Pre-vaccination Checklist for **COVID-19 Vaccines**

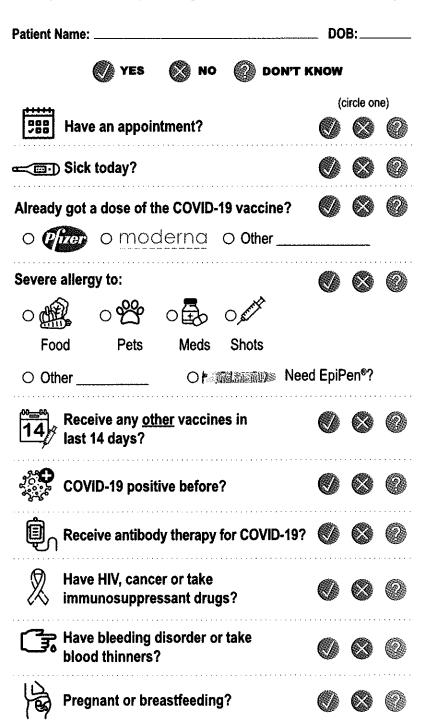


I AM DEAF OR HARD OF HEARING

I am using this card to communicate.

I may need a certified sign language interpreter or captioning to communicate.





Source: Centers for Disease Control and Prevention









The following tips and resources allow individuals with hearing loss the same accessibility to COVID-19 information and important messaging as people with average hearing. Please take into consideration when serving this population.

Tips for Talking to Deaf and Hard of Hearing

- 1. Speak slowly
- 2. Reduce noise
- 3. Ask how patient prefers to communicate Verbal, manual (ASL), written, etc
- 4. Make sure hearing aid/cochlear implant wearers are using them
- 5. Take turns while speaking to Deaf or Hard of Hearing person
- 6. Do not shout, over-emphasize, or exaggerate your words
- 7. Do not speak to the Deaf Person while walking
- 8. Rephrase remarks if not understood

Apps available

Hearing Aid users may have the ability to make adjustments on their phone or may have access to turning their phone into a personal microphone

Utilize a speech to text application

Google Transcribe,

Google translate

Otter Captioning

WebCaptioner

Ava

Google Live Transcribe

For people who need sign language interpreters via video relay

ASL INTERPRETER

Sorenson Wavello-

https://youtu.be/bK0HDs0NS14

Convo

https://youtu.be/1LKfN6cxtD4

BEST SITES AND APPS FOR LEARNING SIGN LANGUAGE

1. SIGNLANGUAGE101.COM

(WWW.SIGNLANGUAGE101.COM)

SIGNLAGUAGE101.COM IS THE FIRST SIGN LANGUAGE TEACHING WEBSITE WE WOULD RECOMMEND. DR. BYRON BRIDGES TEACHES SIGN LANGUAGES WITH AWESOME VIDEO TUTORIALS. YOU CAN LEARN EVERYTHING FROM THE ASL ALPHABET, TO EVERYDAY WORDS AND PHRASES, TO SIGNS ABOUT SPORTS AND GAMES — AND MORE. THE SITE IS COMPLETELY FREE TO USE, BUT THEY DO ACCEPT DONATIONS IF YOU'D LIKE TO CONTRIBUTE.

2. STARTASL.COM

(WWW.STARTASL.COM)

SECOND IS STARTASL.COM. THIS SITE ALSO OFFERS COURSES TO LEARN SIGN LANGUAGE FREE ONLINE. THERE ARE OVER 40 FREE LESSONS AVAILABLE, AS WELL AS WORKBOOKS TO TRACK YOUR LEARNING. THEY MAKE IT EASY TO LEARN THE BASICS OF SIGN LANGUAGE COMMUNICATION AT HOME. IF YOU WANT TO ADVANCE YOUR LEARNING EVEN FURTHER, THEY ALSO OFFER ADVANCED CLASSES AT THREE DIFFERENT LEVELS IF YOU'RE WILLING TO PAY FOR THEM. THE BRONZE COURSE IS \$9.95 PER MONTH, SILVER FOR \$19.95 PER MONTH, OR GOLD FOR \$49.95 PER MONTH.

