

Tinnitus Explanation

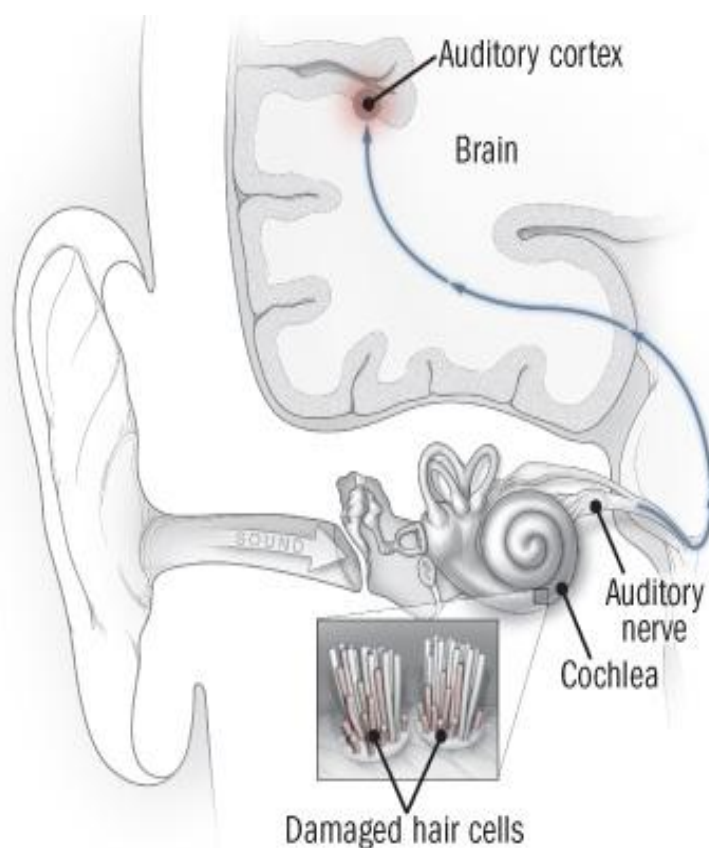
Trafford Audiology Tinnitus Service

Tinnitus is sound that is perceived but is not coming from an external source.

Tinnitus is such a varied condition in that it is different for every individual. Over time, most people with tinnitus habituate to it. Habituation is a natural process where the brain adjusts to the presence of tinnitus and stops responding to it. As a result, the individual becomes less aware of the noise and the tinnitus is less intrusive.

Different things can get in the way of habituation, which may explain why some people remain aware and distressed by tinnitus for longer, whilst other people do not.

What Is Tinnitus?



Tinnitus is thought to be produced in the hearing system in the brain.

Normally, sound travels through the ear into the inner ear (Cochlea) where hair cells transform the sound into electrical signals. These travel to the hearing part of the brain (auditory cortex) along the hearing nerve where the brain interprets this into important or non-important sounds.

If there is a break in the signal (for example damage to the hair cells through hearing loss – which can be very mild), the hearing system doesn't receive the signal it expects and so tries to improve

this with extra activity to “turn up the gain”. This over activity then results in a perception of sound – Tinnitus.

Most tinnitus comes from the hearing system but it can originate in other areas. Our bodies make lots of noises that we don't notice (somatic sounds), but sometimes these can become more noticeable as a tinnitus sound.

Tinnitus may be recognised in the hearing system for many years but we are not always aware of it. The brain is very good at keeping “non-essential” sounds at a level where we don’t perceive the sound and so aren’t aware it’s happening – for example footsteps, fridge noises etc.

We may have noticed an occasional tinnitus sound in the past – for example after a noisy night out, we can experience a ringing in our ears. Once we have slept, this “goes away”. Actually, the brain has just filtered the sound out because it knows it is not an important sound for us.

