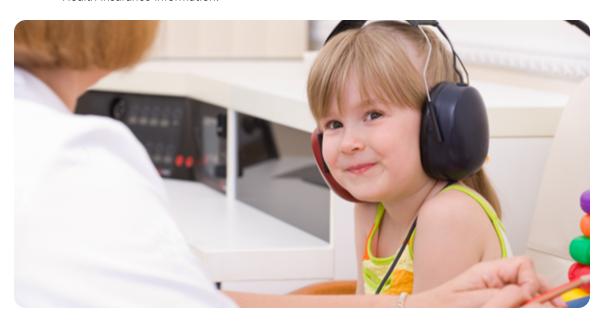
Preparing for Your Doctor Visit

How Can I Prepare for My Child's Doctor Appointments?

When you have a child with a hearing loss, you may be interacting with a variety of medical and educational professionals. Keeping all the information straight can become an overwhelming task. We have a solution! We suggest creating a Medical Care Binder or Notebook. By creating a medical care notebook or binder, you can prepare for office visits, take notes during an appointment, and organize information or reports provided to you by educators or medical professionals all in one location.

Some of the elements that you may want to include in a medical care notebook or binder could be:

- A list of questions for the doctor;
- Written observations of your child's hearing abilities, challenges, and habits to share with the doctor;
- Notes taken during the appointment. It may help you remember suggested treatments and the pros and cons and remember the names of recommended specialists;
- Contact information for all the doctors and professionals you visit;
- A section detailing your child's medical history, including audiogram, specific dates, medications, and surgical procedures;
- Any hospital discharge paperwork;
- Release forms to provide permission to share information between the school and medical professionals;
- Documents pertaining to early intervention (EI) and your child's individualized family service plan (IFSP), if your child is receiving services;
- Documents detailing your child's individualized education program (IEP) if your child is receiving special education services, or 504 Plan if they receive special accommodations; and
- Health insurance information.



Language

Why Is Language So Important for My Child Who Is Deaf/Hard of Hearing?

Language is a complex system of symbols, vocabulary, structure, and grammar. Early language develops naturally in the brain between birth and age five, after which, this language learning window begins to close. Language learning becomes an uphill effort the more time passes, and as such, communicating with others becomes more challenging as this language learning window closes. Therefore, it is really important for children who are deaf/hard of hearing (D/HH) to be frequently and consistently exposed to a rich and stimulating language environment as early as possible. When the chosen language is accessible, children who are D/HH can acquire language without delays and develop a strong language foundation. Children will show their strong language foundation through the use of their preferred communication mode, whether it be visually through sign language, listening to spoken English, or both. In summary, children who are D/HH have unique challenges accessing incidental learning through hearing alone. When the language is accessible, regardless of hearing status, then learning how to communicate can occur.

How Do We Determine What My Child Needs to Develop Strong Language Skills?

A language assessment performed by a speech language pathologist (SLP) and/or an American Sign Language (ASL) specialist is advised. For your school-aged child, these professionals can be accessed through your local school district. If your child is younger than school age, your doctor or audiologist can usually refer you to one of these professionals.

A language assessment will provide important information about your child that will help in deciding on the most effective communication option(s) and design a plan for further language development. You may want to request a language assessment routinely so that your child's progress can be monitored and supported throughout the entire language learning process.

The Outreach Center for Deafness and Blindness at OCALI has a resource that walks a school team through considerations for communication supports, but it also provides some good steps that provide information on language options. The resource is the Communication Planning Guide for Students Who Are Deaf or Hard of Hearing and can be found at: https://deafandblindoutreach.org under the Resources tab: Guidance Documents. Section 1 of this Guide might prove helpful.

Language options include:

- American Sign Language (ASL)
- English
- Bilingual (ASL and English)

There are many options for communication that are available for your child. Getting the most information about each option and your child's ability and learning style will help you decide on the best option for you and your child. It is ok to try different options, switch options, or use multiple options.

How Can My Family and I Build a Language Foundation for My Child?

