

SPEECH DISORDER

Speech is the process of producing specific sounds that convey meaning to the listener. A speech disorder refers to any condition that affects a person's ability to produce sounds that create words.

Speech is one of the main ways in which people communicate their thoughts, feelings, and ideas with others. The act of speaking requires the precise coordination of multiple body parts, including the head, neck, chest, and abdomen. Speech disorders affect a person's ability to form the sounds that allow them to communicate with other people. They are not the same as language disorders.

Speech disorders prevent people from forming correct speech sounds, while language disorders affect a person's ability to learn words or understand what others say to them. However, both speech and language disorders can make it more difficult for a person to express their thoughts and feelings to others.

CAUSES

Speech disorders affect the vocal cords, muscles, nerves, and other structures within the throat.

Causes may include:

- vocal cord damage
- brain damage
- muscle weakness
- respiratory weakness
- strokes
- polyps or nodules on the vocal cords
- vocal cord paralysis

People who have certain medical or developmental conditions may also have speech disorders. Common conditions that can lead to speech disorders are:

- Autism
- Attention deficit hyperactivity disorder (ADHD)
- Strokes
- Oral cancer
- Laryngeal cancer
- Huntington's disease
- Dementia

- Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease

Speech disorders may be hereditary, and they can develop over time.

SYMPTOMS

Depending on the cause of the speech disorder, several symptoms may be present. Common symptoms experienced by people with speech disorders are:

- repeating sounds, which is most often seen in people who stutter
- adding extra sounds and words
- elongating words
- making jerky movements while talking, usually involving the head
- blinking several times while talking
- visible frustration when trying to communicate
- taking frequent pauses when talking
- distorting sounds when talking
- hoarseness, or speaking with a raspy or gravelly sounding voice

DIAGNOSIS

A speech-language pathologist (SLP) is a healthcare professional who specializes in speech and language disorders.

An SLP will evaluate a person for groups of symptoms that indicate one type of speech disorder. To make an accurate diagnosis, SLPs need to rule out other speech and language disorders and medical conditions.

An SLP will review a person's medical and family history. They will also examine how a person moves their lips, jaw, and tongue and may inspect the muscles of the mouth and throat.

Other methods of evaluating speech disorders include:

- Denver articulation screening examination: This test evaluates the clarity of a person's pronunciation.
- Prosody-voice screening profile: SLPs use this test to examine multiple aspects of a person's speech, including pitch, phrasing, speech patterns, and speaking volume.
- Dynamic evaluation of motor speech skills (DEMSS) manual: The DEMSS is a comprehensive guide for helping SLPs diagnose speech disorders.

TREATMENT

The type of treatment will typically depend on the severity of the speech disorder and its underlying cause.

Treatment options can include:

- speech therapy exercises that focus on building familiarity with certain words or sounds
- physical exercises that focus on strengthening the muscles that produce speech sounds

Some of the treatment options for speech disorders are discussed below:

- Target selection

Target selection involves a person practicing specific sounds or words to familiarize themselves with particular speech patterns. Examples of therapy targets may include difficult words or sounds that trigger speech disruptions.

- Contextual utilization

For this approach, SLPs teach people to recognize speech sounds in different syllable-based contexts.

- Contrast therapy

Contrast therapy involves saying word pairs that contain one or more different speech sounds. An example word pair might be "beat" and "feet" or "dough" and "show."

- Oral-motor therapy

The oral-motor therapy approach focuses on improving muscle strength, motor control, and breath control. These exercises can help people develop fluency, which produces smoother speech that sounds more natural.

- Ear device

Ear devices are small electronic aids that fit inside the ear canal. These devices can help improve fluency in people who have a stutter.

Some ear devices replay altered versions of the wearer's voice to make it seem as though someone else is speaking with them. Other ear devices produce a noise that helps control stuttering.

- Medication

Some speech disorders can cause people to develop anxiety disorders. Stressful situations can trigger anxiety, resulting in more pronounced speech disorder symptoms. Anxiety medications may help reduce symptoms of speech disorders in some people.

COMMON TYPES:

Stuttering:

Stuttering refers to a speech disorder that interrupts the flow of speech. People who stutter can experience the following types of disruption:

- Repetitions occur when people involuntarily repeat sounds, vowels, or words.
- Blocks happen when people know what they want to say but have difficulty making the necessary speech sounds. Blocks may cause someone to feel as though their words are stuck.
- Prolongations refer to the stretching or drawing out of particular sounds or words.

The symptoms of stuttering can vary depending on the situation. Stress, excitement, or frustration can cause stuttering to become more severe. Some people may also find that certain words or sounds can make a stutter more pronounced.

Stuttering can cause both behavioral and physical symptoms that occur at the same time. These can include:

- tension in the face and shoulders
- rapid blinking
- lip tremors
- clenched fists
- sudden head movements

There are two main types of stuttering:

1. Developmental stuttering affects young children who are still learning speech and language skills. Genetic factors significantly increase a person's likelihood of developing this type of stutter.
2. Neurogenic stuttering occurs when damage to the brain prevents proper coordination between the different regions of the brain that play a role in speech.

Apraxia

The brain controls every single action that people make, including speaking. Most of the brain's involvement in speech is unconscious and automatic.

When someone decides to speak, the brain sends signals to the different structures of the body that work together to produce speech. The brain instructs these structures how and when to move to form the appropriate sounds.

For example, these speech signals open or close the vocal cords, move the tongue and shape the lips, and control the movement of air through the throat and mouth.

Apraxia is a general term referring to brain damage that impairs a person's motor skills, and it can affect any part of the body. Apraxia of speech, or verbal apraxia, refers specifically to the impairment of motor skills that affect an individual's ability to form the sounds of speech correctly, even when they know which words they want to say.

Dysarthria

Dysarthria occurs when damage to the brain causes muscle weakness in a person's face, lips, tongue, throat, or chest. Muscle weakness in these parts of the body can make speaking very difficult.

People who have dysarthria may experience the following symptoms:

- slurred speech
- mumbling
- speaking too slowly or too quickly
- soft or quiet speech
- difficulty moving the mouth or tongue