

## Key Ideas from a Variety of Articles

### **The Healthy Way to Sit and Exercise at the Same Time** **By Paul Chek, HHP, NMT [Founder, C.H.E.K. Institute ]**

“Did you know that low back pain is the most common orthopedic disorder in the world? Amazingly, one of the major causes of back pain is sitting. For many of you, this is quite a problem because today, more people work seated than any other position. Typically, people get up and sit to eat, sit to drive to work, sit at work, sit on the drive home, sit to eat dinner and sit in front of a TV until they go to bed. That's a lot of sitting! . . . When you sit in chairs for hours each day, the spine doesn't get enough movement and fluid is leached out of the discs. This minimizes incoming nourishment because the discs have no direct blood supply and are fed by a process of absorption facilitated by pressure changes in the case of the spine. . . . But, there is a solution to minimize the detriments of sitting too much -- the Swiss ball (Figure 5). As a sphere, the Swiss ball has a reduced base of support, moves easily underneath you and requires both the activation of your postural muscles and your balance mechanisms.”

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### **Movement and Learning Article on Bonnie's Fitware Inc. website :**

“Peter Strick at the Veteran Affairs Medical Center of Syracuse, New York, made another link. His staff has traced a pathway from the cerebellum back to parts of the brain involved in memory, attention, and spatial perception. Amazingly, **the part of the brain that processes movement is the same part of the brain that's processing learning .**”

“There's other evidence for the potency of physical movement. We know that much of the brain is involved in complex movements and physical exercise -- it's not just "muscle work." In fact, depending on the type of workout, the part of the brain involved in almost all learning, the cerebellum, is in high gear (Middleton and Strick 1994). In a Canadian study with more than 500 schoolchildren, those who spent an extra hour each day in a gym class far outperformed at exam time those who didn't exercise (Hannaford 1995)”

“Researchers know certain movements stimulate the inner ear. That helps physical balance, motor coordination, and stabilization of images on the retina. David Clarke at Ohio State University's College of Medicine has confirmed the positive results of a particular type of activity -- spinning (1980). With merry-go-rounds and swings disappearing from parks and playgrounds as fast as liability costs go up, there's a new worry: more learning disabilities. Clarke's studies suggest that certain spinning activities led to alertness, attention, and relaxation in the classroom. **Students who tip back on two legs of their chairs in class often are stimulating their brain with a rocking, vestibular -activating motion. While it's an unsafe activity, it happens to be good for the brain. We ought to give students activities that let them move safely more often** like role plays, skits, stretching, or even games like musical chairs.”

**Physical activity and learning go hand in hand, expert says**  
**By Kathy Walsh Nufer. Post-Crescent staff writer August 16, 2006**

“Neurokinesiologist Jean Blaydes Madigan believes the best way to nourish children's brainpower is to get them up and moving. The former classroom and physical education teacher from Murphy, Texas, now consults on how brain research links movement to learning. She said there is a “lot of emphasis today on students sitting in class loading up on academics,” when they should do quite the opposite. **“Our kids need to be physically active to help their brains function better,” Madigan said. “When we interact with information, we process more and better.” Movement not only enhances focus and attention, spatial awareness and motor skills that lay the framework for reading, but can bring a lethargic or hyperactive child back into balance, she said.**