Building a language foundation begins with connecting with your child and identifying their best possible way of accessing language. The Outreach Center at OCALI can assist you in finding professionals in your area or provide resources to learn about language and communication modes. Additionally, Deaf Service Centers in Ohio, audiologists, speech language pathologists (SLP), and teachers of the deaf (TOD) may be able to connect you to other resources to help build your family's skills in the chosen language and communication modes. Your audiologist and SLP can provide the specific diagnostic information related to

how your child accesses language.

You can find resources for learning language and communication options through the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-building-a-language-foundation).



Communication

What Are the Communication Modes Available to My Family?

Families have the opportunity to consider and choose a variety of communication modes. Communication mode and language are not the same, although they are two sides of the same coin. Communication mode refers to the means by which language is accessed and conveyed and include spoken language, American Sign Language (ASL), fingerspelling, gesturing, picture symbols, and a host of other options. There is no right or wrong choice of communication mode. Communication is uniquely and intensely personal. Families and the child may change their mode of communication choices as they grow. Families may also choose to combine communication modes. For example, a child might watch an ASL interpreter to have access to spoken English, and then reply with spoken English, or sign language depending on the setting. People may choose to use a different communication mode depending on the situation.

There are three categories of communication modes, manual, spoken, and a combination of both. Manual means that hands, facial expressions, and gestures are used to communicate. Spoken means that listening (typically through hearing assistive technology or HAT) and speaking is used to communicate. Here are some options:

- Manual: American Sign Language (ASL), Pidgin Signed English (PSE), Signing Exact English (SEE)
- Spoken: Cued Speech, Lip Reading, Spoken English, Auditory Listening
- Combination: Total Communication, Cued Speech

You can learn more about communication modes through the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-communication).

When choosing a communication mode, it is important to consider the social, medical, and educational aspects of your child as well as their cognitive ability. Cognitive ability allows for knowing what the child is capable of achieving. This is a place where the connection of medical and educational information will aid in the decision-making process. For example, your child's audiologist can share information about how your child accesses sound and your child's teacher can share how your child is communicating either directly or indirectly with their peers in a social setting. When medical and educational professionals share this kind of information, they are better able to provide the best care in the medical setting and the most effective instructional practices in the classroom.

Early Intervention

What Is Early Intervention, and How Can It Help My Child?

Ohio's Early Intervention (EI) services support the physical, cognitive, social, and emotional development of children with disabilities from birth to age three. Birth to age three is a window in which your child's brain is growing a foundation for future life skills and learning. Children who are deaf/hard of hearing (D/HH) may need additional support to develop these foundations.

Anyone can contact El for a referral, including parents, providers, and pediatricians.

Ohio's Early Intervention

Website: https://ohioearlyintervention.org

Phone: (800) 755-4769

Or visit the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-dhh-early-intervention) for Early Intervention Contacts by County.



Special Education and Specially Designed Instruction

What Exactly Is Special Education and Specially Designed Instruction?

Special education refers to supports and services provided in the least restrictive environment (LRE) to students who need specialized supports and services to access their education. Special education provides access and supports engagement with education and school experiences.

If your school-aged child is eligible for special education, then your child will receive an individualized education program (IEP). An IEP is a legal document that outlines what educational services and supports your child will receive. Updated annually, IEPs include:

- A statement of present levels of academic achievement and functional performance,
- Measurable annual academic and functional goals,
- Special education and related services, and
- Accommodations and modifications necessary to measure a student's true academic achievement and functional performance.

The IEP team is comprised of family members and school personnel providing services to meet your child's educational needs. This includes a school district representative who has the power to commit resources for the student, a general educator working with your child, intervention specialist, a school psychologist, and a parent or guardian. Depending on your child's needs, the IEP team may include other professionals or an agency representative. Regardless of your child's hearing status, a teacher of the deaf (TOD), or educational audiologist will be significantly beneficial to your child as a student.

You may invite anyone to your child's IEP meetings, including a fellow family member, a trusted friend, or an additional professional. You may find it helpful to ask a friend or family member to come to meetings for the purpose of note-taking.

IEP teams are critical personnel with whom to share relevant medical information, such as audiological information, which can impact the planning process and ultimately lead to a more thorough and detailed education plan that sets your child up for success.

If your child does not qualify for special education services, he or she may qualify for a 504 Plan, which falls under Section 504 of the Federal Rehabilitation Act. A 504 Plan is considered a general education plan for access rather than a special education service. Such plans are typically for students who do not need specialized instruction but benefit from accommodations or have accessibility needs.

