

Hale & Harty

Improve Your Balancing Act to Avoid Falls

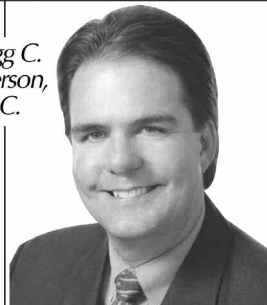
Some of the most heartbreaking personal disasters I hear about are becoming far too common. Sadder still, is that while much can be done to prevent them, too few people do. Disabling hip fractures, facial injuries, subdural hematomas, concussions and other injuries that occur when someone falls can be devastating. One bad fall can often literally turn your life upside down and you may never return to independent living. In fact, only 50% of folks who suffer hip fractures ever make it home again.

According to the **Centers for Disease Control**, injuries are the sixth leading cause of death in adults of 65 years of age or more and falls are the leading cause of such injuries. In the United States, one of every three persons age 65 and older falls each year. Among older adults, falls are actually the leading cause of injury deaths and the most common cause of injuries and hospital admissions for trauma.

It appears that our cultures general adaptation to a sedentary lifestyle during the past century is one of the causes responsible for the steep rise in hip fracture incidence observed in most Western countries during the last 5 decades. From what I have learned and seen in practice is that if you want to reduce disability, prevent injuries and limit dependence upon others as you age, you've got to keep moving; rocking, walking, swimming, dancing, bouncing or whatever it takes! If you stop moving, you stop living. I guess the reverse is true too. Motion is life.

The Spinal Column

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Basic truths of human physiology point to the realities of the cliché, "use it or lose it." Perhaps that would have been a bit more tantalizing title for this column! What happens when we age is that the joints of our bodies often become less and less able to move. This is due to the wear and tear from a lifetime of injuries, small and large, as well as arthritis, scar tissue, and a general weakening of various muscles, particularly the legs.

Basic truths of physiology also reveal the fact that the **central nervous system (CNS)** is the master control system of the body. Our brains are like supercomputers that are constantly receiving and processing data input from the various nerve receptors in the body and then sending out appropriate responses to ensure the proper maintenance and control of our lives. It is an amazing process. For example, the cerebellum, a large portion in the posterior the brain devoted to balance and coordination has billions of nerve cells. One single cell may reach out and touch as many as 100,000 other cells to control the delicate and precise pathways that allow us to walk, talk, shop, and chew gum at the same time!


The greatest input to the brain and **CNS** comes from receptors in and around the joints of the body. They have cool names like golgi tendon organs, muscle spindles and joint mechanoreceptors. When our muscles move our bones, they tell the **CNS** all about it. This communication is called proprioception. It's a big word for "joint position sense."

Your **CNS** needs a steady stream of accurate information about the relative position of all the joints in the body if it is to successfully manage your coordination, balance and delicate movements. This steady stream of data is reduced in both quantity and accuracy in the presence of tissue injury, inflammation, pain, loss of motion, or degeneration. For example a sprained ankle has torn ligaments, strained muscles, swelling, pain and simply cannot work properly. Its data input to the **CNS** is distorted.

Studies with seniors have demonstrated that mild defects in joints, particularly the neck area, impair the function of their joint mechanoreceptors. With the resulting limited proprioception, their body positioning in space is impeded and they must rely on vision to know the location of a limb. Heaven forbid, their eyes go bad too! To compensate for the loss of proprioception, their feet are kept wider apart than usual and their steps become irregular and uneven in length. As impairment in joint function increases, it becomes impossible for them to compensate, making falling a major risk.

Doctors of chiropractic are experts at detecting joints that are not functioning normally and then using what are called adjustments to restore as much as possible. Neurologically, adjustments stimulate an enormous amount of joint mechanoreceptors to their maximum frequency of input to the **CNS**, thereby normalizing proprioception.

The best way to ensure good proprioception, enjoy good balance and coordination and prevent disability or even severe injury from falling, is by restoring and maintaining good joint function. Other strategies to prevent falls among older adults include exercises to improve strength, balance, and flexibility, reviewing of medications that may affect balance; and home modifications that reduce fall hazards such as installing grab bars, improving lighting, and removing items that may cause tripping.

Lastly, I suggest you get checked and adjusted as necessary. Then you must use the better functioning joints frequently and vigorously; rocking, walking, tai chi, swimming, dancing...use your imagination. Use it or lose it! Have a wonderful month of stimulating your joint mechanoreceptors and **CNS**. 

Dr. Gregg C. Anderson specializes in comprehensive family chiropractic care at 3517 Marconi Avenue, Suite 102. in Sacramento. For more information on this or other chiropractic issues, you can reach him at (916) 485-5433 or visit his website at www.andersonchiro.com.

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