**Your Amazing Brain**

*Avoiding Dementia and Promoting Better Brain Health*

**[Alt. Title: 5 Brain Fitness Tips to Foil Dementia/Alzheimer’s]**

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Your brain continues to develop across a lifespan. It has the capacity for nerve regeneration and pathway rewiring, and it has the ability to grow new tissue. In fact, your clever brain produces nearly 10,000 new cells every day! Use them, and you can strengthen your brain just like a muscle – enhancing memory and cognitive ability, regardless of age. Don’t use them, and they soon die.

**Neuroplasticity is the Magic Word**

In the 1967 Mike Nichols film, *The Graduate*, Dustin Hoffman plays Ben Braddock, a recent college graduate who gets one word from a family friend: “Plastics.” At the time, it was an exploding field with great potential. If the film had been produced today, the word would likely be “neuroplasticity.”

Neuroplasticity refers to the brain’s lifelong ability to rewire itself in response to the stimulation of learning and experience. Neuroplasticity allows the neurons in the brain to compensate for injury and disease and adjust its response to new situations and changes in its environment. This dispels the myth that the adult brain is a relatively stagnant and fragile organ. It’s a muscle, just like any other muscle in the body. Like other muscles, you have to work it.

**The Brain’s Super Highway**

Our brains have 100,000 miles of neural pathways. Every time we move, learn something new, recall a fact or do any of the magnificent things our brains are capable of, messages travel along these pathways at hyper-speeds of up to nearly 300 miles per hour. Just like training a muscle, we can train our brains. Once it learns a new pathway, reinforcement makes that pathway stronger and faster.

What happens if something wipes out that pathway – say injury or stroke? In many cases, the brain will find a route around the damaged area of the brain. That’s neuroplasticity at it’s best – rewiring in response to the environment and behavior.

**Nun Sense**

A long-term study in Minnesota tracked the lifestyles and mental decline in a group of nuns. When they died, autopsies revealed some had Alzheimer’s brains – tangles of neurons, and the plaque of beta amyloid material surrounding these neurons. Yet, these nuns experienced no signs of Alzheimer’s. The investigators concluded that a lifestyle of regular physical and mental activity protected these nuns from the onset of the symptoms of dementia, even when the disease was anatomically present. What that tells is that cognitive stimulation improves memory and brain health and minimizes the progression of dementia.

**Five Fitness Tips to Improve Your Brain**

Ready to flex your brain muscles? Here are five brain-healthy tips to get you started:

1) **Exercise Regularly** – Try taking a walk, riding a bike or swimming. Any movement, no matter how small, helps strengthen your brain.

Neuroplasticity and neurogenesis cannot occur without the oxygen and glucose in blood. Our neurons cannot function without nutrients. Physical activity is associated with a surge of substances that stimulate brain growth. Brain-derived neurotropic factors (BDNF) are like Miracle-Gro for the brain, as is nerve growth factor (NGF). Experiments in mammals have shown that these substances can reverse age-related memory impairments.

2) **Challenge Your Brain** – The brain needs constant stimulation to keep the pathways it has and to develop new ones. Learning new things and keeping your level of brain activity up is a virtual fountain of youth. Try learning a new language or how to play a musical instrument. See what happens when you eat dinner with your non-dominant hand or take a different route to the grocery store. New information stimulates your brain.

3) **Learn to Reduce Stress** – Chronic stress rots your brain, destroying cognitive function and raising your risk of dementia. Find what gives you joy – whether it’s meditation, painting, woodworking or reading, etc. Find this quiet place within you and make sure you go there regularly to give yourself mental breaks.

4) **Unplug Regularly** – Dr. Sandra Chapman, founder and chief director of the Center for Brain Health at the University of Texas in Dallas, and author of *Make Your Brain Smarter*, advises us about the “power of one.” Instead of multi-tasking, try “sequential tasking.” Multi-tasking inhibits learning and can negatively affect our memory. Take time to unplug from the sensory overload that comes from being exposed to so much technology; cell phones, computers, and television all have a place, but know when it’s time to unplug for a while.

5) **Eat a Balanced Diet** – A good rule to live by is this: Go fresh. Go local. If your great-grandmother never ate it, more than likely, you shouldn’t either. The closer you get to a Mediterranean diet, the better. Eat fresh fruits and vegetables, nuts, fish and whole grains. Limit meats and high-fat diets. One study at the Johns Hopkins Bloomberg School of Public Health found that the risk of Alzheimer’s was 80 percent higher in people with obesity.

**For more information about better brain health and other successful aging tips, visit** [**www.LiveLongDieShort.com**](http://www.LiveLongDieShort.com)**.**