What Does Least Restrictive Environment or LRE Mean?

Least restrictive environment (LRE) is a term used in special education associated with where services and supports are delivered. Simply defined, it means the environment that is most like the typical school environment – where same-aged peers might receive instruction. It can be thought of specialized supports and services that go with the student to make an educational setting accessible. For students to qualify for special education, they need specialized supports and services, and these are different for every student. Some examples may include technology, and special service providers such as an interpreter, paraprofessional, or a speech and language pathologist (SLP). Special service providers may support students inside or outside of the classroom. Your child's LRE is constructed by identifying your child's needs and then deciding what supports can address those needs.

LRE needs may change as your child grows. Be sure that your team has the relevant medical information that could impact how your child accesses educational materials and environments.

How Do My Child's Communication Abilities Fit into LRE Decision Making?

It is very important that the communication needs of your child who is deaf or hard of hearing (D/HH) are considered as part of the least restrictive environment (LRE) conversation. Your child will have access to the primary language and communication mode that your child is most skilled and comfortable using so your child can more easily focus on learning rather than an unfamiliar language or communication mode. The Communication Planning Guide for Students Who Are Deaf or Hard of Hearing mentioned previously, is designed to assist with this planning process. It can be found at: https://deafandblindoutreach.org under the Resources tab: Guidance Documents. Visit the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-dhh-decision-making) for more information about:

- Where your child can be educated;
- Supplemental aids and supports;
- Service delivery options; and
- Letter template for requesting a special education evaluation.

How Can I Request Special Education Services for My Child?

If you believe your child needs special education services you can make a written or verbal request to the school principal (preferred), special education coordinator, or school psychologist for your child to be evaluated for special education services. We suggest that you make this request through email, so that both you and the school have a record of the evaluation request. There are letter templates and models for this purpose which can be found through the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh). Once your request is received (usually acknowledged by an email reply or a phone call back to you) you will receive a request to come in to the school for a meeting within 10 business days. This meeting is for you to share your concerns with the team of professionals at the school, and together determine if more information and evaluation are necessary to better understand your child's needs.

How Could My Child Become Eligible for Special Education Services?

There is a very prescribed process for your child to be evaluated for eligibility for special education services. The Individuals with Disabilities Education Improvement Act (IDEA 2004) governs the rules for special education and each state interprets those rules and develops processes and procedures. In Ohio, a team evaluates students for special education eligibility. This group of professionals, along with you as a parent, contribute information to help best describe your child's strengths and challenges and help determine if your child needs specialized instruction and supports and services to access and engage in education.

The evaluation is a process that brings together lots of data about your child to determine eligibility for special education services. The team considers a variety of assessment data and gathers relevant functional, developmental, and academic information about the child, including information provided by the parent. The purpose for this evaluation is to determine eligibility for services and to inform educational planning and instruction.

For your child to qualify for special education services in the category of deafness or hearing impairment, the evaluation will have to indicate that your child is deaf or hard of hearing (D/HH) with strong evidence that your child's hearing condition negatively impacts their access to education. This data and documentation might include:

- a medical diagnosis;
- the results of medical, audiological, and/or speech and language testing;
- documents from early intervention services;
- school assignments; and
- correspondence with your child's teacher documenting the strategies used to address learning challenges.

When school personnel perform the evaluation for your child, results are documented in an Evaluation Team Report (ETR), which will indicate if a student is or is not eligible for special education and related services. The ETR is very important; it contains the information used to determine your child's needs and services, including strengths and areas of challenge. Once eligibility is determined, the development of the special education program can begin. The ETR is reviewed at least once every three years for those who are eligible.

What Are Accommodations and Modifications?

Aspects of the individualized education program (IEP) include specialized instruction, accommodations, and modifications. Accommodations and modifications are not the same, although some people use the terms interchangeably. Accommodations are changes and supports provided to enable access to the same school work and education as other students. A modification means the school work or education for a given student is different from what the other students in the class are doing. Accommodations and adaptations are the same thing. Some examples of accommodations include the following:

- Captioning or subtitles on class videos or clips;
- A copy of information that will be displayed on overhead, whiteboard, or chalk board;
- An assigned note taker (students who are D/HH may have to look at interpreters or written content, which means it can be challenging to split focus for notes);
- Strategic seating to allow your child to sit where they are best able to hear and/or see the teacher, classmates and/or interpreter, moving seats depending on the lesson or activity;
- Extended time on testing or assignments;
- Assistive technology (such as an FM system); and
- An assigned educational interpreter.