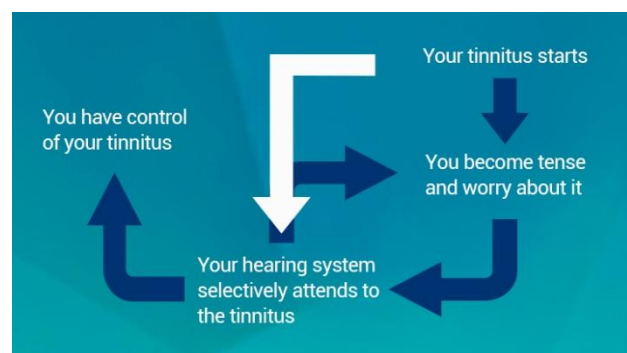
Tinnitus can become more obvious to us for different reasons: a gradual or sudden hearing loss, a virus/illness, ears blocked with wax, head cold or a stressful/emotional event or trauma. At this point, the brain opens its filter system to allow more sounds to pass through and it is at this point that we become aware of the tinnitus and begin to react to it.

The brain relies on reaction to learn what is important to us. If we react to something often enough, our brain recognises it as important (even if it is not a nice thing) and we will always be aware of it in the future – the brain will automatically trigger us to become aware of it. Our brain does this from birth and it is always retraining.

For example, if you buy a ticking clock and then ignore the ticking because it doesn’t bother you, the brain will filter out the ticking and you will hardly be aware of it until you actively listen for it. However, if the ticking causes you to feel annoyed or irritated, the brain feels it must be an important sound to trigger this reaction, so you will always hear the ticking.

With tinnitus, whatever has caused it, if we react to it often enough, the brain thinks it is important and will give it a higher priority so we can always hear it. Reacting to tinnitus is quite normal for everyone. If there is a sound in our ears or head that we cannot account for, we are bound to worry about it and have some sort of reaction.

This brings in a “**Vicious Cycle of Tinnitus**”



Initially, the tinnitus starts and you worry, think about it more – possibly become agitated, anxious, angry etc. Due to this reaction, the hearing system pays more attention to the tinnitus and then it seems worse. The reaction continues or grows and the cycle continues so you feel you have no control over it.

The only way to break through this cycle is to reduce your reaction towards the tinnitus. If you reduce or remove your feelings towards it, the brain reduces the importance and it will then seem less intrusive over time and you will be able to live with it in the background – sometimes not even aware that it is there. Ultimately, the less attention you pay the tinnitus, the less intrusive it will become.

Aggravators of Tinnitus

Tinnitus can spike at any time and be more intrusive on some days than others. There are some known factors that can aggravate tinnitus:

Stress/anxiety/depression; illness; blocked ears; head cold/sinus issues; caffeine (tea, coffee caffeine drinks); alcohol; smoking; loud and persistent noise; Very quiet/silent environments; exercise.

Basically, anything that puts your body out of a normal relaxed state can increase your awareness of the tinnitus. They are not all things to be avoided – like exercise. Mostly, these will all have a temporary effect of the tinnitus awareness. Whilst your body is dealing with the increased stress of the above issues, you may be more aware of tinnitus. However, once the body has relaxed and any toxins are out of your system, the tinnitus will calm down and subside to your “normal” level.

If you notice spikes in the day/week, it is a good idea to keep a “Tinnitus Diary”. Just note down when it became more intrusive and what you have done/eaten/where have you been over the last 24 hrs. You may then see a pattern that is specific to you. This allows you to be more in control of the tinnitus and understand what affects it for you personally.

You may notice tinnitus more after exercise but this is just due to the extra adrenaline running round the body. Once this has calmed down, so will your tinnitus and you should feel better for the exercise.

Tinnitus is very rarely caused by a serious health condition and if there are any indications for this, you will be referred for further investigation. Tinnitus itself will not cause any health issues – headaches, hearing loss etc. Usually, it is the other way around. Tinnitus can be used as an early warning indicator. If you notice your tinnitus spiking but you cannot figure out why, then you could see your GP for a health check and have your blood pressure tested etc.

Strategies For Living With Tinnitus

1. Understanding:

It is important to understand what Tinnitus is, where it is centred in the brain and what affects it on a day-to-day basis. Once you have reassurance and knowledge about tinnitus, you are more ready to accept it in your life and then feel more in control of it.

2. Changing Reaction

As stated above, the more attention you pay to the tinnitus, the more important the brain thinks it is and therefore, the more you will hear it.

