

Physical Therapy and the VOR

Author: René D. Crumley, PT, DPT, NCS

FACT SHEET



Vestibular Rehabilitation
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How does physical therapy help people with “inner ear” problems?

To keep our vision clear and our balance and walking steady, the brain gets information from three systems: our eyes, our position sensors in our legs and neck, and our inner ear balance systems. The ear systems and the eyes work together through the *vestibular-ocular reflex*, or the *VOR*, which is a very fast reflex that keeps our vision clear with head movement. This reflex can become damaged with an injury to the inner ear balance system. Through a process called VOR adaptation, we can make changes to the way our ears and eyes work together and compensate for injury.

How does VOR Adaptation work?

The physical therapist will provide you with exercises to help the VOR regain its function. These are specific exercises that will cause a very slight blur which in turn signals a problem to the brain. The problem can then be fixed by the “repair shop of the brain,” the cerebellum. The cerebellum can *adapt* or reset the way the eyes move with the head and improve your ability to move your head without blurred vision.

What else do I need to know about VOR Adaptation?

At first the exercise may seem to increase your symptoms of dizziness, but this is okay and part of the adaptation process. The repair shop, the cerebellum, needs to have different experiences to make all the adjustments you need, so you may have to do the exercises in different ways. Your physical therapist can help guide you through these exercises and make appropriate adjustments based on your symptoms and tolerance.

References:

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1111 North Fairfax Street
Alexandria, VA 22314-1488

Phone: 800-999-2782,
Ext 3237

Fax: 703-706-8578

Email: neuropt@apta.org

www.neuropt.org