

VERTIGO

Vertigo is the sensation of spinning even when you are standing completely still. Your surroundings appear to be moving either vertically or horizontally. The effect may be slight and only just noticeable, or it may be so severe that you fall to the ground. Vertigo is more severe than dizziness, which is often experienced as a feeling of light-headedness when you stand up. Vertigo can make moving around difficult, as the sensation of spinning affects your balance.

Vertigo is often confused with a fear of heights. However, the dizzy feeling when you look down from a high place is not the same as vertigo, which can occur at any time and may last for many years. Mild vertigo is very common, and symptoms are not serious. However, recurrent or persistent vertigo could be caused by an underlying condition.

Symptoms

Vertigo can develop suddenly and last for just a few minutes, or it may occur on and off for a number of days. For some people with severe vertigo, the symptoms may be constant for several days, and can make normal life difficult. Symptoms of vertigo vary in severity and may include a feeling your surroundings are moving or spinning, nausea, vomiting, difficulty in standing or walking, light-headedness, feeling of not being able to keep up with what you are looking at and feeling that the floor is moving.

Causes

Causes of vertigo are often differentiated into **central** or **peripheral**. Central means the cause is due to a problem with the brain. Peripheral means the cause is due to a problem in another part of the body (eg) ear

The following are examples of central and peripheral causes:

- **Central** (cerebral cortex, cerebellum, brainstem), e.g. cerebrovascular disease such as stroke, migraine, multiple sclerosis, acoustic neuroma (non-cancerous tumor that develops on the nerve that connects the ear to the brain), double vision, alcohol intoxication.
- **Peripheral** (vestibular labyrinth, semicircular canals or vestibular nerve), e.g. viral labyrinthitis, vestibular neuritis, benign positional vertigo, Ménière's disease, motion sickness, ototoxicity (e.g. gentamicin), Herpes zoster (Ramsay Hunt syndrome)

Vertigo associated nausea and vomiting suggest a peripheral rather than central cause. Vertigo is most commonly caused by a problem with the balancing mechanism in the inner ear. This is a coiled tube of fluid that lies behind the

eardrum called the labyrinth. Viral infections such as a common cold or flu can spread to the labyrinth (**labyrinthitis**).

Less commonly, labyrinthitis is caused by a bacterial infection of the middle ear (otitis media). Vertigo caused by an ear infection usually starts suddenly, and may be accompanied by a painful ear and high temperature.

Short but recurrent attacks of vertigo are often caused by **benign positional vertigo**. This type of vertigo may also follow a viral infection, or can develop following inflammation or damage to the middle ear. It commonly affects older people, and can be brought on by a sudden movement of the head, such as turning rapidly. Attacks are usually very short-lived, and may last only a few seconds, but they can be confusing and disorientating. Fortunately, it often settles after a few months without treatment. Specialist physiotherapy can benefit some people if the symptoms persist.

Vertigo can also occur because of:

- Arthritis in the neck - this disorder is usually confined to older people, and can be brought on when the head is turned or tilted.
- Migraines - particularly if your headaches are severe or if you have a family history of migraine.
- Poor circulation - may lead to vertigo if insufficient blood reaches the part of the brain that controls balance.
- Motion sickness and over-breathing (hyperventilation).
- Alcohol and certain drugs (eg) certain sedatives

Rare causes of vertigo include stroke or multiple sclerosis or a tumour affecting the nerve connecting the middle ear to the brain. However, these conditions are usually accompanied by other symptoms such as difficulty with speech or vision. Vertigo can sometimes develop after a head injury.

Diagnosis

Your GP will diagnose vertigo from a description of the symptoms. An examination of ears, eye movements and nervous system may be necessary to find out the cause. If vertigo is severe or ongoing, it may be necessary to conduct more specific tests. A GP can carry out some tests in the surgery, such as a provocation test. This involves putting the patient's head in certain positions to bring on the dizziness, and is used to diagnose benign positional vertigo. Another simple test is for the patient to stand still and close their eyes. If balance is affected, it may indicate a middle ear problem.

