

Stephanie Culver, MD
Dale Amanda Tylor, MD, MPH
1819 State Street, Suite A
Santa Barbara, CA 93101
P: (805) 327-6673
F: (805) 679-5183



RIVIERA ENT

This patient information handout is provided for general medical knowledge only. It may or may not relate to your specific medical condition and it does not constitute individualized medical advice.

Hyperacusis

Hyperacusis, or sensitive hearing, describes a problem in the way the brain's central auditory processing center perceives noise, often leading to pain and discomfort. People with hyperacusis have a hard time tolerating sounds that are typically not loud to others, such as noise from running water, traffic or riding in a car, walking on leaves, shuffling papers, running the dishwasher or other machines, and more. Although all sounds may be perceived as too loud, high frequency sounds may be particularly troublesome.

Many people experience sensitivity to sound, but true hyperacusis is rare, affecting approximately one in 50,000 individuals. It can affect people of all ages in one or both ears, and is often associated with tinnitus, or ringing in the ears. Nearly 36 million Americans suffer from tinnitus; an estimated one in every thousand also has hyperacusis. People can have tinnitus and hyperacusis at the same time.

It's no surprise that hyperacusis can have a big impact on quality of life for people living with this condition. For those with a severe intolerance to sound, it's difficult and sometimes impossible to function in ordinary environments with all of today's ambient noise. That's why hyperacusis can lead to withdrawal, social isolation, fear of normal sounds (called phonophobia), and depression.

What Are the Symptoms of Hyperacusis?

Symptoms of hyperacusis can include:

- Sensitivity to everyday sounds, often beginning in one ear then progressing to both ears
- Difficulty tolerating ordinary environments and situations

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- Isolation
- Pain, or physical discomfort with sounds

What Causes Hyperacusis?

People are not born with hyperacusis, but some can develop an increased sensitivity to sound later in life. While a clear cause is commonly unidentifiable, possible causes include:

- Head injury
- Exposure to loud noise(s)
- 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 (PTSD)
- Chronic fatigue syndrome
- Tay-Sach's disease (a rare, inherited disorder that destroys nerve cells in the brain and spinal cord)
- Some forms of epilepsy
- Valium dependence
- Migraine headaches
- Depression
- Anxiety, mood swings, with increased heart rate, sweating

Hyperacusis can be seen in children with brain injuries (often with other sensory sensitivities), some autistic children, and some children with cerebral palsy.

If you think you or a loved one may have hyperacusis, you should seek an evaluation by an ENT (ear, nose, and throat) specialist, or otolaryngologist. The initial consultation is likely to include a full audiologic evaluation (with hearing test), medical history review, and a medical evaluation. Your doctor should also provide counseling about their findings, as well as possible treatment options.

What Are the Treatment Options?

There are no specific surgical or medical treatments to correct hyperacusis. However, sound therapy may be used to retrain the auditory processing center of the brain to accept everyday sounds. Your doctor may have you wear a noise-generating device on the affected ear, or both ears. The device

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produces a gentle, static-like sound (white noise) that is barely audible. Sound therapy can take up to 12 months to complete, and often improves sound tolerance.

Hearing tests for hyperacusis may indicate normal hearing sensitivity, but this does not mean that someone with hyperacusis can hear better than others. “Recruitment” is another type of sound sensitivity, a condition where soft sounds cannot be heard, and loud sounds are distorted or intolerable. For example, a person with Recruitment may have hearing loss below 50 decibels. At the same time, sound above 80 decibels may be intolerable, resulting in a narrow range of comfortable hearing.

What Questions Should I Ask My Doctor?

1. What are my treatment options for hyperacusis?
2. Can using a cotton ball or ear plug be effective in treating hyperacusis?
3. What tests should I have performed?
4. Do I need to get an MRI to rule out common causes of hyperacusis?
5. Are there any effective, available medications?
6. Can treating my anxiety help my condition?