



Key points

- Vestibular paroxysmia causes short, recurring attacks of vertigo due to damage or pressure on the vestibular nerve.
- Attacks usually happen without warning and last less than a minute.
- Vestibular paroxysmia is an uncommon disorder and is usually chronic.
- Vestibular paroxysmia can often be treated with medication.

What is vestibular paroxysmia?

Vestibular paroxysmia causes short, recurring attacks of vertigo. Each attack can last from less than a second to 1 minute. People can have episodes of many attacks in sequence, up to 30 per day. Other people only have a few attacks per year. The attacks usually happen without warning.

Vestibular paroxysmia is uncommon, affecting around 4% of people who have vertigo (spinning sensation) and non-spinning dizziness. It is most common in people in their 40s and 50s. Vestibular paroxysmia also can happen in children.

Vestibular paroxysmia (vess-TIB-you-er pa-rocks-IZ-mee-uh) may also be called microvascular compression syndrome (MVC).

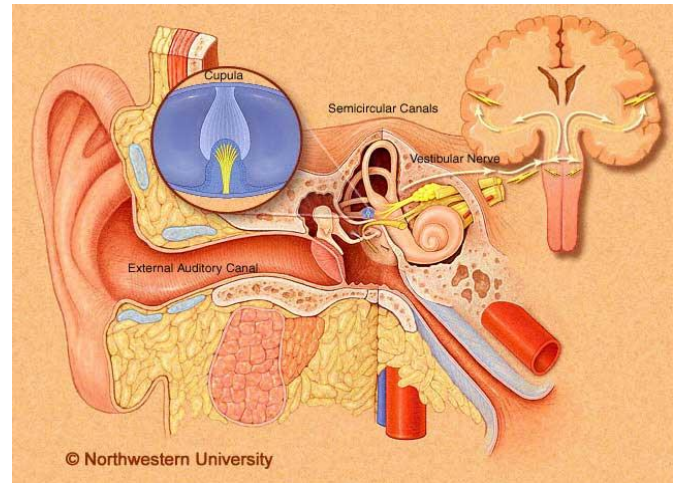
What causes it?

Vestibular paroxysmia is caused by damage to or pressure on the vestibular nerve (also called the 8th cranial nerve or vestibulocochlear nerve), which carries signals to and from the inner ear.

This damage may be caused by:

- pressure from nearby arteries or veins
- vestibular neuritis
- a tumour such as an acoustic neuroma
- a cyst
- injury or trauma
- surgery or radiation therapy

Researchers believe that damaged nerves that are close together sometimes “short circuit,” which causes attacks of vestibular paroxysmia.



Location of the vestibular nerve (8th cranial nerve)¹

What are the symptoms?

Symptoms of vestibular paroxysmia may be different in different people, but each person usually has the same pattern of symptoms during an attack.

Attacks may include:

- a feeling of movement or spinning (vertigo)
- feeling as if you are swaying or rocking, even though you are sitting or standing still (non-spinning dizziness)
- oscillopsia, where what you see appears to wobble or jump around
- unsteadiness and gait (walking) problems if the attacks happen while you are standing or walking
- hearing loss in one ear
- ringing or crackling in one ear (tinnitus) during the attack
- sensitivity to sound (hyperacusis) during the attack

In most people, attacks of vestibular paroxysmia happen without warning. Some people find that turning their head to a particular position triggers attacks. Some people have attacks when they are breathing heavily (hyperventilating) or exercising.

Each attack usually lasts less than 1 minute. But people may have multiple attacks in a row, sometimes as many as 30 per day. Vestibular

paroxysmia is usually a chronic disorder, which means that it lasts longer than 3 months, with some people having many hundreds of attacks per year. In some people, the attacks get longer and more frequent as the disease progresses.

How is it diagnosed?

Vestibular paroxysmia is usually diagnosed by a specialist such as a neurologist, an otolaryngologist, neuro-otologist or an audiologist.

The symptoms of vestibular paroxysmia are similar to the symptoms of many other disorders, including:

- benign paroxysmal positional vertigo (BPPV)
- Ménière's disease
- perilymph fistula
- semicircular canal dehiscence (SCD)
- vestibular migraine
- vestibular neuritis
- epilepsy with vestibular aura
- episodic ataxia type 2
- sudden, intense (paroxysmal) brainstem attacks (in multiple sclerosis or after brainstem stroke)
- transient ischemic attacks (TIAs)
- panic attacks

So your doctor needs to rule out these other possible causes before making a diagnosis of vestibular paroxysmia.

The diagnosis of vestibular paroxysmia is mainly based on patient history. Your doctor will ask about your symptoms. Try to be as specific as possible about your symptoms, when they started and when they get better or worse.

Your doctor will also ask about your medical history, including any medications you are taking or recently stopped taking, any recent illnesses and any conditions you have been diagnosed with in the past. Your doctor will also do a thorough physical and neurological exam.

You will probably have some of the following diagnostic tests:

- vestibular function tests
- electroencephalogram (EEG)
- imaging tests such as an MRI

Clinical criteria for vestibular paroxysmia

Definite vestibular paroxysmia is defined as:

- at least 10 attacks of vertigo (spinning sensation) or non-spinning dizziness
- lasting less than 1 minute
- happening without warning (spontaneous)
- the pattern of symptoms is very similar in each attack (stereotyped phenomenology)
- response to treatment with carbamazepine or oxcarbazepine
- not better accounted for by another diagnosis

Probable vestibular paroxysmia is defined as:

- at least 5 attacks of vertigo (spinning sensation) or non-spinning dizziness
- lasting less than 5 minutes
- happening without warning or triggered by turning your head to a particular position
- the pattern of symptoms is very similar in each attack (stereotyped phenomenology)
- not better accounted for by another diagnosis

How is it treated and managed?

Vestibular paroxysmia can often be treated with low doses of anti-convulsant medication such as carbamazepine or oxcarbazepine. In one study patients treated with these drugs had attacks that were 90% less often, 85% less intense and 89% shorter. Other medications are also being studied.

If medication does not work, and no obvious cause like a tumour or cyst is visible, microsurgery to separate the vestibular nerve (also called the 8th cranial nerve or vestibulocochlear nerve) from the blood vessel pressing on it may be considered. However, it is often hard for doctors to figure out with certainty which side is affected. And there is also a risk of a brainstem infarction (stroke) during microvascular decompression surgery.

If the condition is caused by a tumour or a cyst, surgery may be recommended.

What to expect in the future

There is still a lot that we do not know about vestibular paroxysmia. Researchers are still studying what causes it, how many people have it, and the best ways to define, diagnose and treat it.

In children, vestibular paroxysmia may go away on its own.

Sources

1. Hain TC. Eighth nerve. *Dizziness and balance.com*. Available from: <https://bit.ly/352HL5x> Accessed 02 January 2021

View text sources used for this handout:
<https://bit.ly/3o80mEM>

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This handout is intended as a general introduction to the topic. As each person is affected differently, speak with your health care professional for individual advice.

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