

National Hospital for Neurology and Neurosurgery

Inner ear balance problems
Department of Neuro-otology

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Contents

How does the inner ear help control our balance?	3
What happens if there is a problem with the inner ear balance mechanisms?	4
What are the causes of inner ear balance problems?	5
How do we recover from an inner ear balance problem?	6
How do doctors treat inner ear balance problems?	6
Why do some people have difficulty recovering from an inner ear balance problem?	7
Why is my inner balance problem worse on some days and better on others?	8
What about travelling?	9
Where can I get further information?	10
Where to find us	11
Contact details	12

Your doctor in the department of Neuro-otology at the National Hospital for Neurology and Neurosurgery has diagnosed you with a balance disorder related to the inner ear. This booklet has been written to provide you with some more information about this diagnosis.

How does the inner ear help control our balance?

In addition to hearing, the inner ear is also important for controlling our balance. We have two balance organs (one in each inner ear) and each of these has set of receptors that detect movements of our head.

These receptors can detect rotational movements of the head -for example if you sat in a swivel chair and the chair was spun around. The receptors can also detect when the head moves in a straight line – if you sat in an office chair and someone pushed the chair across the room in a straight line.

When our inner ears detect these head movements, they send signals to our brain to let us know which direction we are moving in. The brain then sends this information on to our eyes which helps us to keep our vision in focus even when our head is moving (for example, a footballer can keep his eye on the ball even when he is running around).



Picture 1: The inner ear is involved in hearing and balance

What happens if there is a problem with the inner ear balance mechanisms?

An inner ear balance problem means that one or both of your inner ears has stopped sending accurate signals to your brain. This can cause the following type of problem:

- Feeling dizzy and off-balance when walking around, particularly if you move your head quickly (such as looking side to side when about to cross the road).
- Feeling like you are moving even when you are not - when this is severe people can even have a spinning sensation.
- Feeling dizzy and unbalanced when you move your eyes quickly, or if there are lots of things moving around in your field of vision, for example people might feel dizzy in a busy supermarket.

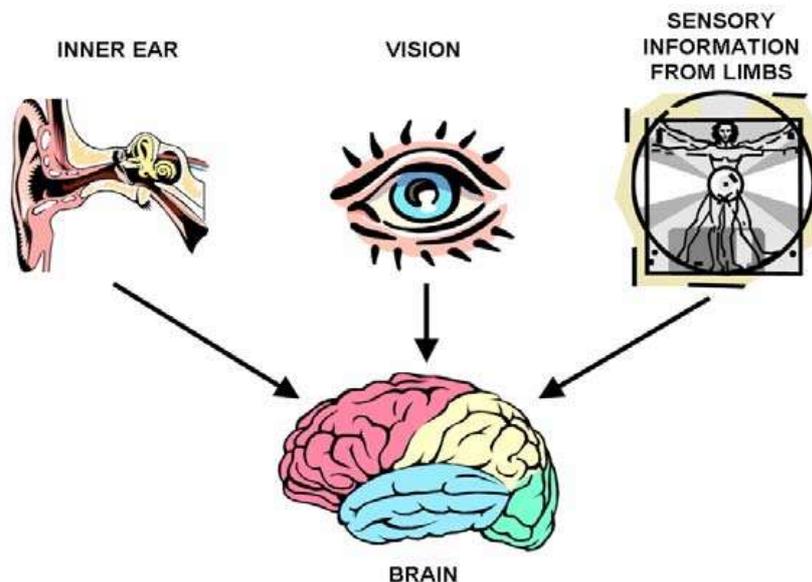


Figure 1: The inner ear is one of the three main sensory inputs used by our brains to control our balance

What are the causes of inner ear balance problems?

There are many different causes of inner ear balance problems although sometimes a cause will not be found. Some of the commoner causes are:

- A viral infection of the inner ear known as vestibular neuritis
- Inner ear problems related to migraine for example migraine associated dizziness
- Damage to the inner ear following a head injury
- Ménière's disease (a condition where the inner ear is under too much pressure, this is usually accompanied by hearing loss and ringing in one ear)

How do we recover from an inner ear balance problem?

