

Tinnitus Hyperacusis FAQs

What is tinnitus?

Tinnitus is hyperactivity in the hearing system so the person hears an extra sound that other people don't hear. People of any age can have tinnitus. It can be in one ear, both ears, or in the head. It can be constant, occasional, or only once in a while. About 10-15% of people who have tinnitus are distressed by it. For them, there is also hyperactivity in the brain's emotion system, so people feel stressed out, worried, sad, angry, frustrated.

Tinnitus can sound like any sound or combination of sounds including ring, roar, hiss, screech, whistle, buzz, click, hum. Tinnitus often changes loudness or pitch on its own for no reason. It also changes loudness or pitch with body movements, e.g. open mouth wide, yawn, chewing, change position of head, neck, shoulders. It can change depending on loudness of sounds around you.

The first records of tinnitus are on ancient Mesopotamian clay tablets from over 5,000 years ago.

What is decreased sound tolerance (DST)?

Decreased sound tolerance is when people have a negative reaction to sound. There are 2 types of decreased sound tolerance: hyperacusis and misophonia including phonophobia.

What is hyperacusis?

Hyperacusis is from hyperactivity in the hearing and emotion system so the person hears sound extra loud that other people don't hear as loudly. Sound hurts. Like jabbing needles through your eardrums. Sometimes all sound hurts, no matter the pitch or frequency. Sometimes only certain sounds hurt, like a fork scraping on a plate, dishes clattering, a balloon popping, or ambulance siren. People of any age can have hyperacusis.

What is misophonia?

Misophonia is dislike of specific sounds, like teeth sucking, whistling, or people tapping on the keyboard of their phone while texting. The main symptom is being filled with intense rage, possibly including murderous thoughts, when the person hears the sound. It is from a hyperactive emotion system tied to trigger sounds.

Phonophobia is a type of misophonia. Phonophobia is fear of specific sounds, like an air horn, balloon

pop, or unexpected bang. The fear and anxiety typically gets worse when the person is anticipating the sound is going to happen. Phonophobia is sometimes called irrational fear, when it's for sounds not expected to cause anxiety. Symptoms can include feelings of panic, terror or dread, rapid heartbeat, nausea, dry mouth, and trembling.

People can have one or more types of decreased sound tolerance, depending on the individual. Hyperacusis was first identified in the 1980's-1990's by neurologist Dr. Pawel Jastreboff and audiologist Dr. Jonathan Hazell. Over the years, there has been more and more science on hyperacusis, misophonia, and phonophobia.

Are people with tinnitus or decreased sound tolerance faking it?

No. Brain imaging or neuroimaging tests like SPECT, PET, and functional MRI prove people with tinnitus and hyperacusis have differences in their brain activity compared to people who don't have these conditions. People with tinnitus and decreased sound tolerance have hyperactivity in the central hearing system. It can come on gradually or suddenly.

How many people have tinnitus or decreased

sound tolerance?

On average, about 16% of children under age 10 are upset by tinnitus. This drops to about 10% for children age 10 to 18, probably because kids aren't having so many ear infections by then.

Nobody knows how many children have decreased sound tolerance, because scientists haven't come up with a standard question to ask them yet. It might be between 3 to 8%.

On average, about 10-15% of adults with tinnitus are upset by it. This can rise up to 50% for people in the military, especially with wartime experience. About 40% of people upset by tinnitus also have hyperacusis. About 86% of people with hyperacusis as a main concern also have upsetting tinnitus.

About 9% of adults have just hyperacusis.

It's unclear how many people have misophonia although estimates range up to 15%.

It's unclear how many people have phonophobia or noise phobia.

Can people with normal hearing get tinnitus or decreased sound tolerance?

Yes. Many people with decreased sound tolerance have normal hearing. About 50% of people with tinnitus have normal hearing. But recent science on attention found people with tinnitus have divided attention, and don't do as well as people with normal hearing for listening tasks.

Hearing might be called normal on a hearing test, but in the real world, people with normal hearing and tinnitus have the same communication problems in difficult or noisy listening situations as people with mild hearing loss but no tinnitus.

Can people with HL get tinnitus or decreased sound tolerance?

Yes. About 50% of people with hearing loss have tinnitus. Because of divided attention, if you have hearing loss and tinnitus, your communication problems will be worse than expected from your hearing test thresholds.

People with hearing loss can also get decreased sound tolerance, and be oversensitive to sound loudness that doesn't bother other people.

People with hearing loss also have recruitment. This means loud sounds bother them the same as they bother normal hearing people, e.g. fire alarm or very loud soundtrack at movie theatre.

Recruitment is not hyperacusis.

Can Deaf people get tinnitus or decreased sound tolerance?

Just tinnitus. Deaf people can't get decreased sound tolerance since they can't hear sound. Deaf people can get tinnitus, because usually the deafness is caused by problems with the inner ear pathway to the brain.

The central hearing system in their brain works fine. If there is hyperactivity in their brain, they can hear tinnitus like anybody else with tinnitus. About 33% of Deaf people have distressing tinnitus.

What causes tinnitus or decreased sound tolerance?

Sometimes people have loud tinnitus that only lasts for a few seconds, or a minute or two. This is called transient spontaneous tinnitus. Everybody gets it.

