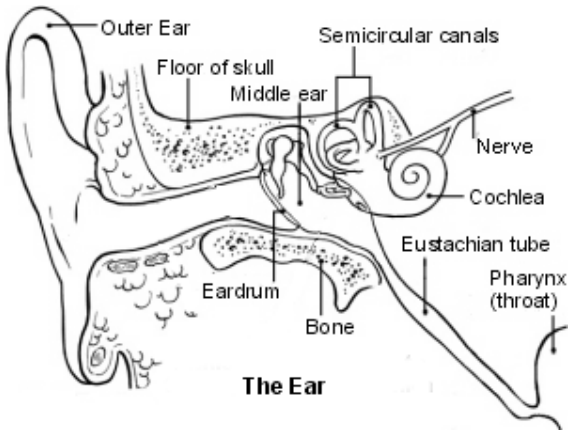
Labyrinthitis and vestibular neuritis

This leaflet explains what labyrinthitis and vestibular neuritis are and how they are treated or managed.

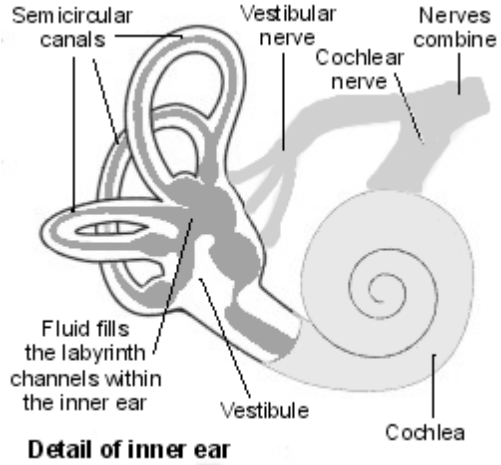
What is the labyrinth and what does it do?

The labyrinth is in the inner ear. The inner ear includes the cochlea, vestibule and semi-circular canals. These are small 'shell-like' structures in which there is a system of narrow fluid-filled channels called the labyrinth. The semi-circular canals sense movement of your head and help to control balance and posture. The cochlea is the organ of hearing.

There are three semi-circular canals, which are roughly at right angles to each other and sense head movement in different directions – left-right, forward-back, and up-down. The semi-circular canals are connected to a larger fluid filled chamber called the vestibule, which in turn is connected to the fluid filled canal in the cochlea.



The Ear



Detail of inner ear

(Source: www.patient.co.uk)

Head movements are sensed because when you move your head, the fluid in the labyrinth within the semi-circular canals moves too. The movement of the fluid moves tiny fine hairs that are on the inside lining of the labyrinth. When the hairs move, this triggers nerve messages to be sent to the brain via a nerve called the vestibular nerve. This gives the brain information about the movement and position of your head, even when your eyes are closed. Looking with your eyes, and nerve messages from the joints and muscles of the body also help to tell your brain about your position and posture. However, a properly working labyrinth in each ear is needed for a good sense of posture and balance.

What is labyrinthitis and vestibular neuritis?

- **Vestibular neuritis (sometimes called vestibular neuronitis)** means inflammation of the vestibular nerve. This is the nerve that comes from the inner ear that takes messages from the semi-circular canals to the brain.

- **Labyrinthitis** means inflammation of the labyrinth in the inner ear. This causes the same symptoms as vestibular neuritis, with the addition of hearing loss.

What are the symptoms?

The main symptom is vertigo, a feeling of spinning or moving when still. Initially, the vertigo can be quite intense lasting 1-2 days, though this may be longer. People may also feel nauseous or vomit and symptoms are often worse on movement. The two conditions are separated by their associated symptoms: labyrinthitis is typically associated with hearing difficulties and tinnitus; neuritis is typically not.

What is the cause?

The exact causes are not known, although labyrinthitis and vestibular neuritis are thought to be most often caused by a viral infection. The infection may occur at the same time as, or just after, a common viral illness such as a sore throat, glandular fever, flu, or a cold. Some people, however, are not always aware of a viral infection and develop the symptoms spontaneously. Very occasionally, labyrinthitis may be caused by a bacterial infection in the middle ear which then spreads to the inner ear.

How common is it?

Exact figures are unknown, although it is estimated that about 5% of all dizziness is due to labyrinthitis or vestibular neuritis.

What causes the dizziness?

The balance organs in our ears are used to working together, sending information to the brain to keep us steady. However, if one balance organ is sending less information to the brain than the other, this can lead to dizziness. At first, people typically experience an intense and constant spinning sensation lasting several days. Following this initial period, the dizziness is then mainly evoked by head movements.

Are my symptoms likely to improve?

Yes! Our brain is quite good at compensating for this difference in balance organ function over time and typically people start to feel better after a few days or weeks. However, this process can be speeded up by performing a set of individually tailored balance exercises. These aim to evoke the symptoms of dizziness in a mild and controlled way in order to help the brain accept the changed signals or to ‘re-calibrate’ itself. By remaining active and performing the exercises, ideally for 10-15 minutes, twice a day, you should notice an improvement in your symptoms within a few weeks.

Is it likely to happen again?

Fortunately, for most people (over 95%) vestibular neuritis or labyrinthitis is a one-time experience.

Contact details:

If you have any concerns or need further advice about your condition or treatment, then contact the Balance Team in the Audiology Department on Tel: 0118 322 7238

Email: audiology.royalberkshire@nhs.net

Website: www.royalberkshire.nhs.uk/audiology

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Audiology, January 2024.
Next review due: January 2026.