

Hearing HealthCare News[®]

A newsletter for our patients, their families and friends

☀ Summer 2024

Slow Down, You Talk Too Fast

When we see someone for a periodic hearing check-up, we often hear, "I think my hearing has gotten worse." But as often as not, the results of the audiologic test indicate no change in hearing sensitivity or for understanding speech in quiet.

However, our conventional audiologic test does not measure how well you understand *rapid* speech. Another common complaint we hear is, "I just can't keep up when people talk fast."

**"I just can't keep up
when people talk fast!"**

We live in a fast-paced world. We're bombarded with information and entertainment, and sometimes it comes at us at a rapid-fire pace. Ordinary speech occurs at about 150 words a minute, but some people talk at more than 225 words a minute. That means we're trying to understand almost four words a second!

Difficulty understanding rapid speech is one of the most common hearing complaints of older adults—including those with normal hearing. The problem may be related to reduced memory abilities and an age-related decrease in the efficiency of our nervous system. This difference is seen in adults even in their 40s.

While rapid speech is difficult even for older adults with normal-hearing, speech becomes easier to understand when there are occasional pauses in the speech. For anyone over the age of 50, communication is improved if the speaker uses pauses and phrases to allow the listener to "catch up."

Of course, understanding rapid speech is more difficult if you have a hearing loss. Most people with hearing loss say that understanding *fast* speech is harder than understanding *soft* speech. Based on these findings, then, you should ask the speakers around you to:

- Get my attention before you speak to me
- Speak at a *normal* rate (speaking *slowly* is not helpful; just don't speak *fast*)
- Use pauses
- Face me when you talk to me

These simple steps should make life a little easier for you and for the people around you.

Speech Tests and the Audiologic Evaluation

You may remember that when we evaluated your hearing, you heard *pure tones*. We use pure tones to measure your hearing sensitivity. That may seem a bit odd since you almost never hear pure tones in real life.

But *speech* is also an important part of the hearing evaluation. We use speech testing to confirm the pure tone results, as part of a diagnostic test, and to estimate your communication ability.

The speech you hear could be single syllables words (*thin, chair*), two-syllable words (*airplane, sidewalk*), sentences, or even distorted speech. You might be listening with earphones or through speakers, and the speech might be in quiet or with background noise.

Word recognition

The *word recognition* (or *speech discrimination*) test evaluates a person's ability to understand speech when it's presented at a level that should be easy to hear. The score on a word recognition test may reflect any distortion caused

by the person's hearing loss. For example, someone might score 88% on a word recognition test, suggesting little distortion. Someone else with the same amount of hearing loss might score only 48%, indicating much greater distortion caused by this hearing loss.

Word recognition tests can also be used to evaluate hearing with and without hearing aids. For this purpose, speech is presented at a normal conversational level. Someone with a moderate hearing loss might score 36% without hearing aids and 84% with hearing aids. While these results don't measure communication ability outside the test situation, the results do give an indication of hearing aid benefit.



Speech is used as part of the standard audiologic evaluation.

Ear Trivia

Human hearing is most sensitive in the 300 to 3000 kHz frequency range—precisely the frequency range of the human voice.

The upper range of hearing is:

- Humans: 20 kHz
- Dogs: about 40 kHz
- Cats: about 80 kHz
- Porpoises: about 140 kHz
- Bats: about 200 kHz

For the softest audible sound we can hear, the eardrum moves less than the diameter of a hydrogen atom.

The eardrum has an area almost 20 times that of the oval window. That allows the acoustic energy in the air medium to be concentrated enough to pass into the fluid-filled cochlea with almost no loss of energy.

If the cochlea were unrolled, it would be about as long as your final thumb joint.

Sound takes about half a millisecond (.5ms) to travel from one side of the head to the other. That time difference, along with the slightly different intensity, allow us to localize very accurately.

**"Speech testing can be used
to evaluate hearing with and
without hearing aids."**

Comfortable levels

We sometimes use speech to measure a person's most comfortable and uncomfortable loudness levels. It's just the nature of hearing loss that a person may need speech louder than normal but can't tolerate very loud speech. We need to take that into account when fitting hearing aids to make sure that this person can hear soft speech, yet still tolerate loud speech.

Summary

We use speech tests as an important part of the audiologic evaluation. The results are useful to validate other test results, estimate hearing levels, obtain diagnostic information and evaluate communication ability.

WELCOME

... to the Summer issue of our newsletter. We hope you find the information helpful to you and your family and friends.

Our practice is based on these fundamental principles:

- **Hearing loss is serious**
- **Hearing loss deserves professional care**
- **Hearing aids improve lives**

Tips for Hearing Aid Users

- ❑ The sound quality on television sets ranges from excellent to terrible. Almost all televisions have built-in captioning that displays a written text of what is being said. You can turn captioning on through the remote control. (Many people with normal hearing use captioning just to make TV viewing easier.)
- ❑ If you try a second new battery—or your battery is fully charged—and your hearing aid still doesn't work, it's probably the hearing aid, not the battery. Check for wax blockage at the sound outlet or let us check your hearing aid for you.
- ❑ *Hospital stay:* If you're going to the hospital, use your spare set of hearing aids. Hearing aids have a tendency to get lost during hospital stays.
- ❑ *Check your smoke alarm.* Almost half of people with hearing loss do not hear their smoke alarm unless they have their hearing aids on.
- ❑ *Telephone use:* If you have a smart phone, text messaging or video calls such as *FaceTime* is easier than regular voice calls.
- ❑ *Family help:* Most people don't understand what it's like to have even a mild hearing loss. Perhaps the most helpful step for a family member: *Please don't talk to me from another room!*

Summer Humidity Alert

Hearing aids are much more resistant to moisture than they once were. Still, excessive moisture can cause hearing aid breakdown. It's more of a problem in summer because of high humidity, perspiration and air conditioning.

We recommend regular use of a de-humidifier (dri-aid) kit to minimize hearing aid problems due to humidity and moisture. These kits are inexpensive, easy-to-use and last indefinitely.

For more severe cases, an electric drying appliance is a good idea. The device circulates heated air and uses a heat lamp to dry and sanitize your hearing aids overnight.

Please call our office if you don't have a dri-aid kit. If you already have one—use it regularly!

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Good Communication Builds Good Relationships

Our sense of hearing is a vital link to the world—a source of pleasure, information and connection to others. Communication is the key to all human activities. It is necessary for learning, exchanging information and taking care of each other. Advancements in hearing instrument technology have made a huge impact in the way people with hearing loss can function today.

If your friend or family member has a hearing loss, you can use the clear speech method to make it easier for them to follow a conversation. There are ways to make communication easier. Talk face-to-face, speak at a natural pace, take clear pauses between phrases and try to eliminate background noise.

These actions combined with the fitting of quality hearing instruments are exactly what is needed to improve a person's ability to follow a conversation. Call **Duncan-Nulph Hearing Associates** at 717-766-1500 to schedule a hearing test.

Sincerely,

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Duncan-Nulph Hearing Associates

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