Most people recover well from an inner ear balance problem. For example, a viral infection will make people feel very dizzy and off balance for the first few days. However, these symptoms improve over the following days and weeks, even if the viral infection has caused some damage to the inner ear. This process of recovery from an inner ear balance problem is known as **compensation**.

How do doctors treat inner ear balance problems?

Research has shown that the best way to recover from an inner ear balance problem is to perform specially designed exercises to help speed up the process of **compensation**.

These are called **vestibular rehabilitation** exercises and must be performed regularly, for a few minutes four times a day. They are designed to provoke your symptoms of dizziness in a regular, controlled way, so that your brain can adapt to the inner ear balance problem. Your doctor will advise you and give you some written information that tells you how to do the exercises and you may also be referred to a physiotherapist.

Carrying out regular, daily vestibular rehabilitation exercises is the most important part of any inner ear balance treatment programme: they are critical for recovery.

Medicines used for attacks of dizziness are not suitable long-term treatments for inner ear balance problems. If taken regularly they may interfere with compensation and delay recovery. Short-term (a few days) use of some medications can help relieve attacks of severe dizziness and nausea that some people can experience. An inner ear problem due to Ménière's disease or migraine may require medicines to help treat these conditions.

Why do some people have difficulty recovering from an inner ear balance problem?

There are factors which are known to slow recovery from an inner ear balance problem, these include:

- Not regularly performing the vestibular rehabilitation exercises. These exercises are the most useful treatment for most inner ear balance problems and should be performed every day. Occasionally people find that the exercises make them feel too dizzy. If this happens you must tell your doctor or physiotherapist so that your exercise

programme can be adjusted.

- Continuing to take medicines for balance. Certain medicines can interfere with the process of compensation for an inner ear balance condition. Examples of tablets that can interfere with compensation if taken in the long term include Stemetil (prochlorperazine), Serc (betahistine) and Stugeron (Cinnarazine). We will advise you about which medicines are suitable to take for your condition.
- Suffering from stress, anxiety or depression. Stress, anxiety, panic attacks, fear of going out alone and depression can all follow on from a balance problem and can slow down recovery. They may need treatment in their own right. If you have any questions or concerns, please discuss these with your doctor.

Why is my inner balance problem worse on some days and better on others?

Inner ear balance symptoms can change from day to day. Factors that are known to bring on symptoms include:

- Being generally unwell, for example having a heavy cold
- Stress, anxiety and lack of sleep

- Alcohol
- Long car or bus journeys, or a long flight

What about travelling?

Some people with an inner ear balance problem are more likely to feel unwell or nauseous when travelling in cars, coaches, buses, trains, planes or by sea. You may find that some standard motion sickness tablets are helpful. Please ask your pharmacist or GP.

Flying is generally safe with an inner ear balance problem; however some people can feel dizzy after a flight. This may be due to changes in middle ear pressure during the flight. It is helpful to prevent pressure problems when flying by regularly chewing and opening your mouth widely when the plane is ascending and descending. This will open up the tube that connects your nose to your ear (the Eustachian tube). A nasal decongestant spray from your pharmacist can also help.

Where can I get further information?

Action on Hearing Loss (formerly Royal National Institute for the Deaf (RNID))

Telephone 0808 808 0123

Textphone 0808 808 9000

SMS 0780 0000 360

<http://www.actiononhearingloss.org.uk/supporting-you/factsheets-and-leaflets/ears-and-ear-problems.aspx>

