

# Vertigo

## Can a simple exercise cure it?

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### About this column

AHFMR frequently receives letters requesting information about Heritage research or about various medical conditions. “Responding to the reader” is a *Research News* feature intended to provide up-to-date information related to readers’ questions, with the help of experts in the Alberta research community. AHFMR cannot provide medical advice, however; please consult your family physician about your specific health concerns.

### THE EXERCISE IN QUESTION

is called the Epley manoeuvre—after Dr. John Epley, who developed the procedure in 1992. And yes, it can be very effective at treating a particular kind of vertigo called *benign paroxysmal positional vertigo* (BPPV). We asked Dr. Jacob Jaremko more about BPPV. He is an Edmonton radiologist who also works for a company that manufactures a device to help BPPV sufferers perform the Epley manoeuvre on their own.



First, it’s important to understand the differences between dizziness and vertigo. When people say they are dizzy, they usually mean they feel light-headed. *Dizziness* can be a precursor to fainting; it may be brought on by a number of things, including low blood pressure or simply standing up too quickly. *Vertigo*, on the other hand, is the sensation of spinning; and it is less common than dizziness.

### Crystals called canaliths get into the semicircular canals

If you have true vertigo, the single most likely diagnosis will be BPPV. It accounts for at least 20% of all vertigo. The older you are, the more likely it is that your vertigo will be of this type. Symptoms are almost always precipitated by a change of position of the head—getting out of bed, rolling over in bed, tipping the head back, or bending forward. Attacks are often sudden and severe, and may be experienced when lying down or standing up. Typically they last no more than 30 seconds and

### The trouble stems from the inner ear

occur in spells. In addition to the spinning sensation, many patients complain of light-headedness, nausea, imbalance, and, in severe cases, sensitivity to head movements in all directions.

The trouble stems from the inner ear; specifically, from a tiny organ called the *vestibular labyrinth*. The labyrinth is made up of semicircular canals that contain fluid and fine, hair-like sensors that monitor the rotation of your head. In BPPV, crystals called *canaliths*, which are normally present in another part of the ear, get into the semicircular canals. They cause the nerves in the ear to send false signals to the brain about position. The result is a spinning sensation. The Epley manoeuvre is designed to tilt the head in a series of positions that move the canaliths out of the semicircular canals. This manoeuvre is the standard of practice in the offices of many *otolaryngologists* (specialists who treat ear, nose, and throat disorders). Its success rate has been reported at 80% to 90% with a single manoeuvre. For patients who do not respond to this treatment, surgery is a safe and highly effective alternative.

BPPV is common, but it's not the only type of vertigo. Consider the following statements:

- My vertigo lasts only seconds or minutes, never hours or days.
- I can bring on the symptoms by assuming certain head positions.
- It feels as though either the room or my body is spinning.
- My problem is not associated with a change in my hearing or a noise in my ears.

Vertigo is the sensation of spinning





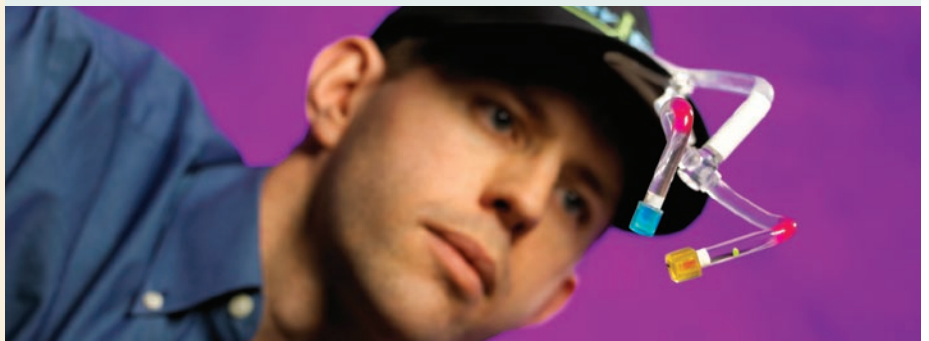
If these statements apply to you, it is very likely that you have BPPV, caused by the migration of canalith crystals. However, because there are many other possible causes of vertigo (including cardiovascular disease, stroke, and viral infection), the best course of action is to see your doctor for a diagnosis. ✱



#### About the researcher

Edmonton radiologist **Dr. Jacob Jaremko** is the advancement officer for Clearwater Clinical Ltd., the Calgary-based company that produces the DizzyFIX device mentioned in the *Cool Tools* article. In 2002 he won the Dr. Lionel E. McLeod Health Research Scholarship, awarded annually by AHFMR to an outstanding student at the University of Alberta, the University of Calgary, or the University of British Columbia for research related to human health.

## Cool tools



### The DizzyFIX

The idea for the DizzyFIX came to Dr. Matthew Bromwich while he was doing his residency in otolaryngology at the University of Western Ontario. There he studied with Dr. Lorne Parnes, one of the world's leading authorities on the type of vertigo known as BPPV. The experience got him thinking about a way to help patients do the repositioning manoeuvre that treats BPPV. As many as 50% of people with BPPV will experience at least one relapse, and many will have repeated relapses. Rather than wait for appointments with specialists, he thought, they could treat recurrent episodes quickly and effectively themselves—with the right sort of help.

Enter the DizzyFIX. The device is attached to a baseball cap, and the patient guides a little green ball through an oil-filled tube by means of a sequence of head movements. When the ball has been moved through the tube successfully, the repositioning manoeuvre is complete. Clinical trials have shown that the device is as effective as treatment in a doctor's office: in nearly 90% of patients, symptoms simply go away.

In 2005 Dr. Bromwich teamed up with friends and family to set up Calgary-based Clearwater Clinical Ltd. The company was formed to market the DizzyFIX and to serve as an incubator for other inventions. The DizzyFIX has been on sale in Canada since 2007. It received FDA approval in the United States in September 2008. AHFMR provided technology commercialization funding to help pay marketing evaluation and patenting costs.

Dr. Jacob Jaremko joined the Clearwater team as advancement officer in 2005. "Our focus now is getting DizzyFIX known among physicians and physiotherapists—basically, any medical professional who treats people with vertigo. This is a device that really works."

For more information on the DizzyFIX go to [www.dizzyfix.com](http://www.dizzyfix.com) ✱