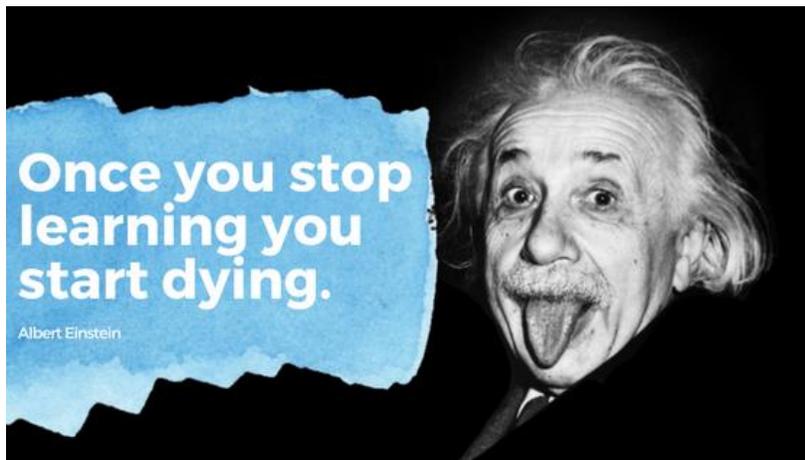


Learn Something New: Your Future Brain Will Thank You

By Kate Kunkel



We used to think that, once you got past like 30 years old, your brain just started dying. The cells died off naturally, or we killed them off by drinking too much, smoking pot, or living in a very polluted environment.

While it's true that these things can have a negative effect on the brain, the good news is that our brains can generate new neurons, and neurons can adapt and change in response to stimuli. They are not static – they are plastic.

We call that neuroplasticity and neurogenesis.

Neurogenesis

Neurogenesis refers to the generation of new neurons from stem cells. It's an important phenomenon in embryos and during early development and in adults, neurogenesis can occur in the hippocampus region of the brain, where learning, memory, and emotions are processed.

Neurogenesis can be very sensitive to environmental stimuli. When our environment stimulates us, it increases our mental energy, and that can help to diversify the development of new neural cells.

Neuroplasticity

We've heard a lot about this in the last number of years...that our brains are plastic, that they change. In fact, a whole industry built up around this.

But what does that mean? Do they get bigger? Do they get more complex? Are new cells created?

What drives neuroplasticity, or changes in the brain, is our own behavior.

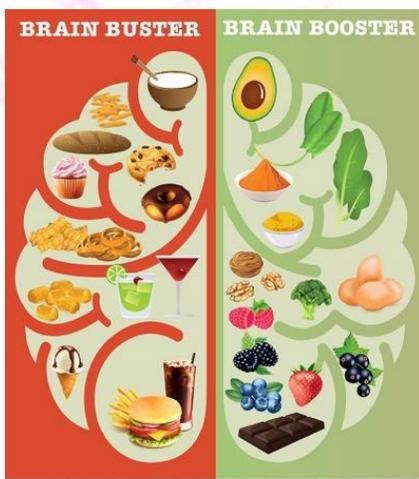
Neuroplasticity involves learning. When we are learning something, we inspire change in the brain. First, chemical changes occur. For example, when you're learning a language, you'll learn new vocabulary and you will remember it that day, because that activity of learning those words has resulted in the brain changing chemically. But chemical changes are only good for short term memory.

To make that learning stick, and to stay in long term memory, the brain needs to change structurally. It physically changes with practice and work on this new learning. It doesn't just happen. Those words you learned in that new language must be practiced and used in context so that the brain changes to accommodate that information.

But there's a caveat here. Neuroplasticity goes both ways; it can be both positive and negative. So, if you start thinking negatively, and doing negative things, like losing your temper or getting addicted to drugs, that behavior changes our brain for the worse. That kind of behavior also makes those chemical, structural and functional changes to the brain. That's why it is so hard to overcome addictions, negative thinking and the like.

What does this have to do with protecting against dementia and Alzheimer's? By making the brain change, by giving it chemical, structural and functional challenges, it is protected against the ravages of time and our lifestyle.

