



York Teaching Hospital
NHS Foundation Trust

Hyperacusis and other forms of sound intolerance

Information for patients, relatives and carers

Audiology Department

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Caring with pride

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What is Hyperacusis?

The term hyperacusis is generally applied to people who experience everyday sounds as intrusively loud, uncomfortable, and/or sometimes painful. Some people notice an increase in sensitivity after they have had a difficult life event, for example, bereavement. In many people, though, there is no clear reason why hyperacusis started.

Hyperacusis can affect people in varying severities. For some it is only a minor irritation but for others it can have a significant impact on their quality of life; they may avoid environments that trigger their hyperacusis, such as social and professional activities; therefore isolating themselves and in turn reinforcing the fear and anxieties, which then heighten and exacerbate the sensitivity.

Other forms of intolerance to sound are:

- **Misophonia:** a strong dislike to environmental sounds regardless of their volume e.g. the sound of people eating or people sniffing.
- **Phonophobia:** an adverse emotional response creating fear and anxiety around a sound when the sound is present and anticipation of hearing the sound in the future.
- **Recruitment:** A form of altered sound tolerance associated with hearing loss.

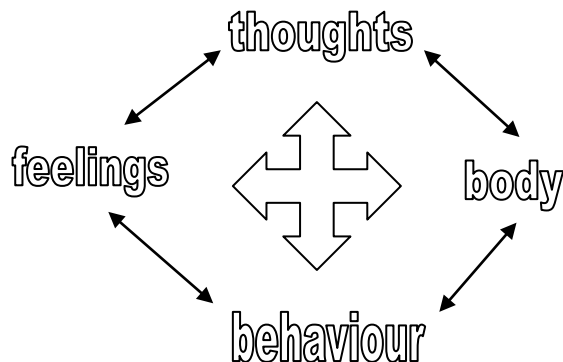
What Causes Hyperacusis?

The specific mechanisms that underlie hyperacusis are not known; however theories usually suggest association with increased sensitivity in the hearing pathway to the brain (Auditory System) which can be influenced by mood. Hyperacusis can be in one in ear, but is most commonly felt in both ears, it can develop suddenly or gradually develop over time.

Physiological and medical conditions associated with the onset of Hyperacusis:

- Exposure to sudden loud noise such as fireworks, a gunshot, or attending a loud music concert.
- Work related noise exposure
- Ototoxic drugs
- Meniere's disease
- Lyme Disease
- Temporomandibular joint problems (TMJ)
- Head injury
- Migraine
- William's syndrome
- Bell's Palsy
- People who find it difficult to process sensory information e.g. those with autistic spectrum disorder or learning difficulties

Other triggers surrounding the onset of hyperacusis can include people who suffer a negative or traumatic life event or a period of increased stress. Hyperacusis can also be associated with conditions associated with emotional wellbeing, such as anxiety and depression.



When we have a negative reaction to a sound we stimulate an automatic ‘fight or flight’ response reflex to help us deal with potentially dangerous events. If we feel frightened, anxious, annoyed, excited or happy, our body secretes adrenaline into our blood stream. Adrenaline increases our heart rate, making the heart beat more strongly, enhances our senses (particularly sight, hearing and touch) and makes us more irritable and jumpy. If our thoughts and feelings towards a particular sound are affected by this ‘fight or flight’ response, it can alter our reaction to that sound in future and lead to a fear of pain or discomfort caused by the sound. We often then develop avoidance behaviour as a protective mechanism.

Tinnitus and Hyperacusis

Tinnitus is generally regarded as a perception of sound that has no external source. Tinnitus is reportedly one of the most common symptoms to affect humanity with around 10% of the adult population aware of it. Tinnitus can be intermittent or continuous and people with tinnitus report hearing a variety of sounds such as low to high pitch ringing. It can even beat in time with your heart. People are generally more aware of it in the absence of any other sound around them.

It is suggested that up to 40% of people who have tinnitus will experience sensitivity to sound or hyperacusis and those with hyperacusis may develop tinnitus; however both conditions can be independent of each other. It does not mean that if you have either one, you are going to develop the other.

Treatment of Hyperacusis

The progression of hyperacusis is unpredictable. For many, hyperacusis is not troublesome and after information and reassurance, surrounding the condition, they will be able to successfully manage it independently. For those who find their hyperacusis intrusive and bothersome, they can be referred for therapy, which is usually provided by their local audiology department, with a clinician who specialises in tinnitus and hyperacusis management. For those whose hyperacusis is related to a medical condition this will be treated in conjunction.

Sound Enrichment

Many people with hyperacusis cut themselves off from sound, trying to avoid the source of their sensitivity. It is generally advised to slowly and gently reintroduce sound into the person's life in an environment they are comfortable and at ease in (controlled exposure to sound). This is called 'Sound therapy' and can be accessed in a number of different ways from using Smart Phone apps, CDs to an ear level sound therapy device, fitted by your audiologist. A white or pink noise sound is most commonly used.

Ear Protection

One common feature of people with altered sound tolerance is that they try and avoid loud sounds. Although this may seem like a common sense precaution, it can turn out to be counterproductive and can even exacerbate the condition. As people avoid sound, their environment becomes quieter. Due to the lack of sound input from external environments the auditory system becomes even more sensitive and can make the hyperacusis even worse.

Ear protection should not be used during normal daily activities e.g. emptying a dishwasher or driving a car as this will not help with learning to manage hyperacusis in the long term. However, it is advised to use ear protection methods when doing something really noisy such as using DIY tools or heavy machinery.

Someone who has become used to wearing ear protection at inappropriate times should consult their therapist about measures for reducing their usage. For advice on appropriate ear protection measures, see the British Tinnitus Association (BTA) leaflet, “Noise and the Ear”. It is available on their website at: www.tinnitus.org.uk/noise-and-the-ear

Relaxation

Being able to relax is important in managing the stress often associated with hyperacusis as it can help to release any physical anxiety response and refocus attention away from the intrusive sounds. There are various techniques which can be taught, including controlled breathing and muscle relaxing exercises.

Psychological therapies, such as Cognitive Behavioural Therapy (CBT) and mindfulness meditation can help in the management of hyperacusis. CBT examines the links between thoughts and emotions and their impact on our behaviour. It focuses on dealing with the feelings associated with sound sensitivity and moving towards accepting the sounds and reducing the stress surrounding them.

Where can I obtain further information?

If you think you have hyperacusis or any other altered sound tolerance it is advised you see your GP and request a referral to Audiology for a hearing test and further advice on how to manage it, if required.

The Hyperacusis Network (www.hyperacusis.net) is an invaluable resource, with much useful and up to date information, lively forums and the opportunity to purchase sound therapy CDs for hyperacusis.

British Tinnitus Association Helpline: 0800 018 0527
www.tinnitus.org.uk

References

Living with Tinnitus and Hyperacusis; (2010) McKenna, L. Baguley, D. McFerran, D. p108

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

Audiology department, The York Hospital, Wigginton Road, York, YO31 8HE, Telephone 01904 726741 or email audiologyadmin@york.nhs.uk

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

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Owner	Jenny Douglas, Specialist Audiologist
Date first issued	November 2017
Review Date	December 2021
Version	2 (issued January 2020)
Approved by	Kate Iley, Head of Audiology
Document Reference	PIL 1124 v2

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