



## **Brain Power**

*By Joe Stein, President*



“God made the bees; the bees make the honey. We do the work, and the teachers get the money” So began the silly refrain of my childhood school days. Learning in school was like exercising muscles: a completely natural act, but work nonetheless. What if you could pump up your mental acuity as effortlessly as doing biceps curls with weights as light as air? Too good to be true?

### **Pump up your brain**

Each week new studies suggest that exercise can help boost your brainpower as much as it boosts your body. Dr. Charles Hillman, an associate professor of kinesiology and community health at the University of Illinois, has said. “Studies of children show that aerobic exercise is related to higher test scores.” Exercise boosts memory by bathing the neurons in oxygen-rich blood. Not only does aerobic exercise increase the size of the brain, it strengthens the hippocampus, the portion that helps regulate emotions. Dr. Hillman explains exercise improves that part of our brain which enhances our ability to perform higher level executive functions such as evaluating a concept or fact then acting on it and repeating this cycle of evaluating and taking actions until a goal is met.

### **Mood elevation**

In “The Athlete’s Way” by triathlete author Christopher Bergland, he notes positive mood swings in athletes, “... The athletic process helps you learn about setting goals and generates optimism.” In a recent study by Dr. Monika Fleshner of the University of Colorado at Boulder, noted a study which compared the effectiveness of exercise to Prozac-class drugs (SSRIs.) “It found that exercise was almost as beneficial (as SSRIs) and that the combination of the drugs and exercise was even better. Exercise helped patients stay on their meds.”

### **The right mix**

The optimum mix of how much of one’s exercise program should be strength training, cardio training and flexibility training has not been determined. Strength

training increases bone density which benefits the nervous system through mechanism not fully understood. The flexibility and breath control of yoga enhances relaxation and increases creativity. Other studies have shown aerobic activity to be superior in developing brain power. My opinion is when in doubt, do all three in moderation. The key, according to Dr. Hillman, is the amount of time spent exercising, not necessarily the intensity. About thirty minutes of exercise a day seven days a week produced the optimum results. One study showed participants who exercised 180 minutes a week (25 minutes a day) had far less depression than another group which exercised only 80 minutes per week (11 minutes a day.) In case you feel the time needed to achieve maximum results is too long, look at it this way: On Monday and Wednesday you lift weights for 50 minutes followed by ten minutes of stretching. On Tuesday you do a spirited 30-minute walk on the boardwalk. Then a nice hour bike ride over the weekend with your spouse, kids or friends. Woops, you would be over your quota...that would give you 210 minutes of exercise in a week!

### **It works**

We know that exercise works, but do not fully understand why it works. Some anthropologists speculate our ancestors walked about 20 miles a day on the savannas. Our genetic predisposition for physical activity has not changed although our lifestyles certainly have. Hunting for debits and credits, using .XLS spreadsheets, driving the kids to soccer and restaurant dining are not substitutes for the activities of our ancient ancestors. Perhaps if we realize how important exercise is to our mental health and brainpower we will teach the next generation a new silly refrain: "God made our brains; our brains make us wise. To keep them sharp, we need to do some exercise."

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Joe Stein, B.S., M.B.A., is a certified personal trainer, weight management and lifestyle consultant and owner of Renaissance Fitness & Wellness. Call 732.345.5151 or e-mail [Joe@RenaissanceFitness.com](mailto:Joe@RenaissanceFitness.com) with questions or to receive a complimentary fitness consultation and session.