3. MARLEE SIGNS

NEXT UP WE HAVE MARLEE SIGNS, WHICH IS A GREAT APP TO LEARN AMERICAN SIGN LANGUAGE FOR FREE. THIS APP ALLOWS YOU TO LEARN SIGN LANGUAGE AND FINGER SPELLING FROM DEAF ACTRESS MARLEE MATLIN. THE APP IS FREE TO DOWNLOAD AND USE, BUT ALSO OFFERS ADDITIONAL LESSONS FOR \$1.99 EACH. DOWNLOAD THE APP FOR FREE FOR YOUR IOS DEVICE (IPHONE/IPAD). UNFORTUNATELY THE APP IS NOT CURRENTLY AVAILABLE FOR ANDROID DEVICES.

4. LESSONTUTOR.COM

(WWW.LESSONTUTOR.COM)

ANOTHER AWESOME WEBSITE TO LEARN ASL IS LESSONTUTOR.COM. ON THEIR WEBSITE, YOU CAN FIND AWESOME EDUCATIONAL TOOLS LIKE LESSON PLANS, WORKSHEETS, AND MORE. THEY OFFER LESSONS ON A VARIETY OF SUBJECTS, INCLUDING AN ASL SERIES. THEY HAVE OVER 30 FREE SIGN LANGUAGE LESSONS, AS WELL AS ARTICLES ON BODY LANGUAGE AND SIGN LANGUAGE CULTURE. YOU CAN EVEN FIND SIMPLE SIGN LANGUAGE TOOLS TO USE FOR CHILDREN AND BABIES

DEAF ADVOCACY GROUP

5. EXPERT VILLAGE

(WWW.YOUTUBE.COM/EXPERTVILLAGE)

EXPERT VILLAGE IS A YOUTUBE CHANNEL WITH TONS OF HELPFUL TUTORIAL VIDEOS ON EVERYTHING FROM PHOTOGRAPHY TO NATUROPATHIC MEDICINE. THEY ALSO HAVE PLAYLISTS OF SIGN LANGUAGE LESSON VIDEOS AVAILABLE ON THEIR CHANNEL TO LEARN FOR FREE. LEARN THE BASICS, COMMON PHRASES, AND MORE TO HELP YOU EXPRESS YOURSELF WITH SIGN LANGUAGE.

6. ASLPRO.COM

(WWW.ASLPRO.COM)

ANOTHER RESOURCE TO LEARN SIGN LANGUAGE IS ASLPRO.COM. THE WEBSITE IS PRETTY BASIC LOOKING, BUT IT DOES HAVE LOTS OF GREAT INFORMATION, SIGN LANGUAGE DICTIONARIES, QUIZZES, AND EDUCATIONAL GAMES. THEY ALSO HAVE SECTIONS ON ASL FOR BABIES, RELIGIOUS SIGNS, AND SINGING. THE SITE IS FREE TO USE, BUT ACCEPTS DONATIONS FROM USERS WHO WANT TO HELP FINANCIALLY SUPPORT THEIR SITE AND SERVICES.

7. LIFEPRINT.COM

(WWW.LIFEPRINT.COM)

LIFEPRINT.COM IS THE HOST OF THE ASLU (AMERICAN SIGN LANGUAGE UNIVERSITY) AND OFFERS TONS OF LESSONS ON SIGN LANGUAGE FINGERSPELLING, WORDS, AND PHRASES. YOU CAN USE THE WEBSITE TO LEARN SIGN LANGUAGE FOR FREE, OR CHECK OUT THEIR PAID COURSES IF YOU WANT MORE ADVANCED LEARNING WITH A STRUCTURED COURSE – WITH ATTENDANCE AND A SET SCHEDULE.

