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Acknowledgements

The Tinnitus Clinic has clinics across the UK, providing the latest evidence based treatment and therapy options.

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About tinnitus

Tinnitus affects over 10% of the adult UK population, affecting genders equally, and for each person the effects of the symptoms and impact are different. When the symptoms first strike, patients are highly anxious and bewildered by the variety of information which is unfortunately not always accurate.

There has been very little research into tinnitus in children, but it is known that children can develop tinnitus. They are less likely to be bothered by the condition but if tinnitus is present or suspected, children should be referred to the local Paediatric Audiology service.

The aim of this booklet is to provide information for General Practitioners and other health care professionals working within a primary care setting who are managing that first contact with a patient with bothersome tinnitus.

The information has been collated from the experiences of our specialist audiologists who are experts in the diagnosis, treatment and management of tinnitus. It is not intended to replace any formal medical training in tinnitus nor does it replace NHS or local guidelines which should always be consulted.

What is tinnitus?

Tinnitus is a conscious awareness of a sound in the ears or head that is not due to an external noise. Tinnitus usually arises as a result of the abnormal firing of nerve cells in the area of the brain which processes sound (neural synchrony).

Tinnitus can affect one or both ears and be of a different nature, sound and intensity in either ear.

The main cause of tinnitus is hearing loss. We all lose our hearing to some extent during life. Tinnitus inception has been linked to hearing loss that may not be revealed by standard pure tone audiometry.
There are many triggers for tinnitus such as exposure to loud noise, ear or head injuries, build up of ear wax, diseases of the ear and ear infections, side effect of medication, or a combination of these.

Patients in the acute stage of the condition often display high levels of anxiety. The central auditory system is influenced by the limbic system, within the brain, which controls emotions and mental state. When a person gets stressed, anxious or excited, this can increase the awareness of tinnitus symptoms. While this process is not fully understood, it is well documented.

By providing good, evidence based information at the first contact, this anxiety should reduce and the tinnitus symptoms may reduce accordingly.

**Is all tinnitus the same?**

Every person with tinnitus has their own very personal tinnitus sound. It can be a high or low frequency tone, several sounds together, and its volume can vary over time.

Patients benefit from being reassured that although tinnitus can sometimes be very distressing it is not usually associated with any dangerous medical conditions and, therefore, quality of life can be recovered.

The majority of individuals who are upset by their tinnitus learn to take control through doing things for themselves to improve their tinnitus perception and modify their emotional reaction to the sound.
Subjective tinnitus
Subjective tinnitus is by far the most common type of tinnitus and is described as a persistent noise that can only be heard by the person who has it.

It can be single or multiple tones which can be either high or low in pitch. Subjective tinnitus sounds can also be buzzing, a hissing or a roaring sound. It is a consistent sound which does not vary widely over time. Many people with subjective tinnitus will report that they have difficulty hearing because of the internal sound of the tinnitus symptoms.

Objective tinnitus
This type of tinnitus is uncommon. On close examination, objective tinnitus can be heard by others and is caused by stenosis within blood vessels, middle ear muscle contractions or a variety of other somatosounds.

Pulsatile tinnitus
Pulsatile tinnitus is a form of objective tinnitus which is reported by the patient as a persistent rhythmic noise.

It will appear to be heard in time with a person’s heart beat. Pulsatile tinnitus is caused by some change in blood flow in the vessels near the ear or to a change in awareness of that blood flow.
Musical tinnitus (Musical Hallucination)
People with musical tinnitus will say that they can hear music when none is being played.

It is a rare condition and is different from the hissing and buzzing which people with subjective tinnitus perceive. Musical tinnitus can be very distressing due to the continual and repetitive nature of the tune or melody that is perceived.

Hyperacusis (pronounced hyper-a KOO-sis)
Hyperacusis is a condition of over sensitivity to even moderately loud sounds and is assumed to be caused by a similar brain mechanism to tinnitus.

Like tinnitus, hyperacusis can usually be improved by using sound therapy procedures, although for hyperacusis the level of added sound is gradually increased systematically over a period of weeks or months. This treatment process is called “desensitisation”.
At the first appointment

What the patients might say:

• I can hear buzzing /ringing /whooshing /whirring etc in ears or in head
• Not hearing voices properly
• I can’t sleep or concentrate
• Fullness in the ear
• Sounds in one ear only
• Don’t like loud noises and they hurt
• Hearing music when there is none
• I am worried I have a brain tumour

What the patients need at that first appointment

• Reassurance and hope
• Explanation of the condition
• A physical check by GP or nurse
• Something they can do right away for themselves
• A diagnosis
• Knowing that the GP and others will work with them to create a management plan aimed at reducing symptoms and getting the patient back to their desired way of life

What are the facts that can reassure the patient?

• Although tinnitus affects 10 – 15% of the adult population, it is rarely caused by a serious underlying pathology
• Tinnitus can sometimes resolve itself within the first three months or so
• Although there is no cure for tinnitus, there are interventions available which can make a real positive difference. Many patients report having been informed there is no treatment and they just have to learn to live with it. This can lead to catastrophic thinking which fuels the condition
• A patient’s awareness of tinnitus is often affected by anxiety or frustration so stress management can improve tinnitus

Basic tests to be done at first appointment

Otoscopy
• Check ears for wax. If present in excess clear it and see whether the tinnitus improves over the next 4 – 6 weeks
• Unusual features of ear canal or tympanic membrane may need investigation (see red flags section)

Does the patient have hyperacusis?
• Patient may report hearing sounds disproportionately loud, which cause pain or discomfort e.g. Likened to TV with volume permanently raised
• Often occurs with tinnitus but not always
• Avoiding loud noises or wearing ear defenders to block noise permanently can lead to greater sensitivity, not less
Encourage the patient to help themselves by:

