THE TUESDAY MINUTE

THIS WEEK'S TOPIC

Boosting Brain Power

"Elderly individuals who did this daily for 24 weeks showed an 1,800% increase in memory, attention and cognitive function."

I'm sure you've noticed ads for products that claim to enhance mental performance? After hearing all the research and the hype, I always try to ask myself the question "Why is that working?" What's the underlying mechanism? You could take 20 or 30 different nutrients to increase brain function, and each one of them has some rationale. But let's consider "principles" that promote brain power rather than a specific "take this miracle product" approach.

My thanks to my friend John Rosenbaum who assembled the handout with the references below. I promise you, these notes can be a great resource.

We now know, contrary to our earlier understanding, that parts of the brain can regenerate though a process called neurogenesis. To stimulate and control neurogenesis, certain chemicals called neurotrophins are involved. One of the most exciting factors and one of the most active is a protein called BDNF, "brain-derived neurotrophic factor."

BDNF is an essential key player in creating new neurons and protecting old ones. Some of the factors that are involved in turning on BDNF are voluntary exercise, caloric reduction and intellectual stimulation. I say "voluntary" exercise because lab animals that were stressed or forced to exercise did not have the same benefits as those who could exercise at will.

Dr. Lautenschlager of the University of Western Australia found that elderly individual's who exercised the equivalent of 20 minutes a day for 24 weeks showed an 1,800 percent increase in memory, attention and other cognitive functions. One reason exercise may be so important is that BDNF is also found in skeletal muscle. It appears that "as BDNF in the muscle increases so does BDNF in the brain." Just hearing about that kind of makes me want to go jogging.

Next, let's consider caloric reduction. More and more research reports the benefits of caloric reduction, and one of those benefits is an increase in BDNF. The average American consumes an average of 500 more calories per day than they consumed in 1970. So reducing calories from the estimated 3,700 to 2,000 for women and 2,500 for men is not a huge discomfort. Somehow we have to communicate to our patients that "Food" is like a pharmaceutical compound that affects the brain. Another interesting note is that "BDNF levels are low in those with obesity and also in patients with Type II diabetes."

Just as exercise can increase BDNF in the muscles, mental exercise can also increase BDNF in the brain. BDNF is increased with problem solving, intellectual stimulation and according to neurologist Dr. David Purlmutter even meditation. I never thought about it but in a way, learning new concepts and ways to apply them on the Tuesday Minute may be actually increasing BDNF in your brain. Every little bit helps, right?

Of course, it will come as no surprise that stress is one of the major factors which "negatively" affects brain health. We can break stress into 4 major categories: inflammatory stress, oxidative stress, toxic stress (both internal and external toxins) and of course emotional stress. Each of these categories overlap, and each one of them can intensify the other.

Most of you know the factors that can lead to inflammatory stress: hydrogenated or trans fats, elevated homocysteine levels, food allergies (particularly gluten and diary), diets high in refined carbohydrates that will raise insulin levels to name a few.

Oxidative stress occurs as a natural process of life but can be accelerated by depletions of natural antioxidants, heavy metals or an overabundance of healthy minerals like iron or copper.

Toxic stress or environmental stress comes from pesticides, herbicides, flavor enhancers, preservatives or coloring agents and more. Figure in emotional stress and we have an equation for "compromised" brain power.

Remember, it takes energy to deal with these stresses. When our energy supplies are depleted the effects of these stresses accumulate and cells begin to function at less than optimal rates. Cellular repair mechanisms need energy to rebuild, repair and reproduce healthy cells.

Brain power can be enforced with core nutrients like ProMulti-Plus as well as good oils like Optimal EFAs, EFA-Sirt Supreme or Biomega-3 liquid. More than 2/3 of the dry weight of the human brain is fat, and ¼ of that is DHA. Both EPA and DHA are beneficial to promote healthy brain plasticity between synapses of brain cells.

KappArest, by Biotics Research, used to reduce NF-kappa B contains curcumin, green tea extract, resveratrol and lipoic acid. These nutrients show exciting promise in building BDNF. KappArest contains BioPerine to increase curcumin absorption. 3 capsules 2 times a day provide a therapeutic dose.

It may seem over simplified, but we actually do reap numerous benefits by practicing core principles. More specifically I'm referring to wellness "principles" that encourage and promote life. Consider voluntary exercise, caloric reduction and intellectual stimulation as key components for optimal brain health. You'll find notes below that are interesting and can be helpful for staying sharp and increasing brain power.

Thanks for reading this week's edition. I'll see you next Tuesday.