

Hyperacusis: When Everything is Too Loud



Image credit: 123rf.com

Summary: Hyperacusis is the condition in which a person is abnormally hypersensitive to sound, to the point that everyday sounds are unbearably loud, causing discomfort or pain. For many people, the natural response to this is to avoid sound, but this can end up making the person even more hypersensitive over time. Ways to get help include seeing an audiologist. Strategies that may be helpful depending on the situation might include desensitization by listening to constant, pleasant, low-level background noise whenever possible, such as quiet nature sounds or relaxation music.

J's Story

J. is an 12-year-old who loves to spend time at home when it is quiet. J. has no siblings and spends much time in their quiet bedroom. However, situations such as the school bus and the classroom are overwhelming. It has reached a point where J. tries to avoid going to school, and it's a daily struggle to get J. to the bus stop. J. also struggles with anger and anxiety and has seen counsellors for coping strategies such as deep breathing, but nothing seems to help.

J's mother can relate as she is also distressed by sound as well, and it continues to make life challenging for her. What should J's parents do?

What Is It?

Hyperacusis (aka auditory hypersensitivity) is a condition in which a person is abnormally hypersensitive to sound. Thus everyday sounds are unbearably loud, causing discomfort, pain and distress.

People with hyperacusis experience abnormally increased sound-induced activity within their auditory system. Non-intrusive sounds (such as sounds that are not very loud) become uncomfortable and annoying for a child with hyperacusis (Jastreboff, 2004).

Who Gets It?

Hyperacusis occurs at all ages and can disrupt all aspects of home, school, work and relationships.

With children, school can become unbearable, as the classroom, cafeteria, and gymnasium are all very noisy settings. It can be difficult for these children to concentrate during instructions and participate in conversations in group work. These are kids who get overwhelmed with daily sounds, causing behavioural, emotional and learning problems.

With adults, it can similarly disrupt their daily lives, work and relationships. Daily sounds that may be distressing can include a running faucet, home appliances (e.g. vacuum cleaner, dishwasher), or people having conversations.

What Causes It?

Hyperacusis is often seen along with other conditions such as:

Auditory conditions	<ul style="list-style-type: none"> • Hearing loss (a reduced ability to hear sounds, which can occur at any age, and can be gradual or sudden). • Tinnitus (a buzzing or ringing noise in the ears that only the person with tinnitus can hear). <ul style="list-style-type: none"> ◦ Most adults who complain of hyperacusis have tinnitus, and many who complain of tinnitus also have hyperacusis. • Following exposure to loud noise such as: <ul style="list-style-type: none"> ◦ A single exposure to loud noise such as an explosion, a gunshot ◦ Long-term exposure such as work exposure in a factory, at a construction site or being a musician.
Head and neck conditions	<ul style="list-style-type: none"> • Bell's palsy • Chronic fatigue syndrome (CFS) • Chronic migraines • Meniere's disease • Surgery to the jaw, face or ears
Brain and related conditions	<ul style="list-style-type: none"> • Concussions and head injuries (very common) • Posttraumatic stress disorder (PTSD) • Depression • General Anxiety Disorder (GAD) • Anxiety and depression (very common) <ul style="list-style-type: none"> ◦ 56% of patients with hyperacusis met the criteria for a psychiatric condition, which speaks to how stressful hyperacusis can be (Jastreboff, 2018). • Autism spectrum disorder (ASD) <ul style="list-style-type: none"> ◦ 40% of those with ASD have auditory hypersensitivity, aka hyperacusis. • Attention deficit hyperactivity disorder (ADHD)
Infections	<ul style="list-style-type: none"> • Viral infection of the inner ear • Lyme disease
Medications	<ul style="list-style-type: none"> • Certain drugs can affect hearing in some people, e.g. non-steroidal anti-inflammatory drugs (NSAIDS) such as aspirin, ibuprofen, naproxen; antibiotics; water pills and diuretics.

Features of Hyperacusis

Typically, both ears are affected, although it is possible to have it in only one ear.

Related Sound Conditions

Other types of sound sensitivity include:

- Misophonia, which causes a great deal of emotional distress with certain specific types of sounds such as:
 - Mouth-related sounds such as chewing and breathing
 - Tapping with the feet when someone walks
 - Typing on the computer
 - Environmental sounds like toilet flushing

Other types of reduced tolerance to sound include:

- 'Loudness recruitment', which is an abnormal growth in loudness often caused by hearing loss.
- 'Phonophobia', which is a persistent and unwarranted fear of sound.

Symptoms of Hyperacusis

Symptoms may start gradually or suddenly.

Symptoms may include:

- Quiet sounds are comfortable, but ordinary sounds (like voices at conversational volume) are too loud or distorted.
- Too much sound can cause headaches, fatigue and concentration problems.
- Louder sounds will cause annoyance, irritation, distress, panic, fear or other strong emotional reactions.
- Low-intensity sounds, such as the noise of a refrigerator, seem too loud and distracting.
- Sudden, loud noise can trigger discomfort, pain and other emotional reactions.

