

# Spinning you right round

One in three people experience dizziness once in their lifetime. By Lim Ing Ruen

**D**OC, I am dizzy. My head spins, my room turns, I feel faint and floating." Giddiness, vertigo, light headedness, and blurriness are all synonyms of this vague sensation called dizziness. Being dizzy may not just cause you to throw up, it may throw you off the course of your life.

One in three people experience dizziness once in their lifetime. One tenth of these go on to have recurrent dizziness. Some people are even unable to work because of incapacitating dizziness. A problem of such magnitude in terms of personal and economic impact deserves detailed evaluation and proper treatment.

## Our balance system

In order to stay firmly grounded, our brain receives a multitude of signals indicating our position in space. Visual input from the eyes, vestibular input from the inner ear and brainstem, proprioceptive input from muscles and joints, pressure input from our skin all contribute to the overall perception of balance by our brain. A visually impaired person needs to rely on his way around. A hearing impaired person needs to rely on his vision and his peripheral senses for orientation in space.

A person who has multi-sensory deficits would have serious difficulties navigating around indeed. Depending on which organ system is affected, there appears to be a few distinct categories of dizziness – vertigo, pre-syncope, disequilibrium, and others.

## Vertigo

Vertigo is an illusion of movement, a spinning sensation while stationary, akin to having too many rides on the merry-go-round. Alfred Hitchcock catapulted vertigo to fame in his 1958 American psychological thriller of the same name, in which his lead detective suffered from acrophobia or an irrational fear of heights. But vertigo is not a psychological condition. It is a physiological condition affecting the balance centres of the inner ear or the brainstem.

Peripheral vertigo involving the inner ear is typically severe. There is nausea, vomiting, abnormal jerky movements of the eyes called nystagmus. Movement worsens the vertigo. Focusing the eyes on an immobile object alleviates it. A single episode of severe vertigo that makes full recovery in a week may just mean a viral infection of the inner ear. This is vestibular neuritis. There is no hearing loss.

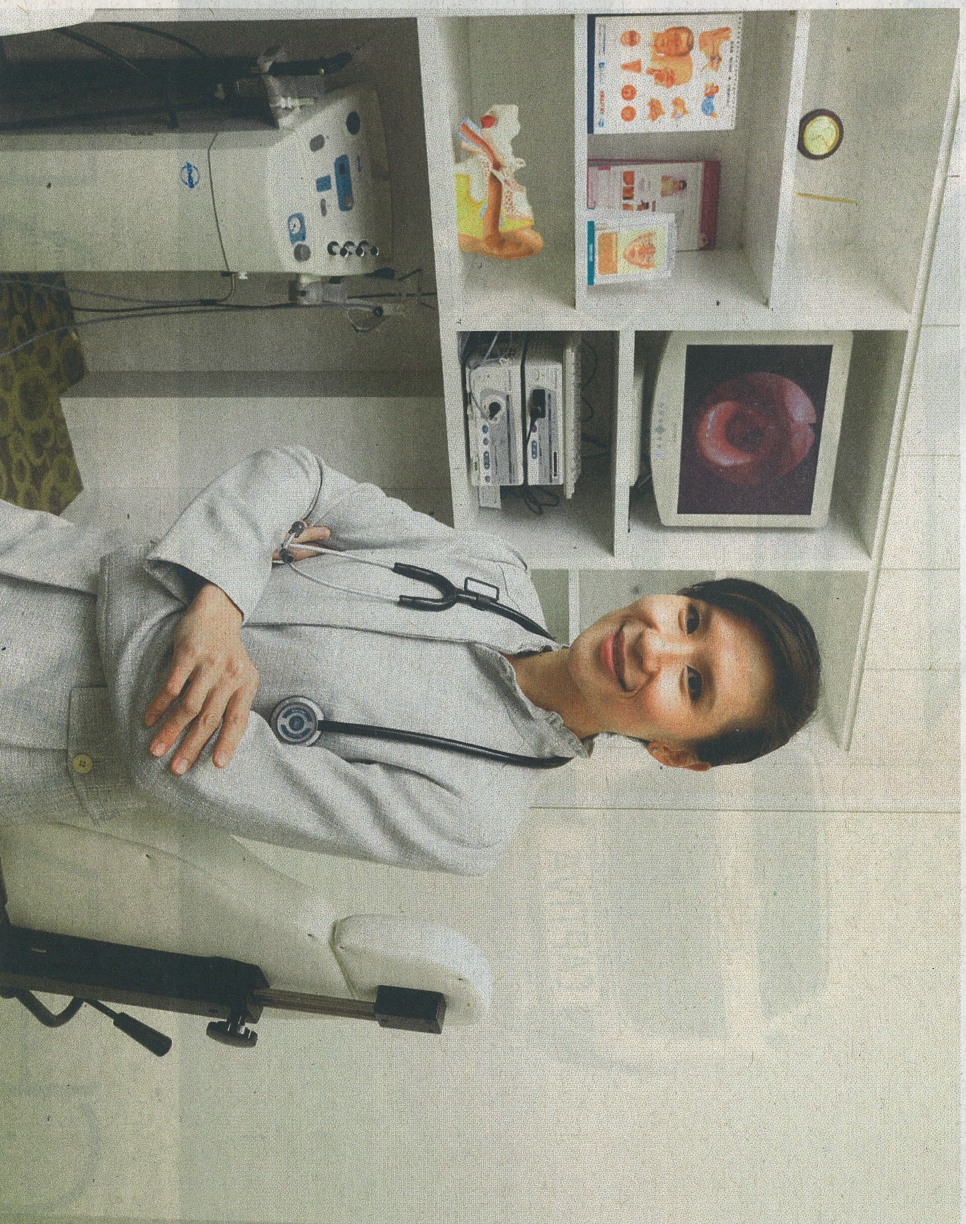
Vertigo caused by turning your head to one side is known as the "beauty parlour" vertigo or "top-shelf" vertigo. Each episode lasts for seconds but is severe enough to limit your daily activities. We call it benign paroxysmal positional vertigo (BPPV). BPPV recovers with vestibular exercises such as Epley's manoeuvre or Semont's manoeuvre.