Loud noise or music trauma is the most common cause of tinnitus. Personal listening device manufacturers are not required to limit sound to safe levels.

For personal listening, always keep the volume below 50% to protect your hearing. Before buying "safe" headphones for children, check online for current lists of products that protect hearing as advertised (e.g. <https://thewirecutter.com/reviews/best-kids-headphones/>)

Other tinnitus causes include whiplash, concussion, closed head injury, skull fracture, high blood pressure, heart disease, stroke, thyroid disease, diabetes, anemia, dental or jaw problems, surgery, drug or medication side effect, stress, genetics, food allergies, and mercury (amalgam) teeth fillings. People with chronic pain or migraines have more hyperactive hearing systems than average.

A serious hearing health concern for causing tinnitus, hyperacusis, and hearing loss is the ototoxic chemical PG-Propylene Glycol used in non-organic e-cigarette vape juice used by children to adults.

Hyperacusis or decreased sound tolerance is often from the same causes as tinnitus, although sudden noise or acoustic trauma and closed head injuries are common. Causes also include depression, Post-Traumatic Stress Disorder, and pain syndromes like fibromyalgia.

Some people with decreased sound tolerance,

especially hyperacusis, may be a Highly Sensitive Person as described by Dr. Elaine Aron in her website and books. Current science suggests high sensitivity may be related to a serotonin gene (5-HTLPR) also associated with other conditions like depression.

Is there a cure for tinnitus or decreased sound tolerance?

There is no cure for tinnitus. Yet. With treatment or coping techniques, decreased sound tolerance can get better. In the real world, most people with decreased sound tolerance are still bothered by certain sounds even after successful therapy.

What treatments or coping techniques are there?

Medical treatments for tinnitus or decreased sound tolerance can include drugs or surgery.

Decreased sound tolerance like hyperacusis is always treated before tinnitus for non-medical options.

For highly sensitive people, it can be helpful to reduce the number of tasks they're trying to do at once, and reduce the number of stimuli in their environment e.g. bright light, loud noise, scratchy

clothing.

If they're feeling anxious or shaky, that can be an early warning sign they need to slow down, with less activities and commotion around to avoid burn outs or breakdowns. Regular quiet comfortable rests in dim or darkly lit places is helpful.

Most non-medical therapies advertised for tinnitus also help hyperacusis. They aren't advertised for hyperacusis, because it's still ignored or forgotten by manufacturers or therapy developers.

Who are the main care providers?

Audiologists are the primary care providers for people with tinnitus and decreased sound tolerance. There are a variety of services and therapies that help people learn to manage distress and cope better. Prices are usually based on hourly counselling rates (pro-rated as needed), fitting fees, and cost of any prescribed hearing protection, aids or devices.

Family doctors and Ear Nose Throat specialists (otolaryngologists/otologists) can also help people manage better, including any medical treatment needed.

People with severe distress sometimes see

psychologists for counselling on coping better with chronic conditions.

What are some treatment approaches?

Most approaches include sound therapy for tinnitus and hyperacusis. People in the normal hearing and hearing loss communities can use sound therapy. Sound therapy means using music, sound or sound mixes to help lower hearing and emotion system hyperactivity. This often includes hearing aids or combination hearing aids and/or sound generators.

For hyperacusis, people should start softer and slower. Some sound, no matter how soft, is better than no sound. Even if it's only for a few minutes a day to start, for people with severe decreased sound tolerance.

All approaches offer some counselling plus mind therapy if needed. Anyone can use mind therapy whether they are in the normal hearing, hearing loss, or Deaf community. Psychologists offer different types of mind therapy.

The most common is CBT (Cognitive Behaviour Therapy). CBT uses different techniques including cognitive to help people stop thinking about their tinnitus or decreased sound tolerance.

Other techniques include distraction, relaxation, and guided imagery or visualization. Mind therapy helps lower hearing and emotion system hyperactivity. Sadly, most people with tinnitus or decreased sound tolerance are never told about mind therapy options.

Can people use self-help coping tools?

Many people do self-help. Adding sound and sound mixes into their daily life, if possible. Regularly practicing mental techniques or activities to switch the attention of their thoughts, as well as distract or relax them. Popular options include self-help books, healthy lifestyle, exercise, hobbies, games, deep breathing, meditation, or mindfulness techniques.

Consider self-help books and workbooks on how to cope better with tinnitus, hyperacusis, misophonia, phonophobia, insomnia, chronic pain, stress, anxiety, and depression. Some workbooks use a CBT style, meditation, or mindfulness approach. CBT style computerized programs or brain training to improve attention, memory, and concentration can also be used without any referral.

Guided self-help is also possible, but not as available as much as it should be. Audiologists or psychologists can guide people using specific self-

help workbooks or computer programs like computerized CBT for mental health concerns or auditory brain training for problems communicating in noise.

Depending on the approach used, they can often be offered one-on-one or in groups. One-on-one counselling appointments can be in-office or by telehealth distance appointments, usually by phone or skype. This is really useful when there is no local care provider, or when it's difficult for a person to leave their home.

Something can be done for people distressed by tinnitus and hyperacusis. Talk to your audiologist if you have any questions or concerns.

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