Self-Help Strategies

Don'ts

- Don't avoid sound entirely, as this reinforces the brain's irritation to sound. When faced with sensitivity to sound, many people will naturally try to 1) avoid situations with sound and 2) wear hearing protection every day, such as wearing earplugs or hearing protectors, even when not exposed to sound. Unfortunately, these strategies may worsen things (Jastreboff, 2018). It may cause the brain to search harder for unpleasant sounds, which makes the person more stressed after removing the hearing protection.

Do's

- Do you really need to use hearing protection?
 - If so, use white noise, nature sounds or soft, pleasant music in the headphones at a comfortable level (instead of earplugs or earmuffs that may silence too much).
- Play sound in the background 24/7.
 - Volume of sound
 - The sound does not have to be loud, simply audible and comfortable. Make sure that the sound isn't annoying or uncomfortable.
 - Types of sound include
 - Ideally, non-voice sounds, like nature sounds, or relaxing spa music.
 - Ways to do this include:
 - During the daytime
 - Have something on the table that plays sound, e.g. Bluetooth speakers, CD player, sound machine, etc.
 - At nighttime
 - Having a fan in the bedroom.
 - Play nature sound or spa music overnight.
- Use healthy coping skills and relaxation or mindfulness techniques to deal with stress.
- Interested in an app?
 - Apps can be downloaded on a smartphone that includes many different live-recorded nature sounds.
 - An example: <https://www.soundoasis.com/apps/>

Self-Help Strategies: Supporting a Family Member with Hyperacusis

What can parents, family members and friends do?

- Is your loved one stressed out from loud sounds?
 - Give them a listening break.
 - Invite them to relax with you, e.g. do some deep breathing together; do something fun together; give them a weighted blanket, or simply do something that distracts them from the stress.
- Listen to them about their challenges, and validate how difficult it is.

Wondering about Hyperacusis?

The first step is to see your primary care provider (e.g. family physician), who can make sure there are no medical conditions that might contribute to the listening challenges. For example, if you are intolerant to sound in just one ear, it may indicate a treatable medical condition.

The next step would be to see an audiologist for an audiological evaluation to rule out hearing loss and a decreased sound tolerance assessment to check your tolerance to sound.

Treatment / Management

Audiologists can provide counselling, sound therapy and strategies such as:

- Sound desensitization:
 - The person starts by listening to pleasant, comfortable sounds (e.g. nature sounds or music) for a specific time every day.
 - Over several months, the person gradually increases their exposure to sound until the sensitivity to everyday sounds is no longer distressing.
- Hearing aids are sometimes used.
 - Hearing aids can include 'maskers' where they make a barely audible noise as you listen throughout the day.
- Tinnitus retraining therapy (TRT):
 - TRT uses sound therapy and counselling over 9-18 months to help with tinnitus. Sound therapy can be done with quality headphones or hearing aids when outside the house and with a speaker, sound machine or radio at home.

Other Strategies / Treatments

Other strategies/treatments may include:

- Biofeedback & Neurofeedback
- Meditation
- Acupuncture (can help with pain relief)
- Occupational therapy (can help with self-regulation strategies)

School / Work Accommodations and Modifications

- Allow listening breaks when completing tasks.
- Let tests or exams be taken in a quiet separate room.
- Allow the person to sit away from noise sources.
- Close windows and doors in the classroom or office.
- Dampen noises from chairs and desks with tennis balls or "Hush-Ups ®".
- Allow access to headphones and favoured music or sounds.

Will It Get Better?

Hyperacusis gets better in most cases.

J's Story, Part 2

J. went to an audiologist for a hearing test and a decreased sound tolerance assessment. The evaluation revealed that J. had mild to moderate hyperacusis. The audiologist recommended various strategies to try, as well as a few

sessions of auditory therapy.

After several months, J. is doing much better. Instead of hiding out in their room, J. is better able to participate in family life and occasional extracurricular activities outside the home. Loud noises can still trigger J. into the 'yellow zone' where he is annoyed. However, these triggers no longer lead to daily 'red zones' with meltdowns and outbursts.

J.'s mother is relieved and hopeful knowing that her child is able to receive help for issues that she had to deal with on her own.

For More Information

<https://hyperacusis.net/>

<https://www.tinnitus-pjj.com/>

<https://idainstitute.com/>

<https://successforkidswithhearingloss.com/hyperacusis-over-sensitivity-to-sound/>

<https://relaxkids.com/>

References

ASHA-American Speech-Language-Hearing Association (2015). Hyperacusis. Audiology Information Series. www.asha.org

Jastreboff, P. & Hazell, J. (2004). Tinnitus Retraining Therapy: Implementing the Neurophysiological Model. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511544989

Jastreboff, P. (2018). The course on Tinnitus Retraining Therapy for Management of Decreased Sound Tolerance (Hyperacusis and Misophonia). Emory University School of Medicine, Department of Otolaryngology.

Paulin, J., Andersson, L., & Nordin, S. (2016). Characteristics of hyperacusis in the general population. *Noise & health*, 18(83), 178-184.

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