If left untreated, BPPV can still recover spontaneously in half a year. Vertigo with a deaf ear is more sinister. You need to get checked for imbalanced ear fluids (Meniere's disease), a tumour on the hearing nerve (acoustic neuroma) or even a stroke.

Central vertigo involving the brainstem tends to feel milder but comes with alarming neurological deficits. These include blurring of vision, slurring of speech, unilateral weakness of face or limb, or loss of consciousness. You need a full neurological assessment and an MRI scan.

## Near syncope

You feel faint, light headed, on the verge of blacking out. Syncope, in contrast, means total black out. Near syncope may result from any condition causing hypoperfusion of the brain. Examples include irregular heart beat (ar-



**Get a comprehensive assessment of your heart, brain, and all the sensory organs.**

hythmias), low blood pressure (hypotension) or low blood count (anaemia). Autonomic dysfunction causes postural hypotension. You feel dizzy on suddenly standing up because the blood drains to the feet due to failure of vasoconstriction in the peripheries.

This is a problem in diabetics. During panic attacks, hyperventilating blows off too much carbon dioxide and changes the pH of the brain, leading to hypoperfusion of the brain and further panic.

A unique solution to this problem would be to offer a paper bag to the hyperventilating person so that she rebreathes in her exhaled carbon dioxide. Beware of offering a plastic bag as it may cause asphyxiation.

## Disequilibrium

Disequilibrium is the sensation of being off balance due to a lesion in the hindbrain. A stroke or tumour affecting the forebrain results in loss of motor or sensory function of one side of the body.

In contrast, a stroke or tumour in the hindbrain or cerebellum results in vertigo that never seems to go away. Unlike vertigo due to inner ear problems which tends to fully recover once the brain takes over, the hindbrain damage lingers on.

Disequilibrium also explains the frequent falls in the elderly. There is multi-sensory deficit affecting vision, inner ear balance, proprioception, peripheral sensation, and central integration. Typically, a cane or gait-assistive device helps in gaining additional sensory feedback and helps in putting you back on your feet.

## Non-specific giddiness

Finally, despite thorough analysis, there will always be those non-specific conditions that do not fit any category.

## Solving the problem

Get a comprehensive assessment of your heart, brain, and all the sensory organs. Go for audiological testing, vestibular testing, and scans as necessary. Only with an accurate diagnosis can the appropriate medication or vestibular rehabilitation be prescribed.

## Practical issues

When travelling, avoid trains, boats, and small aircraft, they are unsteady. No reading on the bus or in the car. Instead, look out to the horizon. Take a motion sickness pill before a long trip.

Choose restaurants with carpeted interiors that absorb echoes and improve acoustics. Avoid places with loud background noises and checkered furnishings. Stay away from the maddening crowds.

Dr Lim is a consultant ear, nose & throat surgeon with special interest in rhinology at Singapore Medical Specialists Centre. She has post-graduate qualifications in Otolaryngology from the Royal College of Physicians and Surgeons of Glasgow, UK and did fellowship in rhinology and sinus surgery at the University of Pennsylvania, US. She also has specific sub-specialty interests in advanced sinus surgery and otolaryngic allergy and thyroid surgery. She is a fellow of the American Academy of Otolaryngology, Head & Neck Surgery and a member of the American Rhinologic Society and Singapore Society of Allergy and Clinical Immunology  
btnews@sph.com.sg

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