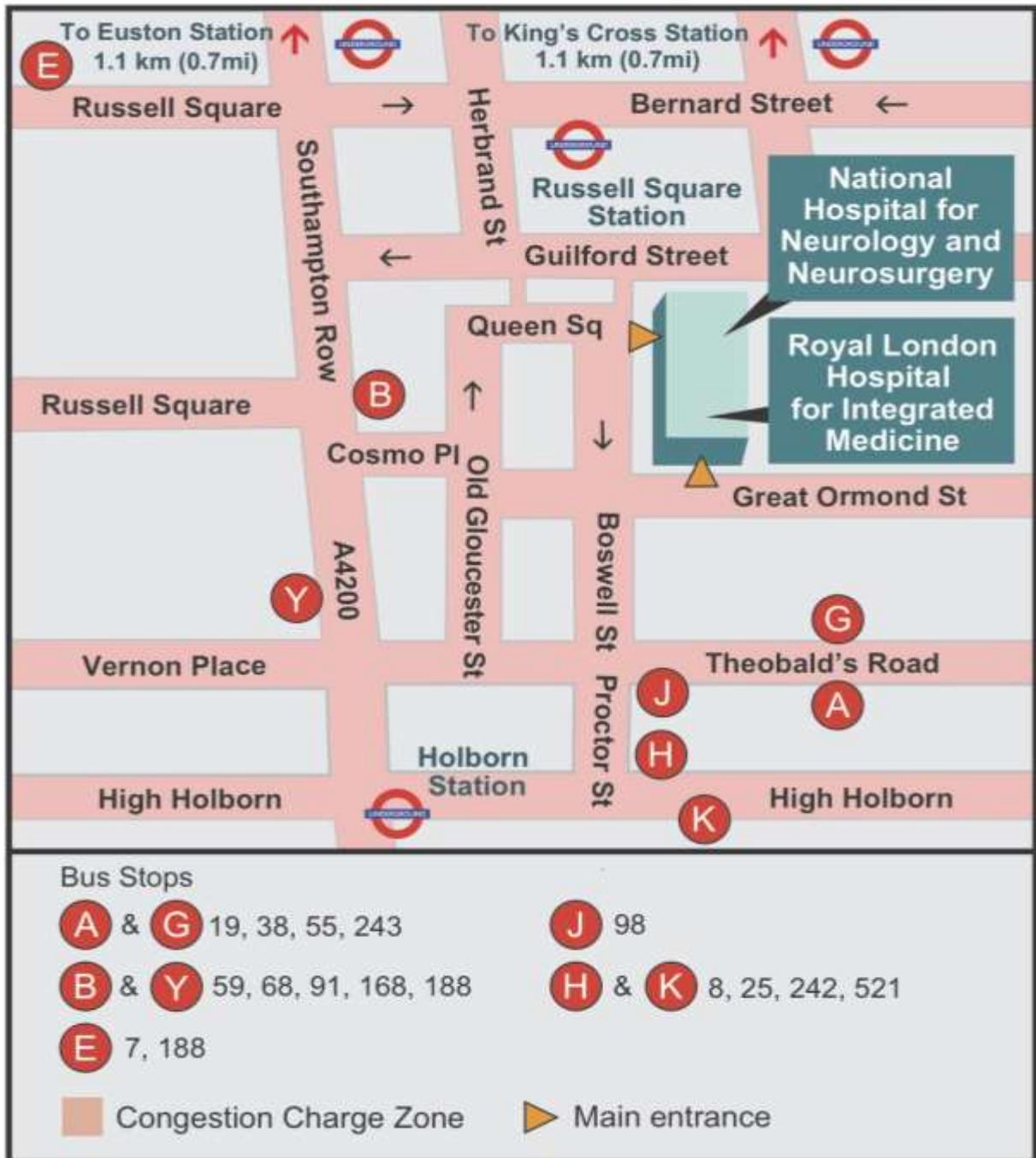
Brain and Spine Foundation: Dizziness and balance problems information page:

http://www.brainandspine.org.uk/information/publications/brain_and_spine_booklets/dizziness_and_balance_problems/index.html

Mènière's Society: Vertigo and Dizziness, by Lucy Yardley. Available as a free download. http://www.menieres.org.uk/vertigo_and_dizziness_book_download.html

UCL Hospitals cannot accept responsibility for information provided by external organisations.

Where to find us



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