A GP may conduct a caloric test, in which air at different temperatures is blown

into the ear to check the inner ear is working correctly. If arthritis of the neck is suspected, the neck may be X-rayed.

Treatment

Treatment of vertigo depends on the cause and severity of the symptoms. Vertigo that is a symptom of earache is usually quite mild and will disappear when the earache clears up. However, with severe vertigo or vomiting, medication may be needed. Antibiotics will often be prescribed for a bacterial infection in the ear.

If labyrinthitis is causing the vertigo, the patient is advised to lie quietly in a darkened room to ease the nausea and sensation of spinning. Labyrinthitis often clears up of its own accord, but you may need antibiotics if caused by bacteria. Vertigo is often made worse with travel, so antiemetic drugs may be prescribed for car journeys, aircraft flights or sea cruises. Antiemetic drugs are used to treat nausea by suppressing signals from the part of the brain that triggers vomiting. They are useful if vertigo is brought on by motion sickness, migraine, inner ear disorders and labyrinthitis. (eg) metoclopramide (Maxalon[®]), prochlorperazine (Stemetil[®])

If vertigo is caused by poor circulation, low dose aspirin may help. Vestibular Rehabilitation is an effective treatment for common vertigo. Vestibular Rehabilitation is an exercise programme that can help with symptoms of dizziness and problems with balance. The programme may include balance activities and eye movement exercises and will be tailored to the particular symptoms. The patient will be asked to exercise daily at home after a number of sessions with a therapist.

Occasionally, surgery may be carried out to remove additional fluid in the middle ear. In cases of very severe vertigo, such as in Ménière's disease, an operation to cut the nerve between part of the inner ear and the brain may be recommended. However, this is a last resort, as the operation can cause hearing loss in the treated ear. See more info later in this article.

Occasionally, vertigo may be treated with a technique called the Epley manoeuvre. This is a procedure in which the patient's head is moved into four different postures, and each posture is held for about half a minute. However, there is not much evidence to support this technique as a long-term cure.

Prevention

The following self-help techniques may relieve or prevent the symptoms of vertigo:

- Sleep with head slightly elevated on two or more pillows.
- In the morning, get up slowly from the bed

- Avoid bending down to pick up items.
- Avoid extending the neck, for example, while reaching up to a high shelf.
- Reduce salt and try to avoid stress

Ménière's disease

More severe vertigo may indicate a disorder of the balancing mechanisms in the inner ears, such as Ménière's disease. About 2 out of 1000 people have Ménière's disease. However, because other types of vertigo are often wrongly diagnosed as ménière's disease, the official figures are higher.

Ménière's disease gives rise to three main symptoms - vertigo, tinnitus and, in time, increasing deafness. Attacks are sudden and may last minutes or several hours and cause severe dizziness and loss of balance.

Tinnitus may be constantly present or only occur during an attack. Between attacks hearing may improve but it worsens with repeated attacks. Attacks can leave the person completely exhausted. Attacks become less frequent with time. For the majority (60-80%) of sufferers, it will not cause permanent disability and most recover with or without medical help

Who's affected?

Ménière's disease is most common between the ages of 20 and 60, and affects men and women equally. The condition mostly affects Caucasians and can run in families. It's not possible to prevent the disease.

Treatment for Ménière's disease

During an attack lying still and avoiding noise, by wearing earplugs for example, can help. Medication can be prescribed to relieve nausea and vertigo during an attack.

Drug therapy

Drug therapy available can be divided into two groups:

- (a) Drugs aimed at controlling acute vertigo (ie) prochlorperazine (Stemetil[®]) and cinnarizine (Stugeron[®]).

Drugs that sedate the vestibular-brainstem axis, such as prochlorperazine, relieve symptoms but should not be used on a prolonged basis for any cause of vertigo. Although there appears to be no effective preventative treatment for vertigo, a variety of drugs may help to alleviate the experience of acute vertigo by partially suppressing the activity within the vestibular system (balancing system)

in inner ear) or by inhibiting the autonomic symptoms associated with severe disorientation. These drugs are not generally considered suitable for long-term usage, as they may retard or prevent central compensation. Put simply, long term use may disrupt the body's natural balancing mechanism.