By understanding the tinnitus and implementing suggestions below, you will be able to be more distracted from the tinnitus and therefore, react less towards it and pay it less attention so the brain will reduce its importance, which allows you to be able to live with it.

3. Hearing Aids

If you have a hearing loss, the main recommendation to help tinnitus is to wear hearing aids.

Hearing loss puts a strain on the hearing system which is creating tinnitus to fill in the gaps in the hearing signal. If a hearing aid is worn, this provides a better signal so the hearing system does not create as much tinnitus. Aids also provide a more natural distraction as you become more aware of sounds around you. Your NHS Audiologist will advise you about the need for hearing aids and will fit appropriately.

4. Relaxation

As stress and anxiety (about anything) is one of the biggest aggravators of tinnitus, it is important to be able to bring your body back to a normal state of relaxation. This will help all your systems to calm down (including the hearing system) and the tinnitus will go back to a more “normal” level.

This can be achieved in a number of ways:

Relaxation can be as simple as taking a few minutes away from what you are doing if this is causing stress. Just a quick walk, cuppa, sit down etc. can give your brain and body a few minutes break which allows everything to relax.

Breathing exercises can be very effective and easy to do. The most simple is to breathe in slowly, hold the breath for a few extra seconds and then release slowly. It is important to think about how you are breathing and this focus on the breathing allows you to be distracted from your tinnitus and so pay it less attention and allow it to calm down.

Hobbies are a good form of relaxation be it reading, TV, crafts, walking, exercise etc. You can become absorbed in the activity which will distract you from listening to the tinnitus.

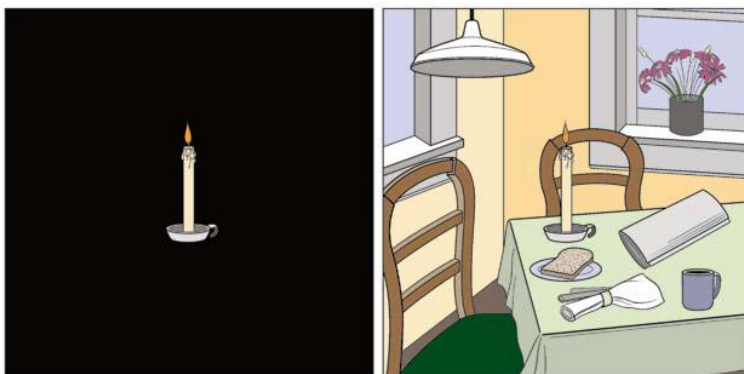
Mindfulness is a relaxation/meditation technique that is easy to use as a distraction technique and also improves mental wellbeing. "An important part of mindfulness is reconnecting with your body and the environment around you. This means waking up to the sights, sounds, smells and tastes of the present moment." That might be something as simple as the feel of a banister as you walk upstairs, concentrating on your breathing, looking at a poster on a wall for a few moments. There is a link at the end for further information about using this technique for tinnitus.

5. Sound Enrichment

If you are busy and occupied, you may have noticed that you are less aware of the tinnitus. However, if you relax in a quiet room or try to go to sleep at night, you may notice that the tinnitus seems to be louder.

If you are busy, the tinnitus is there but you are not paying attention to it, so the brain reduces the importance and you are less aware of it. Once everything goes quiet and you stop/relax, there is less distraction and you will focus on the tinnitus more. In a very quiet room, for example bedrooms, the hearing system reaches out to listen for more distant sounds which puts greater stress on the hearing system. Also, as there is no other distraction, the brain will focus solely on the tinnitus and you will be very aware of it.

Imagine one candle in a dark room. As you enter, you will be instantly drawn to the candle and that is the main focus of your attention.



If you enter the same room with all lights on, the candle will still be there, but you won't pay much attention towards it and may even ignore it.

So, by bringing another sound into the room, the brain will be more distracted and pay less attention to the tinnitus.

Night-time:

A lot of people with tinnitus struggle to get to sleep and to get back to sleep if they wake in the night.

Playing background sounds all through the night is the recommended strategy to help with this.

At night, the sounds need to be natural (preferably). This includes sounds of the sea, rain, wind etc. **Not music.** These are calming and relaxing sounds and are easy to listen to. As they are gentle, they will not wake you in the night as music might.

