

## **SHRINK RAP - Exercise and the Brain**

**By Jan Hittelman**

**Boulder Camera October 28, 2008**

Over the last 40 years, researchers have confirmed the many benefits of physical exercise as it relates to overall health. In the 1970's we learned that regular exercise has a significant benefit in reducing the risk of heart disease. Subsequent studies expanded this finding to a wider range of physical health issues (e.g. high blood pressure, colon cancer, diabetes, premature death, etc.). In the 1980's we began to discover the positive impact of exercise on mental health. Since then several studies have demonstrated that depression, anxiety, and stress can be significantly reduced as a function of exercise.

More recent research has yielded some amazing findings on the impact of exercise on the brain itself. In a newly released article in the British Journal of Sports Medicine, cognitive neuroscientists Art Kramer (University of Illinois) and Kirk Erickson (University of Pittsburgh) evaluated a number of studies indicating that exercise not only slows down brain aging but can actually increase brain tissue and improve brain functioning. The benefit of exercise has even been demonstrated with Alzheimer's patients. This is a profound realization, since brain mass typically shrinks with age and can impact cognitive decline in older adults. In fact, a reversal of this process resulted from as little as six months of exercise. The bottom line is that we now know that exercise doesn't just keep the body healthy but the mind as well.

This brings a heightened concern to our ever-increasing sedentary lifestyle, where children and adults are spending more and more time in front of computer screens. It is estimated that approximately half of people age 12-21 are not physically active and that physical activity declines dramatically during adolescence, particularly for female adolescents. This is consistent with local findings that only one-third of high school seniors report participating in vigorous physical activity (YRBS, 2007). As many of us know, this trend continues into adulthood. It is estimated that 60% of American adults are not regularly active and 25% are not active at all.

What's encouraging about the above research is that it's never too late to enjoy the benefits of exercise and even small amounts of exercise (e.g. going for a walk) can be helpful. For our own physical, mental and neurological health we need to incorporate some level of physical exercise into our normal routine. As parents we need to educate our children regarding the importance of exercise as well as modeling these behaviors ourselves. Creating opportunities to do fun physical activities on a regular basis is a great way to get started. This also provides an opportunity to spend time together as a family. Focusing on enjoyable activities (basketball at the local park, a bike ride on the Boulder Creek path, swimming at the local recreation center, etc.) will increase the likelihood that you will follow through and continue. The key is taking that first step. So in the words of my father, who may have had a different intent, "take a hike!"