

## Keeping your Brain Healthy

As we get older, we may become more forgetful, be less able to concentrate or pay attention, or may have decreased problem solving abilities. Symptoms such as these can occur due to 'age-related cognitive decline'. Contrary to past beliefs however, cognitive decline is not inevitable where there is no disease.

Researchers have made an exciting discovery called 'neuroplasticity', which means that the brain continues to change and adapt, with the potential to grow new neurons and synaptic connections, across the lifespan and into old age. Different lifestyle activities have been shown, in scientific research, to help keep the brain healthy. So, just as physical health can be transformed by diet and fitness; your brain can be affected by your environment and lifestyle. Following are seven scientifically-based and key ingredients to maintaining good brain health.

### THE SEVEN SECRETS OF MENTAL SHARPNESS:

**1. Aerobic Exercise** - helps to physically grow connections in key parts of your brain responsible for concentration and focus, and also helps improve day to day memory. Studies have shown that older adults who engaged in 30 minutes of aerobic exercise 3 - 5 times per week could improve performance on tasks measuring attention, processing speed, executive function and memory. Research found that fitter older adults had greater brain volume than their unfit, sedentary counterparts.

**Tip:** Try activities with easy continuous motions that keep the heart pumping like a brisk walk, playing tennis, dance or aerobic classes or swimming.

**2. Mental Stimulation** - particularly change and novelty - helps keep you mentally sharp and your brain better connected. Research shows that people who engage in higher levels of mentally stimulating activities can reduce their risk of cognitive decline in later years. For example, scientists found that over-65 nuns and priests who were most mentally active had roughly a 50% lower risk of developing Alzheimer's disease over a four and a half year period than those who were least mentally active.

**Tip:** Challenge and change are key! Challenge your brain by doing things that you would enjoy but which would also 'stretch' you; learning a new language, learning to play a musical instrument, or honing your computer skills might be examples of this.

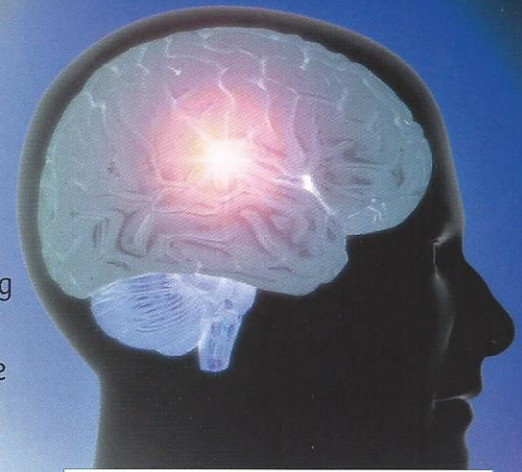
**3. New Learning** - can trigger new connections between brain cells to develop, and stimulate the growth of new cells in key memory domains. Not only this, but researchers have also found that engaging in new and complex learning can result in less atrophy, or wasting away of the hippocampus; an area of the brain important for memory.

**Tip:** new learning can be as simple as learning the words of a new song or as complex as learning a new language. Joining a class can help you to engage in new learning on a regular basis. Anything new that you learn helps to strengthen existing connections and form new connections in your brain, which helps to keep it healthy as you get older.

**4. Good Diet** - what is good for your heart is good for your brain, and vice versa. Several studies have shown that adherence to a healthy diet is associated with a reduced risk of cognitive decline. Researchers found that people who adhered to a Mediterranean-type diet had between 34% and 38% lower risk of Alzheimer's disease than those with the lowest level of adherence. The right foods can have a protective and nourishing effect on brain cells.

**Tip:** Eat more fruit and vegetables, like spinach, or cabbage; oily fish like tuna, salmon; wholemeal cereals, nuts and pulses, salad, olive oil and poultry. Minimize the amount of animal and saturated fats in your diet; so less high-fat dairy products, red meat, butter, crisps and cakes.

**5. Less Stress** - Moderate levels of stress can be stimulating but living a very stressful life can have a negative effect on memory and attention. Stress is part of life so you will not eliminate it, but even learning to control it somewhat is great.



#### About the NEIL Programme:

Our Vision is to enable independent living and improve quality of life. To find out how you can become involved, visit our website or email [neil@tcd.ie](mailto:neil@tcd.ie).



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**Tip:** find a method of de-stressing which suits you and practice it. Examples may include relaxation training, mindfulness, yoga, or exercise. Just feeling a little more in control will help relieve the stress.

**6. Social Engagement** - Social interactions with friends, relatives, societies, choirs, volunteer groups or community programmes, are immensely beneficial to your brain. Evidence shows that people who maintain high levels of social engagement can maintain their mental sharpness for a lot longer. A study in Sweden followed 1,203 healthy older adults over 3 years and found that people who reported having little or no close social ties had a 60% increased risk of dementia.

**Tip:** break out a little bit, and widen your circle of friends and acquaintances. Attend social groups, visit or call family and friends regularly, or try some community or voluntary work.

**7. Thinking and Behaving Young** - Since the 1950's, life expectancy has increased by eight to ten years. If you think of yourself as old at 60, which is not really justified anymore, then you will behave as though you are old, and you will do fewer of the 'seven secrets' that can have such positive effects. Don't think yourself old. Behave younger than you are and you will feel younger. The way you act chemically changes your brain and affects brain function.

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