- Access self help information from a reliable source, such as the British Tinnitus Association, Action on Hearing Loss, American Tinnitus Association or The Tinnitus Clinic

- Read the information and understand what is happening within the hearing part of their brain

- Take regular exercise

- Have a balanced healthy diet

- Sleep management – soft music, sound generators, avoid stimulants before bed time

- Tell friends, colleagues and family so that there is understanding at home and work

- Do not listen out for the noises. This monitoring reduces any chance of the patient’s brain becoming habituated to the noises
<table>
<thead>
<tr>
<th>Be Alert for...</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinically significant depression, anxiety that is not being managed medically or psychologically</td>
<td>Tinnitus is often associated with mental health conditions. If this is a cause of concern, consider initiation of pharmacotherapy and/or referral to clinical psychology</td>
</tr>
<tr>
<td>Sudden hearing loss</td>
<td>Urgent A&amp;E or ENT referral</td>
</tr>
<tr>
<td>Abnormal appearance of ear canal/tympanic membrane</td>
<td>Treat infection/perforation first, consider microsuction for debris removal</td>
</tr>
<tr>
<td>Pulsatile tinnitus that has not been previously investigated via imaging</td>
<td>Referral to ENT or request relevant CT/MRI scans</td>
</tr>
<tr>
<td>Unilateral tinnitus that has not been previously investigated via imaging</td>
<td>Referral to ENT or request relevant MRI scan</td>
</tr>
<tr>
<td>Diagnosis of Hyperacusis</td>
<td>Audiology or ENT referral</td>
</tr>
<tr>
<td>Objective tinnitus heard by patient and examiner</td>
<td>ENT Referral</td>
</tr>
<tr>
<td>Tinnitus accompanied by dizziness or vertigo that is not being managed medically</td>
<td>ENT referral</td>
</tr>
<tr>
<td>Tinnitus with conductive hearing loss previously not diagnosed</td>
<td>ENT referral</td>
</tr>
</tbody>
</table>
Management

Ear protection considerations for newly diagnosed patients
Auditory damage as a result of noise exposure can cause a dramatic escalation of tinnitus symptoms. Therefore, it is imperative that ear defence is utilised in dangerously loud environments.

Ear protection made for an individual using impressions of the ear canals can incorporate a variety of different filter types. These provide appropriate protection in a multitude of different environments, granting optimal protection. Speech and music will sound clear with all the different ‘voices’ in proportion, but hearing will not be damaged by intensity or loudness if the ear protection is used as advised.

Relaxation exercises for patients with tinnitus
These are the basic principles of relaxation which may be of help to your patient.

Examples of relaxation exercises:

- Find a comfortable position, and breathe in slowly and clench your fist. Feel the tension in your hand and wrist. Now breathe out, and as you do so relax your hand and feel the difference.

- Extend this to other parts of your body, such as your other hand, each arm, leg and foot, your back and neck, face movements, and jaw clenching.

- Breathe slowly and deeply, hold your breath a moment, relax then let it out, wait a moment, then breathe slowly and deeply again, and so on.
Once the patient has learned these breathing and muscle relaxation exercises, they should be encouraged to do them regularly, wherever and whenever the patient can find the time and space.

It will take practice, but the benefits will be felt over time and the patient will gradually learn how to relax their body without having to do the exercises.

Some people find that aromatherapy, improved posture, massage, reflexology, craniofacial therapy, yoga, and tai chi have similar relaxing benefits, as can simply resting in a relaxing environment, perhaps with special aromas, dim lights, and soft music.

**Sound therapy**

Many patients would benefit from sound therapy which can be easily and simply applied at home.

Playing natural sounds, such as from sound generators or sound boxes, may be helpful in reducing the contrast between the level of your tinnitus and the level of background sound. In turn, this reduces the intrusiveness of the tinnitus and the tension it causes, thus promoting the habituation process and interrupting the vicious cycle described above.
Sleeping can very often be the most difficult thing to achieve when tinnitus first appears. The aim of the simple rules which follow is to establish a routine which resets the ability to sleep.

**Early evening**

- Spend 15 – 20 minutes each evening, writing down any worries and considering how to resolve them
- Limit the amount of caffeine (tea, coffee, cola, etc.) alcohol and nicotine taken
- Keep active during the day but avoid exercise for up to two hours before bedtime
- Try to avoid stressful or exciting television, books or films
- Make sure the bedroom is calm and tidy, and is neither too hot nor too cold
- Prepare any sound therapy

**One hour before bedtime**

- Turn off phone and computer
- Do simple relaxation exercises for 20 minutes
- Do not have anything further to eat
- Take a warm bath or relaxing shower

**Bedtime**

- Do not read, watch TV or use your smart phone in the bedroom
- Put the light out immediately after going to bed
- Wear loose fitting night clothes
Morning

• Get up at the same time every morning, regardless of how poor the previous night’s sleep has been
• Do not nap or take recovery sleep the following day
• Establish a routine and estimate how much sleep is achieved. It is useful to estimate how much sleep is actually achieved and then spend only that amount of time in bed

Tinnitus affects every patient differently and therefore patient management is particularly challenging for primary care physicians. What one patient finds non-bothersome, another patient will find intolerable.

The advice in this leaflet can be tailored to each patient to help avoid their negative responses to their tinnitus spiralling out of control.

Onward referral and guidance

For more or further advice on patient management within local guidelines contact your local NHS ENT, Audiology or Tinnitus Service.

The Tinnitus Clinic accepts self pay and private medical insurance patients. E-mail info@thetinnitusclinic.co.uk for clinics local to you.