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VISUAL DEPENDENCY

When your vestibular system isn't working your body will depend on your vision for balance instead

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Visually Induced Dizziness "Supermarket Syndrome"

By Morgan Kriz, DPT and Kathleen Stross, DPT, MS, PhD, CHC

Do you dread going to the grocery store because it makes you feel bad? The maze of tall shelves, the bright lights, patterns on the floor, the overwhelming selection of items, bending down or turning your head to scan for the items you need can take a lot of energy to navigate. If you can relate, you are not alone and there is nothing "wrong" with you.

Visually induced dizziness is an umbrella term for a group of symptoms that result from some vestibular disorders. It can also be referred to as visual vertigo, space and motion discomfort, supermarket syndrome or visual vestibular mismatch.

Chronic (long lasting) symptoms of dizziness or unsteadiness can be made worse by:

- Large areas of complex patterns or movement
- Such as supermarket shelves
- Moving traffic
- Movies on a big screen

WHY DOES IT HAPPEN?

There are several theories about why visually induced dizziness happens. Most researchers believe that it is caused by a mismatch or conflict between the different parts of the brain's balance system, similar to motion sickness. Others believe that it happens when a vestibular problem causes the brain to rely too much on visual signals for balance (visual dependency).

The brain's balance system combines information from many sources, including:

- The vestibular system (the semicircular canals and otoliths in the inner ear), which senses when your head tilts, turns or changes speed
- The visual system, which lets you see
- The proprioceptive system, which sends signals about position, pressure, movement and vibration from the legs and feet and the rest of the body



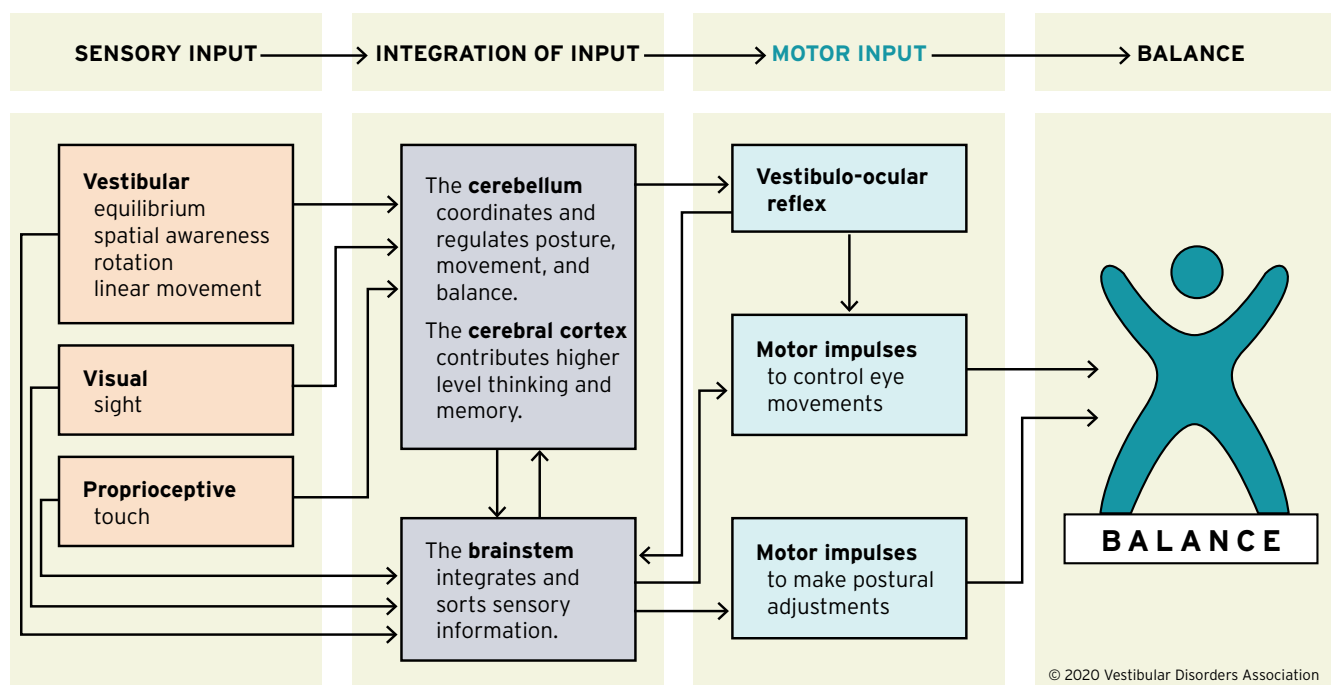


FIGURE 1. Balance is achieved and maintained by a complex set of sensorimotor control systems.

