



Regenerating Brain Health

For generations, medical professionals and researchers asserted that once your brain and nervous system are developed, you can't re-grow lost neurons or repair damaged ones. This meant that once the destruction is done – be it from injury, aging, neurological disease, heavy metals or other neurotoxins, chronic stress, or other factors — there's no way to repair it. However, new research is turning this idea on its head, showing that there's hope for those who struggle with neurological damage.

Not a New Idea

As far back as the 1970s, a Nobel-nominated physiologist and physician from Venezuela, Fuad Lechin, M.D., Ph.D., asserted in his work that the brain could repair itself, given the right conditions. Researchers have known that repair of the nervous system in adults occurs in only a few specific regions of the brain like the olfactory bulb, where cells and the neurons associated with them are constantly being replaced. The mechanism behind this type of neuro-regeneration comes through special cells called neural stem and progenitor cells. These special cells are actually found throughout the central nervous system, but they seem unable to form new neurons in most brain regions, but what was discovered recently is that these cells are actively repressed.

One of the main areas of focus in neuro research is the hippocampus, a region of the brain that transforms short-term memory into long-term memory. Damage to this area is believed to account for memory problems associated with age-related (as well as chronic-stress-related) neurodegenerative diseases, fast becoming epidemic in the industrialized world. What researchers are finding is that this area of the brain appears to be able to undergo regenerative repair. But creating the right environment for this regeneration is crucial.

The Deadly Roles of Inflammation and Oxidation

The main forces driving neurological degeneration in most people are oxidative stress, mainly from excess free radicals in the body, and inflammation. In fact, these two factors go hand in hand, playing key roles in the progression of numerous chronic diseases such as cancer, cardiovascular disease, chronic lyme disease and type 2 diabetes.

Many of the nutritional and lifestyle therapies that reduce risks to cardiovascular, cellular and metabolic health also promote a beneficial environment for neuro-regeneration to occur. They do this by reducing damage to the delicate tissues of the central nervous system caused by chronic inflammation and free radicals.

Botanical compounds/essential oils for Neuro-Regeneration

Certain botanical compounds are being investigated for their neuro-regenerative abilities. Several compounds derived from Panax ginseng have been shown to be very effective in promoting repair and protecting the brain from the effects of oxidative damage. One compound in particular, Rg3, has been found to help clear the “brain fog” that accompanies many neurodegenerative conditions, by decreasing inflammation and reducing the self-destruction, or “apoptosis,” of neurons. Other ginseng extracts are showing effectiveness in improving memory, reaction time and decision-making as well as increasing a sense of calm. Another finding from an animal study showed that one of the ginseng compounds promoted regeneration of injured peripheral nerves.

Compounds like medical grade turmeric (curcumin) have been researched in their ability to break down plaque in the brain and chelate (claw) heavy metal concentrations which create biofilm colonies which cause neuron destruction. Clove has the highest known antioxidant power as measured by ORAC a test developed by researchers at Tufts University to accurately measure free-radical scavenging ability. Thyme CT Thymol has been shown in studies to dramatically boost glutathione levels in the heart, liver and brain. It also prevents lipid peroxidation or degeneration of the fats found in vital organs.

Support Long-Term Neurological Health

Drinking medical grade alkalized water (the brain is 85% water) hydrates brain cells because of its powerful antioxidant properties. Alkalized water has a small molecular that can change the oxidative damage done by environmental exposures that have affected the liver, central nervous system and brain function. There are a number of herbal compounds and other nutrients that have been found to have beneficial effects on the health of brain cells.

Research shows there are a number of other ways to support neurological and brain health. Regular exercise may be at the top of the list; **dancing** in particular has been shown to be an effective way to help prevent dementia. Healthy fats such as **omega-3 fatty acids** are also important for neurological health, as they support the **myelin sheath** at the end of the neurons, which allows for **better communication** between brain cells. Also, regular **meditation** practice is shown to increase cortical thickness in areas of the brain involved in **memory**, attention, perception, and pain sensation, among others. **Tai Chi**, an ancient meditative, mind-body practice, is also shown to **increase brain size** and improve cognitive ability.

Recent findings on integrative approaches to neurological health support the concept that neuro-regeneration is not just wishful thinking, but an emerging reality. Research is also showing that lifestyle factors such as social support and healthy stress relief, along with an anti-inflammatory diet, go a long way to support neurological health and regeneration, in addition to overall vitality. Cell detoxification/regeneration programs should be utilized with any brain cell regeneration program.