Dr. Rob’s Science Connection -- Enhancing Brain Health

## Five Popular Brain Myths – Part 2

## Issue 12

There are quite a few myths out there about human brains. This is the second part of a two-part series on brain myths.

6. **Brain training requires video gaming.** While many of the available brain training apps are impressive in their ability to exercise targeted cognitive abilities, there are many ways to get the benefits of brain exercise. Of course, there are paper and pencil options. And, many Sudoku and word-search books would work for that, not to mention books for reading. But there are also opportunities to learn new things and have new experiences.

* Read a real newspaper.
* Take a class.
* Develop a new hobby.
* Write a letter.
* Learn some new foreign language vocabulary.
* Learn and play a new board or card game.
* Visit museums.
* Attend community lectures.
* Program your electronic devices.

7. **Crossword puzzles can help our ability to make new memories.** There is no direct evidence that I can find that shows crossword puzzles lead to people being able to maintain or improve their ability to make new memories. Crossword puzzles primarily require, and exercise, your ability to retrieve an old memory, not your ability to make a new memory. Earlier stages of cognitive impairment are primarily related to an inability to make new memories. While crossword puzzles certainly won’t hurt and they can be enjoyable, they exercise the wrong cognitive ability in order to prevent impairment in one’s ability to make a new memory.

8. **You are born with all the brain cells you will ever get.** It looks like we can grow new neurons, through the process of neurogenesis, throughout all of our life. Unfortunately, we can’t grow those neurons everywhere, but we do grow them in the hippocampus. And, the hippocampus is where we make new memories. But the rest of our brain is not static. In fact, most of our 86 billion neurons are very dynamic, making and breaking connections between neurons as we learn and forget. (I mean who needs to learn the last 2000 places you parked your car? You just need to remember the last place!)

9. **We are either visual or auditory learners.** While some people might prefer to learn by hearing someone talk, versus reading the same information, there is almost no evidence showing that teaching to a preferred learning style has any effect on learning. This surprises many people, but it makes sense if you think how we immediately turn visual information into an auditory code in our inner voice. Reading is actually auditory for the mind and brain. If someone cannot learn visually, or if they cannot learn auditorily, that would actually be a sign of a serious problem.

10. **Memory and cognitive ability go on a steady downhill slide after about age 20.** Fortunately, this is a myth. While there are changes in cognitive ability in older adulthood such as a slightly slower neurological processing speed and a very slight decrease in aspects of attention. The truth is that we are constantly learning new things and increasing what psychologists call *crystallized intelligence*. And, the more you know the easier it is to understand your world and make sense of it. Others have argued that the increased experience with the world also contributes to greater wisdom.

**From Brain Health Myths Part 1**

1. **Myth: We only use 10% of our brain.**

2. **Myth: Drinking alcohol kills brain cells.**

3. **Myth: Medication is our best chance of reducing dementia rates.**

4. **Myth: We have only five senses.**

5. **Myth: We have 100 billion brain cells.**

Dr. Rob Winningham is a Professor of Psychology and Gerontology at Western Oregon University. For the past 20 years he has researched human memory and ways to enhance cognitive abilities. His brain stimulation activities are used by thousands of retirement communities and have been shown to improve memory ability. For more information go to: [www.robwinningham.com](http://www.robwinningham.com)

*These articles are written for community members to educate them about brain health. The articles can be used in cognitive stimulation classes or in community newsletters. Anyone can use these articles, without requesting permission, as long as Dr. Rob Winningham is given credit. The articles can be reformatted but the text cannot be edited.*