Dynamic Chiropractic

ORTHOTICS & ORTHOPEADICS

Restoring Equilibrium With Orthotic Support

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Forty percent of all people over age 40 suffer from some type of disequilibrium. People can experience a balance disorder with or without dizziness.[1] Either way, subconscious balance becomes a conscious activity, reducing mobility and motor skills, and affecting a person's ability to concentrate on other tasks.

Etiologies may include a variety of causes or complications. However, the central nervous system (CNS) must coordinate the sensory inputs and provide appropriate motor responses to balance and stabilize the total structure, both at rest and in motion. The individual must rely on visual, somatosensory and vestibular input.[2]

Poor lighting as well as ocular problems can negatively affect balance. The vestibular system helps detect motion and position of the head. Somatosensory information is gained from the mechanoreceptors in and around the joints, especially the cervical region and the feet.

It is this system that chiropractors work with all of the time, yet we may sometimes overlook the value of chiropractic adjustments, orthotic supports and rehabilitation. Here's an approach that has worked well for my patients over the years. First, complete a thorough examination to qualify the individual for chiropractic care. Observe for obvious balance disturbances: positive Romberg's test, positive Hautant's test, and extreme difficulty standing on one foot with the eyes closed.

In many cases, you will find segmental dysfunction (subluxations) in the upper cervical region, anterior head position and excessive pronation.[3-5] Treatment should consist of specific chiropractic adjustments, along with rehabilitation exercises. The best exercise I know is coupling posterior cervical translation with extension. Prescribe a cervical pillow for traction and support.

Prescribe custom-made, flexible orthotics. Orthotics, especially those designed for inactive older patients with sensitive feet, stimulate the mechanoreceptors in the bottom of the feet.

For more active and agile patients, proprioceptive training with a mini-trampoline or wobble board can be very effective. This type of training can be performed sitting or standing (with support if necessary).

As simple as this may seem, the results are often astonishing - and in a relatively short time period (generally four to six weeks). Give it a try if you want to dramatically change the quality of someone's balance and life.

References

1. Shumway-Cook A, Woolacott MH. *Motor Control: Theory and Practical Applications*. Baltimore, MD: Williams & Wilkins, 1995.
2. Peterka RJ, Black OF. Area-related changes in human posture control: sensory organization tests. *J Vestibular Research* 1990;1:73-85.
3. Hulse M. Disequilibrium caused by functional disturbance of the upper cervical spine.

Manual Med 1983;1.
4. Guyton A. *Medical Physiology*. Philadelphia, PA: Saunders, 1981.
5. Greenman P. *Principles of Manual Medicine*. Baltimore, MD: Williams & Wilkins, 1995.

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FEBRUARY 2005