As you go to bed, start to play the sound in the background. Try not to use phones, tablets and TV when in bed as this can stimulate the brain further so preventing a restful sleep.

When you are ready to sleep, try to engage with the sound and have a mental picture of where you are with the sound – on a glorious beach, in a forest etc. Imagine what you can see and hear and develop this mental picture in your mind. This will help relax you and allow you to be distracted from listening to the tinnitus or thinking about other issues/stresses which can keep you awake.

Hopefully, you will drift off to sleep, but it is very important to keep playing the sound all night even while you are asleep so that there is a distraction for the brain through the night. If you wake during the night, just repeat the above to get back to sleep and even try listening for the sound when you wake in the morning so that you are not listening for the tinnitus instead.

This technique can take time so you need to persevere and do this every night for it to be beneficial in the long-term.

If you really do not like natural sounds, you could try a talking book or talking radio station or even a fan in the room. You need to be able to feel comfortable with what you are listening to, otherwise it creates more stress which makes you more aware of tinnitus so is very counter-productive.

If you have smart technology – phone/tablet etc., there are many free apps which can produce these sounds – see links at the end of this guide. Smart assistants such as Alexa and Google Home also have skills for natural sounds that can be easily enabled.

If you do not have any smart technology, there are portable sound generators that can be purchased and will play a variety of different natural sounds. See end of guide for links.

Daytime:

Anything goes during the day. You can play music, radio, natural sounds – whatever makes you comfortable. If you are trying to read or work from home in a quiet room, using the natural sounds allows you to have a distraction for the tinnitus but not intrusive enough that it will stop your activity.

If you are out and about, waiting for appointments, likely to be in quiet places, it is ok to use an earphone at low level to provide sound enrichment – even at work if your employer is ok with this.

Sound Generators:

If your tinnitus is particularly intrusive during the day and you are finding it very hard to distract, it is possible to use on-ear sound generators. These are similar to hearing aids but do not need to provide amplification. They have a range of sounds depending on the device – for example white, brown, pink noise and also some natural sea/ocean sounds.

These provide a natural low level distraction so you can pay less attention to the tinnitus and therefore, reduce its intrusiveness over time.

TINNITUS RESOURCES FOR PATIENTS

Websites:

- [Tinnitus UK](http://www.tinnitus.org.uk) (www.tinnitus.org.uk) *Formerly British Tinnitus Association*
- provides advice, support, self-help products and information on the latest research. Service includes telephone helpline and web chatbot.

Find information on protecting your ears from loud noise by typing “plug'em” in the search box

Try the newly relaunched “Take on Tinnitus” by typing this in the search box to see useful information and completing short exercise modules to help

- [RNID](http://www.rnid.org.uk) (www.rnid.org.uk) – provides information, support, information on technology / assistive devices
- [Mindfulness Apps / websites](#) - Headspace, Calm, Insight Timer are available to download from the Google or Apple App Store (NB not all are free)
- [Trafford Talking Therapies](http://www.gmmh.nhs.uk/talking-therapies) (www.gmmh.nhs.uk/talking-therapies) - for more structured therapy in the Manchester area –self referral option.

Tinnitus apps

- [Various hearing aid Apps](#) Some offer a combination of sound therapy and relaxation exercises (eg ReSound Relief App)

Contacts:

- [Tinnitus UK](#): see web link above or Tel: 0800 018 0527
- [RNID](#): Tel: 0808 808 0123. Email: contact@rnid.org.uk
- [Manchester Tinnitus Support Group](#): Meets on first Thursday of each month from 1pm. Everyone is made very welcome and the group often provides interesting talks and lots of support.

Manchester Deaf Centre, Crawford House, Booth Street Manchester M13 9GH. Tel: 0161 2769333. Email: manchestertinnitus@gmail.com

- [Trafford Talking Therapies](#)
Tel: 0161 271 0190 listen to message and select area required

If you have any queries, please contact the Trafford Audiology Department via one of the methods below:

Phone: 0161 746 2304

Email: Trafford.audiology@mft.nhs.uk