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8. SCHOOLOFSIGNLANGUAGE.COM

(WWW.SCHOOLOFSIGNLANGUAGE.COM)

NEXT WE HAVE SCHOOLOFSIGNLANGUAGE.COM. THIS SITE TEACHES BSL (BRITISH SIGN LANGUAGE) SO IT'S A LITTLE DIFFERENT THAN THE OTHER WEBSITES AND APPS WE HAVE MENTIONED SO FAR. ON THEIR WEBSITE, YOU CAN FIND VIDEOS EXPLAINING HOW THE BSL ALPHABET WORKS, HOW TO COMMUNICATE WITH SOMEONE WHO IS DEAF, AS WELL AS SIGNS FOR SPECIFIC WORDS AND PHRASES.

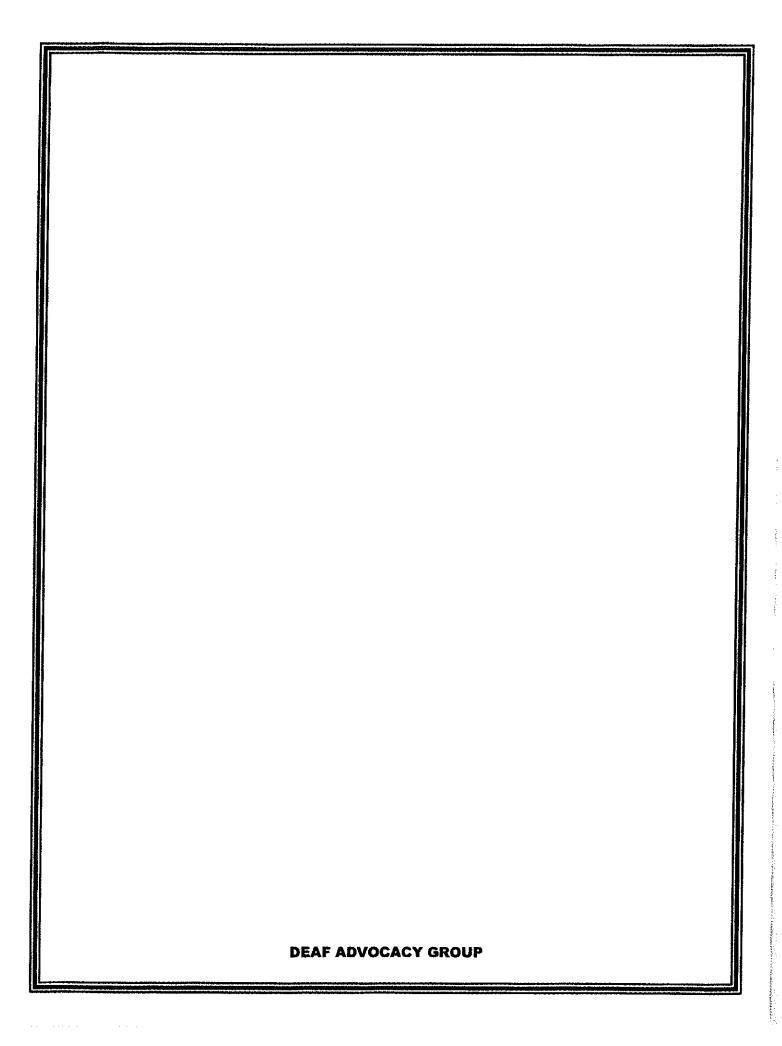
9. THE ASL APP

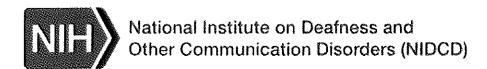
(WWW.THEASLAPP.COM)

THE ASL APP IS A MOBILE APP FOR IOS THAT ALLOWS YOU TO LEARN OVER 1000 GESTURES FOR WORDS AND PHRASES FOR FREE. THERE ARE SEVERAL DIFFERENT SIGNERS THAT TO DEMONSTRATION VIDEOS ON THE APP, SO YOU CAN LEARN FROM MULTIPLE TEACHERS. THE APP MAKES IT EASY TO LEARN SIGN LANGUAGE AND COMMUNICATE WITH SOMEONE WHO IS HARD OF HEARING. DOWNLOAD THE APP FOR FREE ON YOUR IOS DEVICE!