At any moment, your brain is evaluating all these different signals and deciding which ones are more important and reliable at that moment. For example, if you are watching a movie, the visual system says there is motion, but the vestibular and proprioceptive systems say that your head is not moving and your body is sitting in a chair. Normally, your brain takes all these signals and correctly assesses the situation: you can see movement, but your body is not moving.

With visually induced dizziness, the brain relies too much on information from the visual system and not enough on the vestibular and proprioceptive systems.

This is sometimes called “visual dependency.” When there is a conflict between the visual system and the other systems, the brain is more likely to believe the visual system and decide that you are moving when you are not. The conflict between signals can produce feelings of dizziness or unsteadiness.

Some studies have found subtle differences in how areas of the brain are connected in people with visually induced dizziness. This may mean that some people are more prone to visual dependency and more likely to develop visually induced dizziness after a vestibular problem.

SYMPTOMS OF VISUALLY INDUCED DIZZINESS:

When someone has an episode of visually induced dizziness, they may have some or all of the following:

- Dizziness
- Unsteadiness
- Light-headedness
- Disorientation
- Nausea
- Vomiting
- Sweating
- Salivation (mouth watering)
- Tiredness
- Turning pale

Some people say it feels like seasickness or being drunk.

Visually induced dizziness usually does not include feelings of rotation or spinning (vertigo). It is also not the same thing as oscillopsia, where what you see appears to wobble or jump around. People with visually induced dizziness may feel anxious about doing things that could trigger their symptoms. People may tend to avoid situations and disconnect themselves from community settings.



HOW CONDITIONS THAT CAUSE VISUALLY INDUCED DIZZINESS ARE DIAGNOSED

VeDA can help you learn about your condition so that you can be an advocate for your own healthcare.

Our provider directory (<https://vestibular.org/healthcare-directory/>) will help you find qualified vestibular specialists who can diagnose you quickly and provide effective treatment.

TREATMENT AND MANAGEMENT OF VISUALLY INDUCED DIZZINESS

Treatment for visually induced dizziness partly depends on what is causing it. If it is caused by an underlying condition, such as migraine with dizziness or Ménière's disease, treating that condition may help with some of your symptoms.

You will also need specific help with visually induced dizziness, such as vestibular rehabilitation and home-based program. The goal of these treatments is to “retrain” your balance system and reduce visual dependency.

Medication may help with visually induced dizziness, but more research is needed.



DEALING WITH AVOIDANCE AND ANXIETY

It is important to keep doing your normal activities. Try not to avoid things that make you dizzy. You need to get used to them again.

However, do not push too hard. This can make your symptoms worse. Vestibular rehabilitation can help by giving you controlled exposure to things that trigger dizziness. Developing coping and grounding strategies can be extremely beneficial and build one's resilience to provoking situations.

If you have anxiety about your symptoms, talk to your doctor about ways to manage it. For people with visually induced dizziness that is part of PPPD (Persistent Postural-Perceptual Dizziness), cognitive-behavioural therapy (CBT) to help manage anxiety, cope with symptoms, and gain confidence can be an important part of treatment.

VESTIBULAR REHABILITATION

Vestibular Rehabilitation is a type of exercise-based therapy. Its goal is to help your brain relearn how to balance and how to respond to signals from the visual and vestibular systems. A vestibular therapist can help you set treatment goals and design an appropriate program.

Vestibular rehabilitation for visually induced dizziness may include:

- Habituation, a type of rehabilitation that involves getting the brain used to signals that trigger dizziness. This is done through repeated, controlled exposure to signals such as complex patterns, busy environments and head movements. You may do exercises indoors and outdoors. You may go on short trips to places that trigger symptoms, such as grocery stores or shopping malls.
- exercises.
- Balance exercises with the eyes closed, both standing still and moving, to help reduce visual dependency.

Remember that vestibular rehabilitation and coping with chronic conditions takes time and effort from both an experienced provider and the person dealing with the condition. To find a qualified vestibular rehabilitation specialists near you, please refer to our provider listing at <https://vestibular.org/healthcare-directory/>.

Check out our personalized Grocery Shopping List at the end of this article to make you more successful going to the grocery store.

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