

# Tinnitus

## Red flags

- Pulsatile tinnitus

## Background

### ▼ [About tinnitus](#)

#### About tinnitus

Tinnitus is common and symptoms and incidence increase with age. It may indicate a problem in the auditory system. Serious pathology is rare but unilateral tinnitus needs to be investigated.

Tinnitus is usually at its loudest and most annoying soon after it presents. Therefore, if there is a non-sinister cause, reassurance that it often improves can be helpful.

## Assessment

### Practice point

#### Always investigate unilateral tinnitus

All unilateral tinnitus needs further investigation to exclude acoustic neuroma or arterio-venous malformation.

1. Ask about nature and history of tinnitus. If:

- constant, consider ▼ [common causes](#).

#### Common causes

- Recent trauma, e.g. loud noise, head injury, barotrauma. Tinnitus due to this should resolve over hours.
- Noise exposure. Most tinnitus is of gradual onset and associated with hearing loss of presbycusis or noise damage.
- Ototoxic medications include:

- Gentamicin

- Vancomycin
- Macrolides
- Loop diuretics
- Salicylates
- NSAIDs
- Quinine
- Some chemotherapy agents

- fluctuating, with or without vertigo or deafness, consider [Mènière's disease](#).

#### **Mènière's disease**

- Episodic vertigo, tinnitus, and sensorineural hearing loss – usually low frequency.
- May experience a sensation of fullness in the ear.
- Tinnitus often worsens over time.
- Attacks last 1 to 24 hours.
- Usually in patients aged 20 to 50 years.
- Males and females are equally affected.

- pulsatile, consider [vascular cause](#).

#### **Vascular cause**

Vascular causes of tinnitus include:

- Atherosclerosis of vessels in the head and neck
- Arteriovenous malformations
- Vascular tumours
- Benign intracranial hypertension

2. Consider anxiety and depression which are commonly associated with chronic tinnitus.

3. Examination:

- Check:
  - ear canal, and if possible remove wax.
  - ear drum for effusion, infection, or other abnormalities.
  - head and neck. If pulsatile tinnitus, look for a vascular cause. Listen for carotid or temporal bone bruits.

- If unilateral tinnitus, perform a [neurological examination](#) to exclude suspected [acoustic neuroma](#) or arterio-venous malformation.

### Acoustic neuroma

- Unexplained cause and sensorineural hearing loss with asymmetry of 20 dB or more at 2 consecutive frequencies between 500, 1000, 2000, and 4000 Hz.
- Any asymmetry with associated unilateral tinnitus, vertigo or imbalance, or other neurology, e.g. loss of corneal reflex or facial sensation, facial weakness, or cerebellar signs.
- A family history of neurofibromatosis type 2:
  - A central form with central nervous system tumours rather than skin lesions.
  - Tend to have bilateral acoustic neuromas.

### Neurological examination

This includes:

- muscle tone, reflexes, power, and co-ordination.
- cerebellar signs – nystagmus, ataxia, dysdiadochokinesia (inability to perform rapidly alternating movements), hypotonia.
- cognitive function.

1. For asymmetrical sensorineural hearing loss, arrange an audiogram.

## Management

1. If tinnitus associated with significant neurological symptoms or signs, e.g. facial weakness, request [urgent ENT assessment](#).
2. If pulsatile tinnitus, request [urgent suspected cancer ENT assessment](#).
3. Request [adult audiology assessment](#) via Audiovestibular Medicine (Audiology) if:
  - unilateral tinnitus.
  - bilateral tinnitus.
  - tinnitus that is causing distress despite primary care management.
4. Be aware that once a serious underlying condition has been ruled out, the impact on quality of life is important. Aim the treatment at managing the tinnitus:
  - If associated with or aggravated by stress, consider [Primary Mental Health Support Service](#) courses or input.
  - Manage [depression](#) or anxiety appropriately.
  - Note, medication is generally of no benefit.

- Advise the patient of [lifestyle changes](#) as they may be beneficial.

#### Lifestyle changes

- Avoid exposure to loud noise.
- Foods do not directly cause tinnitus but eliminating alcohol, caffeine, cheeses, salty food, and quinine (tonic water) may help some patients.
- [Stopping smoking](#) may help.
- Advise regular exercise, relaxation, and avoiding becoming overtired.
- Control blood pressure.
- At bedtime play soothing music or white noise, e.g. fan or masking device.

- Educate and provide patient information.

5. Consider stopping an [ototoxic medication](#) as it may help.

#### Ototoxic medication

Often, tinnitus is the first sign of ototoxicity.

Discontinuing these medications can prevent progression to hearing loss or balance systems dysfunction in some patients, even if tinnitus does not resolve.

Ototoxic medications include:

- Gentamicin
- Vancomycin
- Macrolides
- Loop diuretics
- Salicylates
- NSAIDs
- Quinine
- Some chemotherapy agents

6. If bilateral tinnitus is associated with hearing loss, request [routine ENT assessment](#) for hearing aids or white noise generators if indicated.

## Request

- If tinnitus associated with significant neurological symptoms or signs, e.g. facial weakness, request [urgent ENT assessment](#).
- If pulsatile tinnitus, request [urgent suspected cancer ENT assessment](#).

- Request [adult audiology assessment](#) via Audiovestibular Medicine (Audiology) if:
  - unilateral tinnitus.
  - bilateral tinnitus.
  - tinnitus that is causing distress despite primary care management.
- If bilateral tinnitus is associated with hearing loss, request [routine ENT assessment](#) for hearing aids or white noise generators if indicated.

## Information

### ▼ [For health professionals](#)

#### Further information

- NICE Clinical Knowledge Summaries (CKS):

- [Ménière's Disease](#)
- [Tinnitus](#)

- Patient – [Tinnitus](#)

### ▼ [For patients](#)

- British Tinnitus Association – [All You Need to Know About Tinnitus](#)
- Hearing Link – [Tinnitus](#)
- Royal National Institute for Deaf People (RNID) – [Tinnitus](#)

SEND FEEDBACK

## SOURCES

## PAGE INFORMATION

Last Updated: 28 April 2023

Last Reviewed: 21 December 2022

Keywords: —

Topic ID: 571028