

Benign Paroxysmal Positional Vertigo (BPPV)

Benign paroxysmal positional vertigo (BPPV) is one of the most common causes of vertigo — the sudden sensation that you're spinning or that your head is spinning inside.

Benign paroxysmal positional vertigo is characterized by brief episodes of mild to intense dizziness. Symptoms of benign paroxysmal positional vertigo are triggered by specific changes in the position of your head, such as tipping your head up or down, and by lying down, turning over or sitting up in bed. You may also feel out of balance when standing or walking.

Although benign paroxysmal positional vertigo can be a bothersome problem, it's rarely serious except when it increases the chance of falls. You can receive effective treatment for benign paroxysmal positional vertigo during a doctor's office visit.

Symptoms

The signs and symptoms of benign paroxysmal positional vertigo (BPPV) may include:

- Dizziness
- A sense that you or your surroundings are spinning or moving (vertigo)
- Lightheadedness
- Unsteadiness
- A loss of balance
- Blurred vision associated with the sensation of vertigo
- Nausea
- Vomiting

The signs and symptoms of BPPV can come and go, with symptoms commonly lasting less than one minute. Episodes of benign paroxysmal positional vertigo and

other forms of vertigo can disappear for some time and then recur.

Activities that bring about the signs and symptoms of BPPV can vary from person to person, but are almost always brought on by a change in the position of your head. Abnormal rhythmic eye movements (nystagmus) usually accompany the symptoms of benign paroxysmal positional vertigo. Although rare, it's possible to have BPPV in both ears (bilateral BPPV).

When to see a doctor

Generally, see your doctor if you experience any unexplained dizziness or vertigo that recurs periodically for more than one week. Although it's uncommon for dizziness to signal a serious illness, see your doctor immediately or go to the nearest emergency room if you experience dizziness or vertigo along with any of the following:

A new, different or severe headache

A fever of 101 F (38 C) or higher

Double vision or loss of vision

Hearing loss

Trouble speaking

Leg or arm weakness

Loss of consciousness

Falling or difficulty walking

Numbness or tingling

Chest pain, or rapid or slow heart rate

The signs and symptoms listed above may signal a more serious problem, such as stroke or a cardiac condition.

Causes

About half the time, doctors can't find a specific cause for BPPV.

When a cause can be determined, BPPV is often associated with a minor to severe blow to your head. Less common causes of BPPV include disorders that damage your

inner ear or, rarely, damage that occurs during ear surgery or during prolonged positioning on your back.

The ear's role

Inside your ear is a tiny organ called the vestibular labyrinth. It includes three loop-shaped structures (semicircular canals) that contain fluid and fine, hair-like sensors that monitor the rotation of your head. Other structures (otolith organs) in your ear monitor movements of your head — up and down, right and left, back and forth — and your head's position related to gravity. These otolith organs — the utricle and saccule — contain crystals that make you sensitive to movement and gravity.

For a variety of reasons, these crystals can become dislodged. When they become dislodged, they can move into one of the semicircular canals — especially while you're lying down. This causes the semicircular canal to become sensitive to head position changes it would normally not respond to. As a result, you feel dizzy.

Risk factors

Benign paroxysmal positional vertigo occurs most often in people age 60 and older but can occur at any age. Aside from aging, there are no definite factors that may increase your risk of benign paroxysmal positional vertigo. However, a prior head injury or any other disorder of the balance organs of your ear may make you more susceptible to BPPV.

Complications

Although benign paroxysmal positional vertigo (BPPV) is uncomfortable, it rarely causes complications. In rare cases, if severe, persistent BPPV causes you to vomit frequently, you may be at risk of dehydration.

Tests and diagnosis

Your doctor may do a series of tests to determine the cause of your dizziness. During a physical examination, your doctor will likely look for:

Signs and symptoms of dizziness that are prompted by eye or head movements and then decrease in less than one minute

Dizziness with specific eye movements that occur when you lie on your back with your

head turned to one side and tipped slightly over the edge of the examination bed

Involuntary movements of your eyes from side to side (nystagmus)

Inability to control your eye movements

If the cause of your signs and symptoms is difficult to diagnose, your doctor may order additional testing, such as:

Electronystagmography (ENG) or videonystagmography (VNG).

The purpose of this test is to detect abnormal eye movement. ENG (which uses electrodes) or VNG (which uses small cameras) can help determine if dizziness is due to inner ear disease by measuring involuntary eye movements while your head is placed in different positions or your balance organs are stimulated with water or air. Other tests can assess your ability to maintain an upright position under easy and difficult conditions.

Magnetic resonance imaging (MRI).

