

Quadrant II Newsletter

Research shows that the difference between leaders who derail in their career and those that soar to great heights is social skills. Social skills appear in the second quadrant of Stephen R. Covey's Importance-Urgency matrix: social skills are important to a career but not urgent (Covey is author of the top-selling business book *The 7 Habits of Highly Effective People*). Quadrant II provides an opportunity for business and technical professionals to learn and try out new social skills based in science.

11Nov2015, author: Valerie Patrick, PhD: *Secret to Improving Intelligence*

Quotable (*Key Message*)

Regular aerobic exercise improves intelligence, both emotional and cognitive intelligence. Emotional and cognitive intelligence, in turn, improve your ability to work well with others and do great things.

Quantify (*The Science*)

Madhumita Dr. John Medina, a developmental molecular biologist and affiliate Professor of Bioengineering at the University of Washington School of Medicine, describes the impact of exercise on cognitive health in his book *Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School* (<http://brainrules.net/about-brain-rules>). Dr. Medina's first brain rule is that exercise boosts brain power. In a presentation at Google, Dr. Medina summarizes the scientific research in support of this brain rule (<http://thebalancedbrain.com/dr-john-medina-brain-rules/>).

Dr. Medina starts with the seminal study by Louise Clarkson-Smith and Alan A. Hartley of Scripps College in California in which the presence or absence of a

sedentary lifestyle was found to be the independent variable impacting the aging process. This study showed that the presence or absence of a sedentary lifestyle predicts how well a person ages as well as the extent of executive brain function (tied to problem solving and emotion regulation), long- and short-range memory, spatial abilities, and reaction time. Dr. Medina describes another study involving older adults that shows that specifically aerobic exercise behaves like a switch towards specifically executive brain function. That is, if aerobic exercise is stopped, then executive brain function begins to degrade within 6 days. Alternatively, if aerobic exercise is started, then executive brain function begins to improve within 4 months. Dr. Medina cites another study that shows aerobic exercise decreases the risk of having Alzheimer's disease by 50% and of having general dementia by 60%. Dr. Medina describes another study that shows that as little as 20 minutes of aerobic exercise 2 to 3 times a week is sufficient to begin seeing the cognitive benefits of aerobic exercise. Dr. Medina also reports a study of young adults (27 years old) that replicates the impact of starting and stopping aerobic exercise on executive brain function reported for older adults. Finally, Dr. Medina talks about the specific impact of aerobic exercise on the brain. Aerobic exercise has been found to elevate the number of BDNF (Brain-Derived Neurotrophic Factor) molecules per unit cell in the anterior horns of the hippocampus and increase the cerebral blood volume in the dentate gyrus of the hippocampus. These regions of the hippocampus are deeply involved in learning and memory processes.

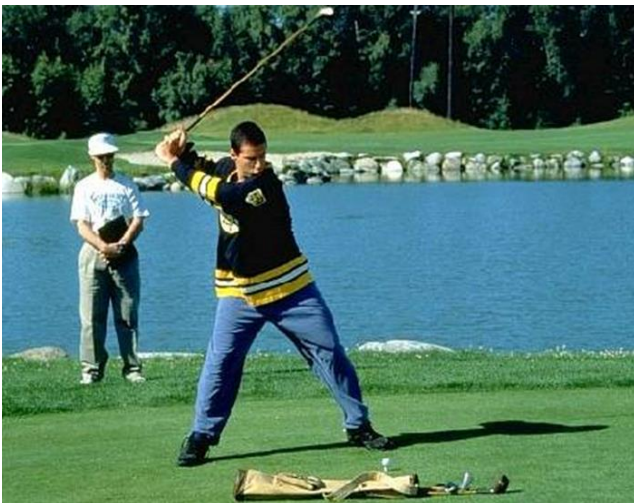
Qualify (*Put into Practice*)

Imagine what a wonderful world it would be if when a disagreement erupted, the arguing parties would take the disagreement “outside” to discuss over a brisk walk – brisk enough to be aerobic exercise.

The research shows that 20 minutes of aerobic exercise 3 times a week is sufficient to get the cognitive benefits of a non-sedentary lifestyle. Try different forms of aerobic exercise and measure your heart rate to understand what it takes to get to your target heart rate into the aerobic zone. You need to maintain the target heart rate for at least 20 minutes to get the benefits of aerobic exercise. Some of my favorite forms of aerobic exercise are using an elliptical exercise machine (gentle on the joints), hiking up and down mountains, biking, walking briskly to music in scenic areas, taking a spinning class, and swimming long distances in lakes.

The target heart rate for the aerobic zone is 65 to 85% of your maximum heart rate or 220 minus your age (<http://www.hanford.gov/health/?page=112>). To take your heart rate during exercise, place the index and middle fingers of your right hand gently on the carotid artery on the right side of your neck. When you feel the pulse, look at the second hand on your watch or phone and count the number of pulses in 6 seconds and then multiply by 10. If you are on an exercise machine, there is typically a timer that you can use to count your pulse and calculate your heart rate to check that you are in the aerobic zone.

Quip (*Fun*)



Golf does not count as aerobic exercise even if you put as much energy into your swing as Adam Sandler did in the movie Happy Gilmore. Aerobic exercise means sustaining a level of activity that elevates your heart rate to the target heart rate for at least 20 minutes. You could jog or briskly walk the golf course without

stopping for 20 minutes to get your aerobic exercise.

Quest (*Resources*)

Dr. Valerie Patrick, Founder and President of Fulcrum Connection LLC, provides training, consulting, and keynotes on collaboration, creativity, innovation, social intelligence, change management, and thriving on a steep learning curve. Contact Dr. Patrick (valerie.patrick@fulcrumconnection.com or text 412-742-9675) to set up an exploratory call.

Read about the role of facilitation in innovation on the Competent Collaborator Blog here: <http://fulcrumconnection.com/blog/to-facilitate-or-not-to-facilitate-innovation/>

About Fulcrum Connection LLC

Fulcrum Connection specializes in instructional design, training, speaking, facilitation and consulting to develop skills in leadership, innovation, sustainability, troubleshooting teamwork, and managing technical professionals.