Please note: Each individual student is different and may require more or less accommodations or modifications than listed above.

Want To Talk To Someone About the Special Education Process?

Ohio's Coalition for the Education of Children with Disabilities

Phone: (740) 382-5452

Ohio Department of Education, Office for Exceptional Children

Phone: (614) 466-2650

Visit the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-dhh-accommodations-and-modifications) for more information about Special Education and Specially Designed Instruction.

Transition

How Can I Support My Child's Transition into Adulthood?

When your child turns 14, the individualized education program (IEP) team increases planning with a focus on preparing for his or her transition into adult life. At age 14, your child will start to receive official invitations to join the IEP meetings. However, your child is welcome to attend their IEP meetings at any age. Your school team may want to perform an Age Appropriate Transition Assessment (AATA) before age 14 so that your child's current needs for adult skill development can be identified and addressed. As transition planning begins, students can be referred to Opportunities for Ohioans with Disabilities (OOD) for services. Transition meetings are good opportunities for your child to start earnestly thinking about and planning for his or her future.

The transition planning process opens lots of opportunities for your child to practice independence. This is a great time for your child to start working on using his or her own voice and assertiveness for self-advocacy. It is also a time to practice independence across his/her entire day. For example, they could complete some of the following tasks:

- Charging and keeping track of assistive technology (AT) devices;
- Getting up independently for school;
- Making and managing doctor appointments; and
- Speaking directly to doctors and teachers about any challenges and needs he or she may have.

Visit the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh) for more resources including:

- Supporting your child's independence medical and health wise;
- National Deaf Center for Post-Secondary Outcomes;
- Outreach Center and OCALI transition resources: and
- Supporting your Teen who is D/HH with Self-Identity as a developing adult.

Want To Talk To Someone About Transition?

OCALI's Lifespan Transition Center

Phone: (614) 410-0993



Assistive Technology and Communication Technology

Assistive Technology

What Is Hearing Assistive Technology (HAT) and What HAT Support Is Available for My Child?

Technology may be beneficial for your child who is deaf or hard of hearing (D/HH). Hearing assistive technology, also referred to as HAT, helps people who are D/HH hear in loud or busy places. This includes amplification devices, telecommunication technology, independent living technology, and much more. Your child's school team can help determine which HAT supports are appropriate for your child. The educational audiologist at your school, your teacher of the deaf (TOD), or your speech language pathologist (SLP) can help you better understand the specific supports available to your child.

What Hearing Aids Are Available?

Hearing aids help carry and amplify sound. Most now are digital, and battery operated. They are made in several styles. The most common hearing aids for children are behind the ear (BTE) because they are more durable and will last for four to five years, with only the earmold needing to be changed due to the child's growth.

How Can FM/DM Systems Help My Child Hear in Noisy Settings?

Frequency Modulation/Digital Modulation (FM/DM) systems are wireless hearing assistive technology devices (HAT) which help children hear speech more clearly in challenging listening situations. FM/DM systems have a receiver, which is attached to your child's personal HAT through a "boot". The person your child wants to hear will wear a transmitter with a microphone and the speaker's voice will be channeled directly to your child's hearing aid and/or cochlear implant.

The FM/DM system eliminates the loss of intensity due to distance from the speaker and reduces the effects of background noise and reverberation. The FM/DM can help your child understand speech in noisy settings such as a classroom, a gym, at assemblies, or during sports. There are a variety of other HAT options, such as sound field systems, infrared systems and induction loop systems, which are used primarily for larger groups, whereas a personal FM/DM system connects directly to your child's personal hearing aids and/or cochlear implant processors. An audiologist will fit and maintain FM systems and other hearing assistive technology.

Communication Technology

What Are Hearing Implants?

