

***Iowa Farmer Today***

# Safety Watch: Hearing protection never too early or too late

By Stephanie Leonard and Fred Gerr

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Ralph Altmaier's nearly invisible over-the-ear hearing aid.

**F**or Ralph Altmaier, the decision to get fitted for hearing aids occurred five years after he recognized, in his late 40s, that his hearing loss was affecting his communication with others.

According to the Hearing Loss Association of America, it takes people seven years, on average, from the time they think they might have a hearing loss to the time they seek treatment for it.

Altmaier, now 57, recounts how it was especially hard to hear conversation in large groups of people or areas with background noise, like vehicles and restaurants. Women's and children's voices were the hardest to make out. Asking family or friends to repeat themselves was increasingly frustrating. Eventually, he made an appointment with an audiologist to have his hearing tested.

The appointment confirmed what he already knew: He had irreversible noise-induced hearing loss in both ears, a cumulative result of repeated or prolonged exposure to excessive sound levels.

He attributes his own exposures to operating tractors and other farm equipment in the '70s, '80s and '90s.

"My dad had a fondness for chrome exhaust pipes on his tractors, without mufflers back then!" he laughs.

Altmaier, who holds an off-farm job while managing his own livestock operation in Johnson County, is far from alone. In the U.S., one in five adults experience hearing loss resulting from age and/or excessive noise exposure.

Farmers work in one of the highest noise-exposed occupations, with hearing loss rates second only to construction workers. Studies suggest as many as 70 percent of farmers experience hearing loss.

Noise-induced hearing loss can occur so gradually it is not initially noticeable. Young farmers may be at particular risk, not recognizing the progressive harmful effects of even short-term exposure to high (loud) sound levels.

Early symptoms may include tinnitus, a ringing or buzzing in the ears after a noise exposure, or a sensation of fullness in the ears. Friends or family members may notice a change in one's hearing before the affected person observes that others "mumble too much."

A local physician or an ear, nose and throat doctor can determine if you have a hearing loss. If hearing loss is confirmed, he or she can refer you to a certified audiologist for a full hearing evaluation. The audiologist will help determine which hearing aids or assistive devices can best meet needs and preferences.

Hearing aids today vary widely in cost and design, and they have an array of features. Cost for a pair of hearing aids can range from around \$3,000-\$7,000, depending on features and technology.

Some training and time is necessary to become used to the fit, operation and care of hearing devices. Getting used to new hearing aids can take weeks and may involve trial and error to identify the best model and fit to suit each wearer. Altmaier's acclimation took about a month, he said, as he tried several options of ear inserts to find the most comfortable fit.

Prevention works

Preserving the hearing you have is important for everyone, even those for whom some loss has already occurred. It's also simple and inexpensive.

Keeping machinery and equipment lubricated and maintained reduces noise caused by friction or by vibration of loose parts. Installing sound-absorbing materials to enclose noise sources and vibration-reducing pads can reduce noise levels of some equipment. Replacing worn mufflers on equipment and operating with the doors and windows closed will also help.

Individuals with normal or impaired hearing can safeguard their remaining hearing by wearing protective devices. For hearing protection to be effective, it must be accessible, comfortable and used consistently. Keeping earplug dispensers and earmuffs near high noise areas helps ensure their use.

The specific type, brand or model of hearing protection used is less important than consistent use of protection in any activities with sound levels above 85 decibels (dBA), even if the exposure is short-term. A good rule of thumb is if an activity or location requires raising your voice to be heard, you should be wearing hearing protection.

Earmuffs are easy to use, durable and can be stored near noise sources. Basic earmuffs range in price from \$12-\$50. Earmuffs can be worn with hearing-aid devices since they enclose and protect the entire ear. Care should be taken to make sure a complete seal is made around each ear.

Disadvantages include possible discomfort in hot weather, improper fit with hats or other personal protective gear, or impracticality when working in tight or confined work areas.

The Noise Reduction Rating (NRR) assigned to basic muffs ranges from around 17 to 30 decibels. This rating is shown on the package.

Sophisticated (and more expensive) earmuffs are now available that use electronic technology to block harmful noise above 85 decibels while allowing, or even amplifying, higher frequency tones like voices or alarms.

Earplugs and ear caps fit fully or partially in the ear canal. Earplugs cost around 15 to 45 cents per pair and can be bought in bulk packages of 200 pair or more. The NRR for plugs ranges from around 20 to 33 decibels.

Expandable foam earplugs must be rolled into a cylinder shape before insertion in the canal, where they expand to a snug custom fit. Proper insertion is important to achieve noise reduction. Though they are marketed as “disposable,” foam earplugs can be reused following a trip through the laundry, as long as they still fully compress and expand.

Getting used to wearing hearing protection or hearing aids can take patience and trial and error to find the best equipment to suit your needs. But, Ralph Altmaier says he “wouldn’t go without hearing aids” now. He wears earmuffs over his hearing aids when working in noisy environments.

He advises it’s worth the effort to protect whatever hearing you have, and to seek help if you suspect you have a hearing loss.

Look for hearing protection at hardware, farm or medical, supply stores, or online (e.g., Grainger [www.grainger.com](http://www.grainger.com) or Gempler’s [www.gemplers.com](http://www.gemplers.com)).

More information is available through the Hearing Loss Association of America at [www.hearingloss.org/content/understanding-hearing-loss](http://www.hearingloss.org/content/understanding-hearing-loss).

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