Commonly prescribed include antihistamines e.g. cinnarizine (Stugeron[®]) and phenothiazines (eg) prochlorperazine (Stemetil[®]) & tranquillisers (e.g. diazepam).

Antimotion sickness drugs may also be tried (e.g. hyoscine). Some of these drugs are also useful for the fact they reduce anxiety which often accompanies vertigo.

(b) Drugs aimed at reducing the frequency and severity of attacks (ie) betahistine (Serc[®]) and diuretics.

Diuretics and betahistine are both reputed to reduce the severity of attacks of vertigo experienced by some people with Ménière's disease, although they are probably unable to eliminate the vertigo or halt the progression of the disease. Betahistine may improve blood flow labyrinth and is used as a preventative in Ménière's disease. Betahistine seems to dilate the blood vessels within the middle ear which can relieve pressure from excess fluid and act on the smooth muscle. The main side effects of betahistine are headache and low level of gastric side effects. It is best to take after food. Unlike other drugs used for vertigo and Ménière's disease, betahistine does not cause drowsiness and has no effect on driving, reaction time or vision. Most people that report a positive effect from betahistine will experience this within a few days. If it does not show any benefit within one month, there is not much point continuing it. Serc[®] is the original brand of betahistine, but there are now equally effective and less expensive generic brands available such as Vertigon[®]. There is little evidence of its efficacy. The Food and Drug administration (FDA) in the US did an assessment of betahistine in 1999, and essentially, their conclusion was that there is no evidence that it is harmful, but also little evidence that it has any therapeutic effect. It thus is similar in status to a placebo.

In relation to diuretics such as furosemide, here is insufficient evidence of their effect on vertigo, hearing loss, tinnitus or aural fullness in clearly defined Ménière's disease.

Other measures are:

- Lifestyle changes and diet (low salt diet).
- Stress management and relaxation.

- Counselling and psychotherapy.

These measures will produce a good level of control in four out of five people, but it may not stop the episodes completely and it cannot guarantee that the episodes will not return. If these measures fail to produce satisfactory control there are other treatments that can be tried.

Surgery

In some cases, surgery may be recommended as a last resort to cure the vertigo. This may be achieved by removing some of the bones that surround the inner ear to reduce swelling, or by destroying balance receptors. Types of operations that are done include:

- **Grommet-** A grommet is a plastic tube which is slipped through a tiny incision in the eardrum. It acts as a pressure-equalisation tube. The procedure is simple, and is considered a routine procedure provided strict asepsis is maintained. The only limitation it places on the patient is that they are not allowed to let any water enter the ear. Replacement may be needed roughly every twelve months. Its efficacy in Ménière's disease is questionable.
- **Sacculus decompression-** An ear operation which aims to stop the attacks of vertigo whilst preserving remaining hearing in that ear. An incision is made over the mastoid process, which is the bony lump behind the ear. Complete resolution occurs in 50 - 75% of patients. There is a small relapse rate over a 10-year period. 1 in 10 to 1 in 20 people may need the operation redone later. 30 - 40% of patients have improved hearing. 50% experience reduced or absent tinnitus noise in that ear. The sensation of pressure or fullness in or around the ear is reduced in 50% of patients.
- **Vestibular Nerve Section-** this cuts the nerve to the balance organ. It is very effective for vertigo. It aims to save hearing but there is a 5% risk of loss. Risk of facial nerve damage has been variously reported as between 3 and 44%. It is an operation close to the brain and risks are more significant.
- **Labyrinthectomy-** very effective at stopping vertigo but will always cause deafness in the ear.
- The procedure involves a drug (such as gentamicin) that "kills" the vestibular apparatus being injected into the middle ear. Up to 1 in 3 patients develop Ménière's in both ears so an operation that does not damage hearing is preferred in most cases unless there is almost no hearing left in that ear or other measures fail.

