



July 2021



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EAP HELPLINE



E-MAIL EAP

NEUROPLASTICITY OF THE BRAIN

WHAT IS NEUROPLASTICITY?

It is the brain's ability to continuously grow and evolve in response to life experiences. Put simply, our brains can change throughout our lives to adapt to new circumstances. Plasticity is related to flexibility, which is what the brain is characterised by. It can change and adapt by forming new neural connections - this reorganisation gives us many benefits.

There are approximately 86 billion neurons in the human brain. Scientists used to believe that new neurons are only formed during infancy, but we now know that this is not true. In fact, throughout the entire life, the brain can create new neurons and connections and reorganise pathways, which we call neuroplasticity.

Although children are characterised by a much greater capacity for neuroplasticity, adult brains are also capable of change and reorganisation.

Types of neuroplasticity:

1. **Functional plasticity** - it consists in the brain transferring functions from damaged areas to undamaged areas.
2. **Structural plasticity** - as a result of learning, the brain changes its physical structure.

What are the benefits of neuroplasticity of the brain?

Neuroplasticity is extremely important because it makes it possible:

- to recover mental function after strokes and brain injuries,
- to redirect brain functions: when one area is damaged, its functions are transferred to another area,
- to strengthen some areas of the brain while others are weakened,
- to improve memory, learning, adaptability to change,
- to increase the level of cognitive functions such as attention, perception, thinking.

Thus, neuroplasticity does not only enhance our ability to learn, process and remember, but it can also help us recover from serious injury and damage.

What has a negative effect on neuroplasticity?

Factors that reduce neuronal activity and lead to its disappearance mainly include:

- stress, especially prolonged distress,
- damage caused by free radicals, i.e. poor diet,
- neuronal inactivity - lack of stimulation of the brain, for example, by reading books, learning new things, solving logic puzzles.

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Inspire yourself to change for good



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How to improve memory and learn new things faster? We recommend reading Norman Doidge's book „The Brain That Changes Itself” about neuroplasticity and the abilities of the brain.

HOW TO IMPROVE BRAIN NEUROPLASTICITY?

What can we do to improve our brain plasticity?

It turns out that there are many ways to do this, including:

- Learning a new language or skill, for example playing a musical instrument or a new dance,
- Finding your inner artist and expressing yourself through art. Taking classes in painting, sculpting, carpentry or decorating. Drawing, making scrapbooks, redecorating the house. Simply being creative!
- Travelling and experiencing new places and cultures. Travelling is a great learning tool and forces you out of your comfort zone.
- Keeping your mind clear with reading and crossword puzzles, as well as writing and expanding your vocabulary. Taking a writing course or delving into a good fantasy novel is a good idea.
- Intermittent fasting - it helps improve cognitive functions and stimulates neuronal growth. It also helps you stay healthy and may even lead to you losing a few extra pounds.
- Training your memory when learning new things by using mnemonics such as memorising the acronym PEMDAS used in mathematics to learn the order in which equations are solved (Parentheses, Exponents, Multiplication, Division, Addition and Subtraction).
- Exercising the non-dominant hand, for example using the left hand to comb your hair.
- Making sure you get enough sleep, as it helps with acquisition of knowledge.
- Doing puzzles, solving problems and challenging yourself as much as possible. A great exercise is to try to find multiple solutions to an issue.
- Ensuring you get enough exercise as it promotes blood flow and cell growth in the brain.

It is worth exercising your brain, and above all being active both physically and mentally! This will help you stay healthy and is a great preventative tool that can keep away many ailments of old age. Plus, this activity is a lot of fun and it is addictive! It is great for boredom, it can improve your memory, boost confidence and help you make new friends.

So what are you waiting for? Start changing your brain!

***When was the last time you did something for the first time?
If you feel that you need changes or support in your life, for example to develop an action plan,
talk to our coach. We are here to support you!***