THOSE ARE THE BEST NINE WEBSITES AND APPS TO LEARN SIGN LANGUAGE. HOPEFULLY THEY HELP YOU ON YOUR JOURNEY TO LEARNING ASL, BUT IF YOU'RE BRAND NEW TO SIGN LANGUAGE AND NEED SOME TIPS, CHECK OUT OUR LIST OF THE FOUR THINGS YOU NEED TO KNOW WHEN LEARNING SIGN LANGUAGE YOURSELF.

DEAF ADVOCACY GROUP





COVID-19

Get the latest public health information from CDC Get the latest research information from NIH | Español NIH staff guidance on coronavirus (NIH Only)

Assistive Devices for People with Hearing, Voice, Speech, or Language Disorders

On this page:

- What are assistive devices?
- What types of assistive devices are available?
- What types of assistive listening devices are available?
- What types of augmentative and alternative communication devices are available for communicating face-to-face?
- What augmentative and alternative communication devices are available for communicating by telephone?
- What types of alerting devices are available?
- What research is being conducted on assistive technology?
- Where can I get more information?

What are assistive devices?

The terms assistive device or assistive technology can refer to any device that helps a person with hearing loss or a voice, speech, or language disorder to communicate. These terms often refer to devices that help a person to hear and understand what is being said more clearly or to express thoughts more easily. With the development of digital and wireless technologies, more and more devices are becoming available to help people with hearing, voice, speech, and language disorders communicate more meaningfully and participate more fully in their daily lives.

What types of assistive devices are available?

Health professionals use a variety of names to describe assistive devices:

Assistive listening devices (ALDs) help amplify the sounds you want to hear, especially where there's a lot of background noise. ALDs can be used with a hearing aid or cochlear implant to help a wearer hear certain sounds better.

- Augmentative and alternative communication (AAC) devices help people with communication disorders to express themselves. These devices can range from a simple picture board to a computer program that synthesizes speech from text.
- Alerting devices connect to a doorbell, telephone, or alarm that emits a loud sound or blinking light to let someone with hearing loss know that an event is taking place.

What types of assistive listening devices are available?

Several types of ALDs are available to improve sound transmission for people with hearing loss. Some are designed for large facilities such as classrooms, theaters, places of worship, and airports. Other types are intended for personal use in small settings and for one-on-one conversations. All can be used with or without hearing aids or a cochlear implant. ALD systems for large facilities include hearing loop systems, frequency-modulated (FM) systems, and infrared systems.

Hearing loop (or induction loop) systems use electromagnetic energy to transmit sound. A hearing loop system involves four parts:

- A sound source, such as a public address system, microphone, or home TV or telephone
- A thin loop of wire that encircles a room or branches out beneath carpeting
- A receiver worn in the ears or as a headset

Amplified sound travels through the loop and creates an electromagnetic field that is picked up directly by a hearing loop receiver or a telecoil (see sidebar), a miniature wireless receiver that is built into many hearing aids and cochlear implants. To pick up the signal, a listener must be wearing the receiver and be within or near the loop. Because the sound is picked up directly by the receiver, the sound is much clearer, without as much of the competing background noise associated with many listening environments. Some loop systems are portable,



Hearing Loop Switch hearing aid to T-coil

This logo informs people that a public area is looped.

Source: HearingLoop.org

making it possible for people with hearing loss to improve their listening environments, as needed, as they proceed with their daily activities. A hearing loop can be connected to a public address system, a television, or any other audio source. For those who don't have hearing aids with embedded telecoils, portable loop receivers are also available.

FM systems use radio signals to transmit amplified sounds. They are often used in classrooms, where the instructor wears a small microphone connected to a transmitter and the student wears the receiver, which is tuned to a specific frequency, or channel. People who have a telecoil inside their hearing aid or cochlear implant may also wear a wire around the neck (called a neckloop) or behind their aid or implant (called a silhouette inductor) to convert the

What's a telecoil?

