



## GIVE MY BRAIN A CHANCE!

The brain consists of nerve cells which are all interconnected. Each part of the brain is responsible for different tasks, actions or thought processes. Previously everyone believed that no new neurons were ever formed. In other words - what you had at birth was what you had for life.

Latest research shows that our brain has Neuroplasticity. This means that contrary to previous beliefs our brain can continue to grow and develop throughout our lives. No longer do we have to expect that our cognitive functions will decline with age. Cognitive decline means a diminished ability to think, remember, make decisions, use language and have appropriate emotional responses. As it progresses it becomes Dementia.

**Neuroplasticity means that our brain will respond to stimulation and adapt to new situations by growing new neurons (nerve cells) and making new connections.**

The discovery of Neuronal Stem Cells has proven that the more you stimulate your brain, the more new cells you will make and that new pathways will be formed. This occurs more rapidly in younger people but is possible into old age if you give your brain a chance!

The Hippocampus, especially targeted in Alzheimer's, is particularly susceptible to age related decline but also particularly responsive to stimulation. It is the part of the brain that deals with conversion of short term memory to long term memory and spatial awareness.

### **Factors Which Promote Brain Aging:**

- **Stress** - repeated stress causes the nerve cells in our brain to shorten and decreases the number of connections to other cells, as well as reducing the number of new cells being produced. This can affect your mental abilities as well as negatively impacting on your mood.
- **Nutrient poor diets** - the brain needs protein, Omega 3 and 6 fats, Iron, Zinc, Iodine, Selenium, Vitamin A, Choline and Folate for maximum health.
- **Lack of exercise** - a sedentary lifestyle reduces the ability of the brain to change and adapt to new information. It increases nerve cell aging.
- **Lack of stimulation** - without stimulation through social interactions and new situations or learning, the brain's ability to grow is reduced and there will be a marked decrease in cognitive function.
- **Hypertension** - high blood pressure damages the small blood vessels in the brain. This causes reduced brain size which means your cognitive functions diminish. It can predict the progression of dementia.



## What Can I Do To Improve My Cognitive Ability?

- **Learning** - learning any new skill whether it be a language, cards, sport, or craft is the fastest way to stimulate the growth of your brain and create new neuronal connections. Doing this in a group setting enhances these effects. Social interactions are a vital part of keeping your brain young and active.
- **Exercise** - regular mild exercise prolongs the life of stem cells, which means it increases your brain's capacity for new growth. It increases learning ability, exploratory behaviours and muscle coordination. It has both a short term and long term effect.
- **Antioxidants** - these are necessary to reduce oxidative stress (Free Radical damage) in your brain. They are found in any colourful fruits and vegetables, Chia and Quinoa. Especially beneficial are blue berries.
- **Reduce fructose** - high fructose diets result in slower brain functioning and reduced learning capacity. High fructose foods are any foods made with corn syrup, found in many fast foods, and concentrated fruit products like juices and fruit wraps.
- **Reduce Trans Fats** - they are caused by the way some fats and oils are processed. They are found in foods that use hydrogenated or partially hydrogenated vegetable fats, such as deep-fried and baked foods like chips, popcorn, cakes and baked goods. Higher levels of these fats in the body reduce the size of your brain and decrease your cognitive abilities.
- **Care for someone** - studies have shown that inter-personal relationships will shape your brain, or confer benefits to parts of the brain responsible for emotions, arousal and feelings. Stimulating these parts of your brain increases your motivation and reward centres.
- **Positive outlook** - what we give out to the universe is what we receive back. If you actively try to find the positives in any given situation you will find that you cope with everything better. Gratitude Journals are an easy way to reinforce and develop a positive outlook. Every night record something for which you are grateful and that matters most to you.
- **Repetition** - this is the key to brain changes. The more you do something the greater the stimulation to the brain and the more you reinforce the changes.

**We only have one brain, so make it the best it can be!**