Long term outlook

Ménière's disease is often described as “burning itself out”. It is sometimes believed that the condition is cured at this stage. However, what actually happens is that the condition has progressed to a stage where the vestibular function in the affected ear has been completely destroyed. At this stage, the hearing in the affected ear is completely lost. The vertigo will improve at this stage however the tinnitus (ring in ears) and feeling of fullness in ears may continue.

Not everybody with Ménière's disease end up with “burn out” and the resulting deafness. On a positive note, vertigo generally reduces as the disease progresses. About 50% of people are symptom free after 2 years and 71% are usually vertigo free after 8 years. Some people however continue to experience attacks for up to 20 years. These figures are based on Ménière's disease that affects one ear only. One of the most frustrating aspects of the condition is that no doctor or specialist will be able to tell you how long the condition will last.

CASE STUDY:

A Westmeath man’s experience of Ménière's disease

In the final part of this article, I bring you the experience of a Westmeath man who suffers from a particularly severe form of Ménière's disease. He kindly allowed me to discuss how the condition impacts on his life and how he manages with the condition.

How it affects his life?

He has suffered from Ménière's disease for the last year and has no other health problems; prior to being hit by the condition he knew nothing about Ménière's disease. Since he has developed the condition, he has been unable to work as his Doctor has advised that the stress of working will not help the condition. He describes the condition as being extremely uncomfortable with its unpredictability being one of its frustrating factors. He has altered his lifestyle to help minimise attacks.

Symptoms

He has reached a point with the condition that he can predict how the condition will affect him on a daily basis. He points out that if he wakes up with a heavy feeling in his head, a migraine type headache and watering eyes, he knows he is liable to be struck with a dizzy attack.

On these days he needs to sleep for two hours and when he gets up the symptoms will have improved and are usually gone by the evening. 60% of his hearing in one of the ears has gone due to the condition. His consultant has explained that this hearing won't return. At the moment the hearing in his other ear is fine but his consultant advises there is a chance that this could deteriorate over time. His consultant monitors his hearing on a regular basis.

Managing with the condition

He takes Serc 16mg tablets three times a day which gives him a certain amount of control but his whole lifestyle has had to change. He describes it a "walking a tightrope". Anything out of the ordinary can trigger an attack. He cannot walk fast as this could trigger a dizzy spell. When undertaking normal activities like walking or gardening, he has to be very conscious he could fall and needs to have his arms out by his side at all times in case of falls. It slows down his ability to do routine activities like gardening. For example, because of the condition, an activity like pruning a bush which would previously have taken him two hours, can now take up to two days. Lifting something heavy, stress, stooping down, stretching or missing one of his tablets can bring on an attack. He says that apart from this condition, he is physically and mentally fine. However, it does affect his confidence. For example, when at an event with a crowd, he tends to stay near an exit so he can leave quickly if hit by an attack. His driving is very curtailed now. He only drives for short distances now as longer drives tend to bring on the condition.

His long term outlook

He is under the care of an ENT consultant who is monitoring his condition. His consultant reckons that the condition will burn itself out. As I mentioned in my article last week on the condition, surgery is an option for some people. However, his consultant believes the surgery does not solve the problem in most cases and hence is not worth the risk. He finds there is very little support in Ireland for the condition. However, he has found Ménière's support groups, websites, blogs and books from Britain and the US which he finds very informative and helpful. From his reading on the condition, he has found that on average, the condition lasts for 4 to 7 years. He recently meet a lady who previously suffered from Ménière's disease, her conditions disappeared after 5 or 6 years.

Do you suffer from the condition?

If you suffer from Ménière's disease, he would be happy to speak to you to share your experiences. You can contact me (Eamonn) in Whelehans pharmacy or e-mail me at info@whelehans.ie and I will pass your details on to him.

Disclaimer: Please ensure you consult with your healthcare professional before making any changes recommended

For comprehensive and free health advice and information call in to Whelehans, log on to www.whelehans.ie or dial 04493 34591. You can also e-mail queries to info@whelehans.ie.