A telecoil, also called a t-coil, is a coil of wire that is installed inside many hearing aids and cochlear implants to act as a miniature wireless receiver. It was originally designed to make sounds clearer to a listener over the telephone. It also is used with a variety of other assistive listening devices, such as hearing loop (or

signal into magnetic signals that can be picked up directly by the telecoil. FM systems can transmit signals up to 300 feet and are able to be used in many public places. However, because radio signals are able to penetrate walls, listeners in one room may need to listen to a different channel than those in another room to avoid receiving mixed signals. Personal FM systems operate in the same way as larger scale systems and can be used to help people with hearing loss to follow one-on-one conversations.

Infrared systems use infrared light to transmit sound. A transmitter converts sound into a light signal and beams it to a receiver that is worn by a listener. The receiver decodes the infrared signal back to sound. As with FM systems, people whose hearing aids or cochlear implants have a telecoil may also wear a neckloop or silhouette inductor to convert the infrared signal into a magnetic signal, which can be picked up through their telecoil. Unlike induction loop or FM systems, the infrared signal cannot pass through walls, making it particularly useful in courtrooms, where confidential information is often discussed, and in buildings where

induction loop) systems, FM systems, infrared systems, and personal amplifiers.

The telecoil works by receiving an electromagnetic signal from the hearing loop and then turning it back into sound within the hearing aid or cochlear implant. This process eliminates much of the distracting background noise and delivers sound customized for one's own need. For people who are hard-of-hearing who do not have a telecoil-equipped hearing aid or cochlear implant, loop receivers with headsets can provide similar benefits but without the customized or "corrected sound" feature that matches one's hearing loss pattern.

Many cochlear implants have a telecoil built into the sound processor, or can use an external telecoil accessory with both hearing aid compatible telephones and public loop systems. A simple switch or programming maneuver performed by the user activates this function.

See the NIDCD fact sheet Hearing Aids (https://www.nidcd.nih.gov/health/hearing-aids) for more information.

competing signals can be a problem, such as classrooms or movie theaters. However, infrared systems cannot be used in environments with too many competing light sources, such as outdoors or in strongly lit rooms.

Personal amplifiers are useful in places in which the above systems are unavailable or when watching TV, being outdoors, or traveling in a car. About the size of a cell phone, these devices increase sound levels and reduce background noise for a listener. Some have directional microphones that can be angled toward a speaker or other source of sound. As with other ALDs, the amplified sound can be picked up by a receiver that the listener is wearing, either as a headset or as earbuds.

What types of augmentative and alternative communication devices are available for communicating face-to-face?

The simplest AAC device is a picture board or touch screen that uses pictures or symbols of typical items and activities that make up a person's daily life. For example, a person might touch the image of a glass to ask for a drink. Many picture boards can be customized and expanded based on a person's age, education, occupation, and interests.

Keyboards, touch screens, and sometimes a person's limited speech may be used to communicate desired words. Some devices employ a text display. The display panel typically faces outward so that two people can exchange information while facing each other. Spelling and word prediction software can make it faster and easier to enter information.

Speech-generating devices go one step further by translating words or pictures into speech. Some models allow users to choose from several different voices, such as male or female, child or adult, and even some regional accents. Some devices employ a vocabulary of prerecorded words while others have an unlimited vocabulary, synthesizing speech as words are typed in. Software programs that convert personal computers into speaking devices are also available.

What augmentative and alternative communication devices are available for communicating by telephone?

For many years, people with hearing loss have used text telephone or telecommunications devices, called TTY or TDD machines, to communicate by phone. This same technology also benefits people with speech difficulties. A TTY machine consists of a typewriter keyboard that displays typed conversations onto a readout panel or printed on paper. Callers will either type messages to each other over the system or, if a call recipient does not have a TTY machine, use the national toll-free telecommunications relay service at 711 to communicate. (See Telecommunications Relay Services (https://www.nidcd.nih.gov/health/telecomm) for more information.) Through the relay service, a communications assistant serves as a bridge between two callers, reading typed messages aloud to the person with hearing while transcribing what's spoken into type for the person with hearing loss.

