



# Medicine for Managers

Dr Paul Lambden BSc MB BS BDS FDSRCS MRCS LRCP DRCOG MHSM

## Vertigo

**Vertigo is a strange word which means a sensation of spinning or whirling or producing a tendency to fall when in fact no such movement is happening. There are a variety of causes and the most common reason that it occurs is because of an inner ear disorder. Vertigo itself is not a disease, but a symptom of a variety of conditions.**

There are two types of vertigo:

- **Peripheral vertigo**, the result of a problem with the inner ear (common)
- **Central vertigo** caused by a brain disorder

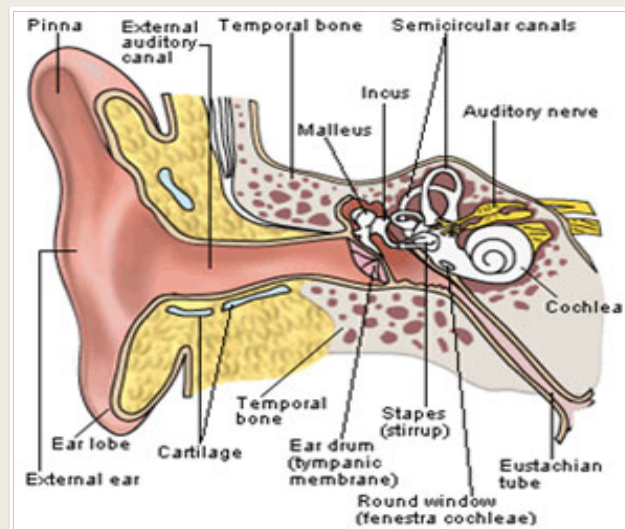
**A**lthough the words are interchanged, in fact dizziness and vertigo are different. They are both balance problems, but

**dizziness** is a feeling of being unbalanced, whilst **vertigo** is a sensation that you are moving or that your surroundings are spinning.

The body normally maintains itself in a state of balance and stability through several different and inter-related mechanisms. Each mechanism, which involves the receipt of stimuli by sensory

organs, leads to the passage of nerve impulses from those organs to the brain where they are correlated so that the individual knows where they are in time and space. Truly amazing! The three principal methods of accumulating information are:

- The eyes which allow the individual to see where they are in relation to their environment
- Sensory receptors in the muscles, tendons and joints in the legs and other parts of the body which detect position and even the smallest of movements.
- The inner ear balance mechanism. It is composed of three semi-circular canals which are laid out in different planes, lined with sensitive nerve receptors and filled



with fluid containing tiny pieces of calcific material. As the head moves, the calcific bodies move in the fluid and touch the nerve receptors which are stimulated. The pattern of movement governs the pattern of nerve stimuli and the brain collects the impulses transmitted to it from the receptors and is able to deduce position and maintain stability.

Good balance is a combination of all three mechanisms but, with the eyes shut, balance will normally remain good because the inner ear balance mechanism is so effective.

**Vertigo** is a feeling that one is spinning. It may be accompanied by nausea or vomiting. It can occur as a temporary phenomenon following, for example, revolving fairground rides because the brain cannot process the continual nerve impulses received from the semi-circular canals it therefore registers 'dizzy'. The symptom generally settles following cessation of the activity although it may take a significant time to do so.

It can happen at any age and it is thought that up to 40% of adults may experience at least one episode during their lifetime. It is more common over age 65 and women are more likely to be affected than men.

An attack may last from seconds to weeks or even more.

Vertigo is not considered serious but for many people its occurrence, particularly out of the blue, is frightening. However, vertigo itself may provide an indicator for a more serious health condition. Though common, it is not hereditary.

## Disorders causing vertigo

- **Labyrinthitis**. The labyrinth houses the **auditory** (also known as the vestibulo-cochlear) nerve which transmits nerve impulses regarding sound and position to the brain. Usually caused by viral infection, vertigo occurs if the nerve is inflamed or infected and symptoms last a few days or weeks. It normally resolves spontaneously and is treated symptomatically.
- **Vestibular neuritis**. Similar to labyrinthitis but affects only balance rather than hearing. It may cause nausea and blurred vision and is thought to be viral. It settles with resolution of the infection and treatment is symptomatic.
- **Ménière's Disease** is a rare cause of vertigo affecting about 1 patient in 1,000, usually aged between 40 and 60. It also causes **tinnitus** (ringing in the ears), headache, hearing loss and feelings of pressure. Patients may have repeated attacks lasting minutes to hours. Eventually the attacks subside and may disappear but hearing loss and tinnitus may be permanent.
- **Benign Paroxysmal Positional Vertigo (BPPV)** is the most common cause of vertigo. It does what it says on the tin. It is not serious, usually lasting less than a minute and positional when, for example, looking up or down, resulting in vertigo. It is thought to be the result of calcium deposits in a semi-circular canal, which move, sending inappropriate stimuli to the brain. It usually settles after weeks or months. It may be accompanied by **nystagmus** (involuntary eye movements). It can

often be largely avoided by restricting sudden movements.

- **Cholesteatoma** occurs following repeated ear infections producing skin growth which can lead to vertigo and hearing loss.

### **Other causes of vertigo**

- Migraine
- Some medications
- Stroke
- Diabetes
- Shingles involving the ear
- Head injuries
- Multiple sclerosis
- Acoustic neuroma – a benign tumour of the acoustic nerve leading to vertigo, tinnitus and hearing loss

Other causes are rare.

### **Characteristic vertigo symptoms**

- Nausea and vomiting, especially when moving
- Loss of balance
- Tinnitus
- Headache
- A feeling of fullness in the ear
- Nystagmus (involuntary movements of the eyes from side to side)

### **Diagnosis of vertigo**

It is often possible to establish a provisional diagnosis based on history and examination. There are various tests available to assess and diagnose but common ones include:

- **Unterberger's Test.** This involves marching on the spot for thirty seconds

with the eyes closed. Rotating or leaning to one side suggests a problem with the inner ear or labyrinth and may induce vertigo.

- **Romberg's Test.** This involves standing with the arms by the sides. Loss of balance may suggest a nervous system issue.
- **Head Eye Test.** The patient focuses on a stationary object whilst moving the head from side to side. The balance system is monitored to assess how eye movements are co-ordinated whilst moving the head.

Other tests include:

- **CT Scan**
- **MRI Scan**

### **Treatment of Vertigo**

Treatment may be unnecessary and it often resolves spontaneously

Treatments include:

- **Medication** which depends on the cause and may include antibiotic, antiviral, steroids or anti-histamines.
- **Vestibular Therapy** which is a rehab. process to manage the vertigo and augment the other senses
- **Surgery** only if there is a serious underlying condition.

Some people recommend herbal remedies to ease symptoms, including ginger and turmeric

Symptoms can be helped by standing or turning slowly, sleeping with head elevated, sitting if feeling dizzy and squatting rather than bending.

[paullambden@compuserve.com](mailto:paullambden@compuserve.com)