But this is not something that happens just by playing computer games. It involves practice, and the harder something is, the more it changes your brain, and the more protection you have.



How do we stimulate Neuroplasticity and Neurogenesis?

Besides eating a nutritious, whole foods, plant-based diet, good levels of physical activity (exercise) and engagement in cognitive stimulation, (learning and social interaction) can increase neural plasticity and the resilience of our brains.

Exercise: Research shows that physical activity, independent of any other stimuli, induces neuroplastic changes in brain structure and function.

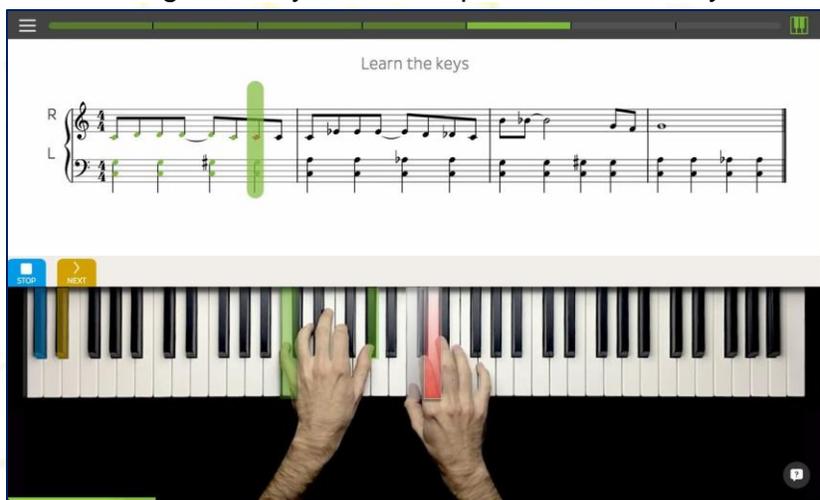
Change it up: Take on new projects to learn and develop yourself. Join a book or discussion club or volunteer in your community. Read to kids at the library or visit the elderly in nursing or care homes. These activities also fulfill the need for quality social interaction.

If you always go to the same restaurants, try new ones. Try new types of food or visit different communities. If you're financially able, travel. There is truly no better way to expand your brain and your mind.

Learn something that you would never have considered before. For example, learn a new language. Spanish and Mandarin are very different, but they are the second and third most popular languages on the planet. How about studying one of them and plan a trip where you can use that language, even if it's just to Chinatown in the nearest big city, or the authentic Mexican restaurant in the next town?

There are many incredible on-line courses these days, and many of them are very inexpensive. The Great Courses, The Centre of Excellence, Udemy – all have courses on just about every topic you could imagine, so you could spend the rest of your life learning new things.

That said, while online courses are great, there are also many community colleges and universities where you can audit courses for little or no money, especially if you're over 60. That way you will also meet new, most likely younger people who will give you different outlooks on life, and you will be in a new environment.



Learn to play a musical instrument. This is good on so many levels. Even just mindfully listening to music itself helps expand the brain, but by learning to play an instrument, you are using your brain in an entirely different way. The complexities of hand movement combined with note reading and timing will engage many different parts of the brain, making them work in ways they may never have cooperated before.

What about computer games?

Regarding computer brain games.... There is some evidence that non-computerized reasoning and computerized speed-of-processing training can help improve driving in older adults and reduce the number of accidents. So far, though, there is little evidence that playing them can improve broad cognitive abilities.

On the other hand, if you have never used a computer before, or played any kind of video game in the past, the act of learning how to do operate the computer or play the game is something new, and that helps with neuroplasticity.

Any new experience that requires mental effort will produce changes in the neural systems that are used in acquiring that new skill. There could be an increase in the number of synapses, or the number of neurons, or the connections between them could be strengthened.

Do you have a keyboard or guitar gathering dust in the corner? Sign up for an online course - heck, there's one guy who says you can learn piano in 21 days. Might be just the right amount of time!

Whatever you decide to do, be gentle with yourself. You don't have to be "good" at this, you don't have to perform, you don't even have to let anyone else know you're embarking on your new learning. Just enjoy, and know that whatever you're doing to learn something new is helping your brain.