There are two types of surgical implants that can be used for hearing loss. A cochlear implant is (CI) an electronic device that bypasses damaged or nonworking parts of the inner ear (cochlea), and directly stimulates the hearing (auditory) nerve. An auditory brainstem implant provides hearing to people with hearing loss who can't benefit from a hearing aid or cochlear implant.

An implant has two parts, an internal piece and an external piece. The internal piece of a cochlear implant includes two parts, the receiver/stimulator, and the intracochlear electrode array. The internal piece is surgically implanted by an otolaryngologist (ENT). The visible external part of the implant is called a sound processor, and it activates the internal components. An audiologist programs the sound processor to stimulate the internal receiver and electrode arrays.

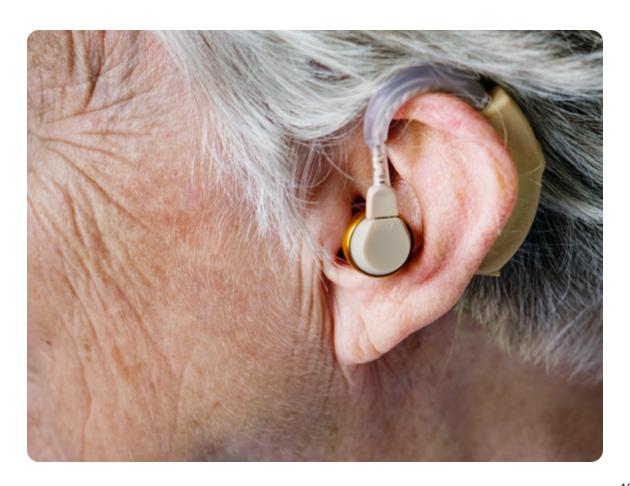
People with typical hearing receive the benefits of hearing acoustically. Hearing with a cochlear implant occurs through electrical stimulation. Newer implants may preserve some of the acoustic hearing. When

that is the case, some people can use a hybrid cochlear implant to hear through combined electro-acoustic stimulation (EAS). Candidates for EAS devices typically have residual hearing in the low frequency ranges.

Children using cochlear implant processors participate in extensive listening and auditory verbal therapy (AVT). The brain needs training to understand the new electrical input. An audiologist, speech language pathologist (SLP), or teacher of the deaf (TOD) may be a certified Listening and Spoken Language Specialist (LSLS), which would make them a qualified auditory verbal therapist. AVT is designed to build good listening skills and acquire spoken language. This is particularly important for children with implants and hearing aids. Some professionals have additional oral listening training yet are not fully certified AVT specialists. You may want to ask your child's professionals about their training or experience with AVT or working with children who are deaf/hard of hearing (D/HH).

Visit the online version of this MedEd Connections Resource Guide (https://deafandblindoutreach.org/meded-connections-dhh/meded-dhh-what-to-expect-new-aid-implant) for more information/resources, including:

- Supporting your child's listening skills through HAT
- Tips to help your child feel more comfortable wearing HAT.



Success Stories

People who are deaf/hard of hearing (D/HH) may do things differently, but different can still be effective. With support from family, the community, and educators, people who are D/HH can live quality lives.

Here are two success stories from people who are D/HH.

Carrie Spangler

My name is Carrie Spangler. I was born with a mild sloping to profound hearing loss in both ears. Universal Newborn Hearing Screening (UNHS) was not available at this time resulting in a late diagnosis at 4 years of age. I was fit with my first pair of hearing aids at the age of 4 1/2 and I was sent on my way to navigate the hearing world. I was enrolled in special education services (minimal support) and attended my neighborhood school.

My parents are my greatest supporters and never let my hearing loss define me, it was just a part of me! They did not let hearing loss be an excuse for anything that I wanted to accomplish, we (my village) just knew to navigate a little differently.

Having support and high expectations propelled me to attend college and later obtain my doctorate degree in Audiology. Today, I feel fortunate to be able to support school age children who have hearing challenges achieve their greatest potential! The sky is the limit!

Julie Stewart

My family, including grandparents, aunts, uncles, cousins and neighbors and I created an all-inclusive environment using signed and spoken languages so I was always part of the family gatherings and social events with my peers. My family had high expectations of me, expecting me to achieve anything I want in life. Those opportunities helped me develop a sense of who I am, and I completed a Master's degree in Education.







