

## PATIENT INFORMATION

# MRI Scan for asymmetric hearing loss or unilateral tinnitus

## What you need to know

You have been offered an MRI scan after having a discussion and hearing test with the audiologist. An MRI scan has been offered to you due to asymmetric hearing loss (this is when the hearing is different between the two ears) or due to unilateral (one sided) tinnitus.

This leaflet will explain why an MRI scan has been offered and what to expect.

### Why have I been offered an MRI scan?

Due to your symptoms an MRI scan has been offered to try and help identify if there is a cause for these symptoms.

In a very small percentage of people, having unilateral tinnitus or asymmetric hearing loss may indicate the presence of a benign (non-cancerous) growth on the vestibulocochlear (hearing and balance) nerve. This is called an acoustic neuroma (sometimes alternatively called vestibular schwannoma).

### Will having an MRI scan improve my symptoms?

An MRI scan will tell us whether an acoustic neuroma is present. Having an MRI scan will not improve your hearing loss or tinnitus. Generally, the audiologist will discuss how to manage your hearing loss and/or tinnitus at your initial appointment.

### What is an acoustic neuroma?

An acoustic neuroma is rare and affects approximately 1 to 2 people in every 100,000. In most cases, the cause is unknown.

The vestibulocochlear nerve runs through the internal auditory meatus; this is a narrow bony channel running from the brain to the inner ear. The acoustic neuroma grows in the bony channel, and it can press on the cochlear (hearing) portion of the nerve. This is what causes hearing loss and/or tinnitus.

Acoustic neuromas are slow growing.

### What is an MRI scan?

MRI stands for magnetic resonance imaging. An MRI scan uses a strong magnetic field, radio waves and a computer to produce a detailed picture of your body. It is a non-invasive procedure that does not involve any ionising radiation and can be done as an outpatient.

### What happens in an MRI scan?

You will be asked to lie down on a table that is moved into a long cylindrical tunnel. For a scan of the ears, you will go headfirst into this tunnel. You will be given ear plugs as the MRI scan can be noisy. Sometimes a frame will be put around your head. You need to lie very still during the MRI scan to get the best image. You can communicate with the radiographer through an intercom, and they will be able to see you. The time in the MRI scanner is generally less than 10 minutes but your appointment will be longer than this.

### Can anyone have an MRI scan?

MRI scans are very safe, and most people can have them.

There are some safety considerations before having an MRI scan. The audiologist will ask these questions if you are proceeding with the MRI scan. These will probably be asked again when you go for your MRI scan.

You may not be recommended for an MRI scan if you have:

- A pacemaker
- A PVP shunt
- A history of metallic objects within the eye orbits

### What happens after I have had the MRI scan?

You will not be given the results on the same day as the scan. The radiologist will review your scan, and a report will be made available. Either the audiology or the Ear Nose and Throat (ENT) department will be in touch with you to let you know the results. This will either be by phone or letter.

### Will the MRI scan look at other areas of my brain?

The focus of the MRI scan will be on your internal auditory meatus (inner ear and the nerves). Sometimes the radiologist will comment on other structures or findings they see on the scan. We call these incidental findings. These can be normal changes that are seen due to age, or other benign findings that are picked up but do not need any other treatment or investigation. In rare circumstance they may pick up other problems that do need further investigation.

When an incidental finding is found we will get an ENT consultant to review the scan to see if any further appointments or investigations are needed. Sometimes we will also need to inform the GP of these findings.

#### What happens if an acoustic neuroma is found?

In the unlikely event that an acoustic neuroma is found, you will be contacted directly by ENT in Torbay to discuss the results.

All patients with a finding of an acoustic neuroma are referred to the ENT/neurosurgical team at Derriford Hospital in Plymouth. You may then be required to undergo another scan locally at Torbay, or to visit the team in Derriford for an appointment in person to discuss your options. It is important to note that whilst some acoustic neuromas will require surgical intervention, not all require treatment, and often a watch and wait approach is adopted in the first instance with repeated scans to monitor for any growth.

The ENT team at Torbay will not be able to tell you whether you are more likely to require surgery or more likely to require monitoring. Instead, this will be a discussion between yourself and the team at Derriford Hospital.

#### Further Information

[BANA UK | British Acoustic Neuroma Association](#)

[Vestibular Schwannoma \(VS\) – British Skull Base Society](#)

[MRI scan - NHS](#)

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For further assistance or to receive this information in a different format, please contact the department which created this leaflet.