AMERICAN ACADEMY OF OTOLARYNGOLOGY–HEAD AND NECK SURGERY

FACT SHEET

Hyperacusis—An increased sensitivity to everyday sounds

What Is Hyperacusis?

Hyperacusis is a condition that arises from a problem in the way the brain's central auditory processing center perceives noise. It can often lead to pain and discomfort.

Individuals with hyperacusis have difficulty tolerating sounds which do not seem loud to others, such as the noise from running faucet water, riding in a car, walking on leaves, dishwasher, fan on the refrigerator, shuffling papers. Although all sounds may be perceived as too loud, high frequency sounds may be particularly troublesome.

As one might suspect, the quality of life for individuals with hyperacusis can be greatly compromised. For those with a severe intolerance to sound, it is difficult and sometimes impossible to function in an every day environment with all its ambient noise. Hyperacusis can contribute to social isolation, phonophobia (fear of normal sounds), and depression.

Prevalence And Causes Of Hyperacusis

Many people experience sensitivity to sound, but true hyperacusis is rare, affecting approximately one in 50,000 individuals. The disorder can affect people of all ages in one or both ears. Individuals are usually not born with hyperacusis, but may develop a narrow tolerance to soundOther common causes include:

- Head injury
- Ear damage from toxins or medication
- Lyme disease
- Air bag deployment
- Viral infections involving the inner ear or facial nerve (Bell's palsy)
- Temporomandibular joint (TMJ) syndrome

There are a variety of neurologic conditions that may be associated with hyperacusis, including:

- Post-traumatic stress disorder
- Chronic fatigue syndrome
- Tay-Sach's disease

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- Some forms of epilepsy
- Valium dependence
- Depression
- Migraine headaches

Hyperacusis is seen in brain injured children (due to the universal sensory sensitivity), some autistic children, and some children with cerebral palsy)

Diagnosis of Hyperacusis

Individuals who suspect they may have hyperacusis should seek an evaluation by an otolaryngologist (ear, nose, and throat doctor). The initial consultation is likely to include a full audiologic evaluation (with a hearing test), a recording of medical history, and a medical evaluation by a physician. Counseling about evaluation findings and treatment options may also be provided at that time.

Treatment for Hyperacusis

There are no specific corrective surgical or medical treatments for hyperacusis. However, sound therapy may be used to "retrain" the auditory processing center of the brain to accept everyday sounds. This involves the use of a noise-generating device worn on the affected ear or ears. Those suffering from hyperacusis may be uncomfortable with placing sound directly in their ear, but the device produces a gentle static-like sound (white noise) that is barely audible. Completion of sound therapy may take up to 12 months, and usually improves sound tolerance. Because social situations are often painfully loud for those with hyperacusis, withdrawal, social isolation, and depression are common.

Hearing Loss

Hearing tests usually indicate normal hearing sensitivity and often register at minus decibel levels. Counter to what one might think, this does not mean that those with hyperacusis hear better than others. Instead, it is a clear indication of a problem in the way the brain processes sound. Hearing loss coupled with low tolerance to sound is another termed recruitment, a condition where soft sounds cannot be heard and loud sounds are intolerable (or distorted). For example, a person with recruitment may have hearing loss below 50 decibels while at the same time; sound above 80 decibels may be intolerable. The result is a narrow range of comfortable hearing.

Relation to Tinnitus

Hyperacusis is strongly associated with tinnitus, a condition commonly referred to as "ringing in the ears." Nearly 36 million Americans suffer from tinnitus; an estimated one of every thousand also has hyperacusis. Individuals can have tinnitus and hyperacusis at the same time