With today's new electronic communication devices, however, TTY machines have almost become a thing of the past. People can place phone calls through the telecommunications relay service using almost any device with a keypad, including a laptop, personal digital assistant, and cell phone. Text messaging has also become a popular method of communication, skipping the relay service altogether.

Another system uses voice recognition software and an extensive library of video clips depicting American Sign Language to translate a signer's words into text or computer-generated speech in real time. It is also able to translate spoken words back into sign language or text.

Finally, for people with mild to moderate hearing loss, captioned telephones allow you to carry on a spoken conversation, while providing a transcript of the other person's words on a readout panel or computer screen as back-up.

What types of alerting devices are available?

Alerting or alarm devices use sound, light, vibrations, or a combination of these techniques to let someone know when a particular event is occurring. Clocks and wake-up alarm systems allow a person to choose to wake up to flashing lights, horns, or a gentle shaking.

Visual alert signalers monitor a variety of household devices and other sounds, such as doorbells and telephones. When the phone rings, the visual alert signaler will be activated and will vibrate or flash a light to let people know. In addition, remote receivers placed around the house can alert a person from any room. Portable vibrating pagers can let parents and caretakers know when a baby is crying. Some baby monitoring devices analyze a baby's cry and light up a picture to indicate if the baby sounds hungry, bored, or sleepy.

What research is being conducted on assistive technology?

The National Institute on Deafness and Other Communication Disorders (NIDCD) funds research into several areas of assistive technology, such as those described below.

Improved devices for people with hearing loss

NIDCD-funded researchers are developing devices that help people with varying degrees of hearing loss communicate with others. One team has developed a portable device in which two or more users type messages to each other that can be displayed simultaneously in real time. Another team is designing an ALD that amplifies and enhances speech for a group of individuals who are conversing in a noisy environment.

Improved devices for nonspeaking people

More natural synthesized speech

NIDCD-sponsored scientists are also developing a personalized text-to-speech synthesis system that synthesizes speech that is more intelligible and natural sounding to be incorporated in speech-generating devices. Individuals who are at risk of losing their speaking ability can prerecord their own speech, which is then converted into their personal synthetic voice.

Brain-computer interface research

A relatively new and exciting area of study is called brain-computer interface research. NIDCD-funded scientists are studying how neural signals in a person's brain can be translated by a computer to help someone communicate. For example, people with amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease) or brainstem stroke lose their ability to move their arms, legs, or body. They can also become locked-in, where they are not able to express words, even though they are able to think and reason normally. By implanting electrodes on the brain's motor cortex, some researchers are studying how a person who is locked-in can control communication software and type out words simply by imagining the movement of his or her hand. Other researchers are attempting to develop a prosthetic device that will be able to translate a person's thoughts into synthesized words and sentences. Another group is developing a wireless device that monitors brain activity that is triggered by visual stimulation. In this way, people who are locked-in can call for help during an emergency by staring at a designated spot on the device

Where can I get more information?

The NIDCD maintains a directory of organizations (https://www.nidcd.nih.gov/directory/) that provide information on the normal and disordered processes of hearing, balance, taste, smell, voice, speech, and language.

Use the following keywords to help you search for organizations that can answer questions and provide printed or electronic information on assistive devices:

- Assistive technology (https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=9)
- Assistive listening device (https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=8)
- Augmentative and alternative communication (https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=14)

For more information, contact us at:

NIDCD Information Clearinghouse

1 Communication Avenue Bethesda, MD 20892-3456 Toll-free voice: (800) 241-1044 Toll-free TTY: (800) 241-1055

Email: nidcdinfo@nidcd.nih.gov (mailto:nidcdinfo@nidcd.nih.gov)

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December 2011

*Note: PDF files require a viewer such as the free Adobe Reader® (http://get.adobe.com/reader/).

Last Updated Date: November 12, 2019

Have a question?

Information specialists can answer your questions in English or Spanish.

Voice: (800) 241-1044 TTY: (800) 241-1055 nidcdinfo@nidcd.nih.gov