This technique uses a magnetic field and radio waves to create cross-sectional images of your head and body. Your doctor can use these images to identify and diagnose a range of conditions. MRI may be performed to rule out acoustic neuroma — a noncancerous brain tumor of the nerve that carries sound and balance information from the inner ear to the brain — or other lesions that may be the cause of vertigo.

Treatments and drugs

To help relieve benign paroxysmal positional vertigo (BPPV), your doctor, audiologist or physical therapist may treat you with a series of movements known as the canalith repositioning procedure (also known as the Epley maneuver).

Canalith repositioning (aka Epley maneuver)

Performed in your doctor's office, the canalith repositioning procedure consists of several simple and slow maneuvers for positioning your head. The goal is to move particles from the fluid-filled semicircular canals of your inner ear into a tiny bag-like open area (vestibule) that houses one of the otolith organs (utricle) in your ear where these particles don't cause trouble and are more easily reabsorbed. Each position is

held for about 30 seconds after any symptoms or abnormal eye movements stop. This procedure is usually effective after one or two treatments.

After the procedure, you may feel slightly unsteady for the rest of the day. This is normal and should pass with time. Avoid lying flat or placing the treated ear below shoulder level for the at least 48 hours. Elevate your head on a few pillows when you sleep. This allows time for the particles floating in your labyrinth to settle into your vestibule and be reabsorbed by the fluids in your inner ear. You may turn your head from side to side, but avoid quick head turns, tipping your head back and bending over for a week. Afterwards, gradually return to normal activities as you feel up to it. Your doctor may teach you how to perform the canalith repositioning procedure on yourself so that you can do it at home. Ask your doctor about exercises you can do at home. If you are unsure how to perform the procedure on your own, ask your doctor on the next visit as doing the procedure incorrectly can often worsen your symptoms. You should have a follow up examination with your doctor a few weeks after the procedure. Occasionally patients with persistent symptoms will require a second repositioning procedure. Other maneuvers that may help include the Semont and Brandt-Daroff exercises. Check out

<https://www.webmd.com/brain/home-remedies-vertigo#1> for more information on these alternative maneuvers.

Surgical alternative

In rare situations in which the canalith repositioning procedure isn't effective, your doctor may recommend a surgical procedure. Success rates for surgery vary with the type of surgery performed.

Lifestyle and home remedies

If you experience dizziness associated with benign paroxysmal positional vertigo (BPPV), consider these tips:

Be aware of the possibility of losing your balance, which can lead to falling and serious injury.

Sit down immediately when you feel dizzy.

Use good lighting if you get up at night.

Walk with a cane for stability, if you are at risk of a fall.

Work closely with your doctor to manage your symptoms effectively.

BPPV may recur even after successful therapy. Fortunately, although there's no cure, the condition can be managed with physical (vestibular or balance) therapy and home treatments.

Vestibular Habituation Exercises

For some that have sensitivity to motion even after treatment for BPPV, exercises to teach the brain and body to ignore or "tune-out" uncomfortable dizziness is called habituation. If symptoms worsen or do not improve after these exercises, contact your ENT.

Perform this series of exercises twice a day:

1. Go from a sitting position to flat on your back -- repeat 5 times.
2. Go from flat on your back to your left side -- repeat 5 times.
3. Go from you left side to your right side -- repeat 5 times.
4. Go from flat on your back to a sitting position -- repeat 5 times.
5. From a standing position, turn body to right -- repeat 5 times.
6. From a standing position, turn body to left -- repeat 5 times.
7. From a sitting position, touch nose to left knee -- repeat 5 times.
8. From a sitting position, touch nose to right knee -- repeat 5 times.
9. From a sitting position, turn head to left -- repeat 5 times.
10. From a sitting position, turn head to right -- repeat 5 times.
11. From a sitting position, bend forward -- repeat 5 times.
12. From a sitting position, stand up straight -- repeat 5 times.
13. From a sitting position, move head up and down -- repeat 5 times.
14. Sitting on side of bed, turn head to right and lie down -- repeat 5 times.
15. Sitting on side of bed, turn head to right and lie down quickly -- repeat 5 times.
16. Sitting on side of bed, turn head to left and lie down quickly -- repeat 5 times.
17. Sitting on side of bed, lie down quickly (head hanging over side of bed) -- repeat 5 times.

If dizziness occurs during any step, stay in that position until dizziness subsides, then resume exercises.

Coping and support

Living with benign paroxysmal positional vertigo (BPPV) can be challenging. It may affect your interaction with friends and family, your productivity at work, and the overall quality of your life. You may find encouragement and understanding in a support group.

Although support groups aren't for everyone, they can be good sources of information. Group members often know about unique coping skills and tend to share their own experiences. If you're interested, your doctor may be able to recommend a group in your area.