

How to Train Your Brain

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Educational Objectives

1. Gain a basic understanding of how the brain works.
2. Understand the impact of brain stimulation on memory and learning.
3. Encourage increased brain stimulation through everyday activities.

Discussion: To start this lesson, ask members to name components of a healthy lifestyle. They may list items such as eating healthy, eating fruits and vegetables, exercising regularly, walking, etc. Take notice if any of the members mention activities that use the mind, i.e., reading, doing puzzles, learning something new.

When we think of a healthy lifestyle, we may think of exercising, eating a balanced diet, losing weight, being heart healthy, controlling diabetes or lowering cholesterol levels. We often forget the importance of brain stimulation in our healthy lifestyle. After all, the brain is the most important and most complex part of the body. It controls almost all body processes including heartbeat, breathing, digestion, muscle movement, speech and all five senses. We need our brain to be healthy because it is responsible for memory, emotion, behavior and reasoning. The health of our brain is vital to nearly everything we do.



Brain Basics

The brain is the control center of your body! All of this is accomplished by an organ that weighs a mere 3 pounds and is the size of a small head of cauliflower. But, how does the brain work? Your brain contains approximately 100 billion nerve cells called neurons. Neurons behave like wires in a computer, gathering and transmitting electrochemical signals. The point of connection and communication between two neurons is called a synapse.

Discussion: Different areas of the brain help you complete different tasks. For example, the cerebrum (the largest part of the brain) is the portion that allows you to initiate movement, analyze information, reason and experience emotions. The centers for these things are located in different areas of the cerebral cortex, which is the outside portion of the cerebrum.

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Every time you practice an activity or access a memory, neurons fire and connect together to form electrochemical pathways. When this happens repeatedly, the connections and pathways are strengthened and expanded. If you stop practicing an activity, your brain will eventually “prune” the unused cells. The brain works on a system of supply and demand. The more times a pathway is used, the stronger the connections will be. One saying regarding the brain is “the cells that fire together, wire together.” We are born with the majority of the neurons in our brain. Very few can be renewed, so use them or lose them!

“Let’s Connect!” Activity

The brain is about connections and working together, so let’s work together to tell a story. Starting in the back of the room and working your way to the front, each member will add a sentence that connects with what the person behind them said, to build the story. This story will begin and end with the lesson leader. Use the prompt below to get your club’s creative juices flowing: **“Yesterday, Pam was on her way to the grocery store and the craziest thing happened!”**

Why Train Your Brain

Brain stimulation is any activity that creates or strengthens neural pathways and connections. These linkages are drawn on when needed by the individual and brain challenging activities can help with improving one’s memory. People who stimulate and challenge their mind throughout their lives often maintain a high level of brain activity. We have all heard the old adage, “You can’t teach an old dog new tricks.” That is not true with it comes to learning and the brain. The brain has an ability called *neuroplasticity*, which allows it to adapt and change, regardless of age. With the right stimulation, your brain can form new neural pathways, alter existing connections, and adapt and react in ever-changing ways.

The brain’s incredible ability to reshape itself holds true when it comes to learning and memory. You can harness the natural power



of neuroplasticity to increase your cognitive abilities, enhance your ability to learn new information and improve your memory.

The brain is a wonderful muscle that is always changing and that gives us the opportunity to shape neural connections through our behavior and environment. However, we cannot forget there are other factors, like genetics, that are unchangeable. Neuroscientists are still researching the causes of neurological diseases like dementia and Alzheimer’s disease, as well as how lifestyle choices affect the brain. We can incorporate brain stimulating activities into our daily lives to keep our brains as strong as possible, while accepting that there are certain factors in life that we cannot change.

Benefits of Exercising Your Brain

Research shows that engaging in cognitively stimulating activities throughout your lifetime can lead to a slower decline in later life. Some memory loss is unavoidable with age. But, by engaging your brain, you can delay the decline and improve your cognitive state. The sooner you start challenging your mind, the better! Research has indicated that exercising your brain can lead to short-term gains in memory and reasoning, and long-term gains in processing times. Regular brain stimulation can be beneficial in many ways including:

- Faster thinking
- Better memory
- Sharper listening skills
- Quicker reactions
- Improved mood
- Improved multitasking skills



“Make Up Your Mind” Activity

Club members will be given two options. They must quickly “make up their mind” on what they prefer.

1. The lesson leader will read two options out loud. For example, “Coffee or tea?”
2. Members can pat their head if they prefer item #1 or they can rub their belly if they prefer item #2. If your club likes to be active, members can move to one side of the room to choose the first item and the opposite side for the second item.

Below is a list of suggestions.

Item #1	Item #2	Item #1	Item #2
Tea	Coffee	Cat	Dog
Apples	Oranges	Car	Truck
Flower	Vegetable	Carrots	Celery
WVU	Marshall	Beach	Mountains
Jacket	Sweater	Pop	Soda
Jelly	Jam	Pants	Jeans

Redesign Your Mind

There are a number of activities that you can do for mental stimulation. It is important to engage your brain throughout the day. Try some of the following activities:

- **Try something new:** Learn a new language or learn to play an instrument!
- **Spend time with loved ones:** spend time playing cards, walking or meeting with friends.
- **Brain games:** Try word searches, sudoku, word cyphers or crossword puzzles.
- **Pick up a book:** Read a book that you find interesting or write in a journal.
- **Pay attention:** Be present in the moment and avoid auto-pilot!

Discussion: Ask club members questions to prompt discussion.

1. How many of these activities do you already do?
2. Which of these activities can be easily incorporated into your daily life?

3. Are there any other activities you do daily that stimulate your brain?

Quick Tip: Amp Up the Exercise!

Regular aerobic exercise keeps your brain sharp! A recent study shows that regular aerobic exercise that raises your heart rate increases the function of your hippocampus, the part of your brain responsible for verbal memory and learning. Exercise improves the health of the brain by encouraging the release of chemicals that fuel neurons. It also reduces stress, increases concentration and promotes sleep, which all have an impact on brain health.

“Getting on the Move” Activities:

- Go for a walk before or after your club meeting.
- If the weather does not cooperate, play the indoor game, “Boop.” Members are asked to stand in a circle. The lesson leader tosses a balloon into the circle and the group works together to keep the balloon from hitting the ground. To make it more fun (and challenging) add more balloons.

All Goes Hand in Hand

A healthy lifestyle includes eating a balanced diet, being physically active and exercising the brain. All of these work hand in hand to keep us “fit” in the different areas of life. Brain challenging and physical activities have already been mentioned, now it is time to briefly highlight nutrition. While almost any fruit or vegetable have shown to promote



brain health, here are a number of specific ingredients that are beneficial:

- Salmon, trout
- Apples (with the skin)
- Brown rice
- Onions
- Barley
- Tomatoes
- Quinoa
- Spinach
- Walnuts
- Tea
- Blueberries
- Tumeric

Food items that are not beneficial to your brain health are saturated fats, trans fats, added sugars or syrups, and any grains that are not 100% whole grain. Eating a balanced diet rich with fruits, vegetables, good fats, whole grains and lean meats gives the brain the nutrition it needs for optimal health. A combination of a balanced diet with physical and brain stimulation activities will allow you to train a strong and healthy brain.

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