



## Month Six – Video #3

### Neurodegenerative Diseases – Parkinson's / Alzheimer's

Parkinson's disease and Alzheimer's disease are on the rise and may severely impact families not only socially but financially. The numbers are staggering. Although the two diseases have similarities their mechanisms are completely different. First let's look at their similarities.

1. Both Parkinson's and Alzheimer's have a late onset in life, usually after the age of 50.
2. Both are neurodegenerative in nature meaning that nerve cells in the brain either die or become damaged.
3. Both get worse over time. They are progressive in nature.
4. Both Parkinson's and Alzheimer's can lead to Dementia effecting one's ability to concentrate, memory, orientation and a person's ability to act on decisions.
5. Just another bit of information, approximately 2 out of 3 people with Dementia have Alzheimer's disease.

Now let's talk about their differences:

1. Parkinson's disease affects approximately 10 million people worldwide, a million of those in the United States. As of 2016 approximately 60,000 new cases are diagnosed each year and men are 1 ½ times more likely to develop Parkinson's disease than women. It is estimated that Parkinson's disease costs around 25 billion dollars a year in lost productivity and treatment. Estimated costs for medicine alone per individual are \$2500 and surgeries related to the disease can run as high as \$100,000 per patient.

Alzheimer's disease affects approximately 5.4 million American's and each minute one new case is diagnosed. The cost of caring for an Alzheimer's patient is approximately \$5000 per year. Total care for Alzheimer's patients is estimated at a staggering 236 billion a year. One in three seniors dies with Alzheimer's or some other form of Dementia.

2. Parkinson's is primarily a movement disorder with memory / cognitive and Dementia problems only affecting about 50% of those suffering with it. Alzheimer's is a disease is a disorder that involves memory. Rarely will an Alzheimer's patient display movement issues such as tremors.
3. The causes of the two diseases are also different. Parkinson's develops when nerves or neurons in a certain part of the brain called the Substantia Nigra are lost or damaged. When this happens they cannot produce a neurotransmitter called Dopamine which is needed in the Substantia Nigra to help control coordination and movement. Estimates are that before symptoms begin to show, one must lose approximately 60-80% of these neurons before symptoms will begin to show up. Symptoms of Parkinson's include; impaired coordination, slowed movements of the arms, legs and ambulation, muscle rigidity and most noted resting tremors or shaking while at rest. Treatment has included medication to help with production, replacement or preservation of Dopamine; however it tends to become less effective as the disease progresses.

Alzheimer's begins by affecting the parts of the brain called the Hippocampus and the Entorhinal Cortex. These two areas of the brain are heavily involved with memory and learning so it isn't surprising that early signs of Alzheimer's involve loss of cognitive abilities. A neurotransmitter called Acetylcholine is what becomes diminished with damage to the neurons in the Hippocampus and Entorhinal Cortex leading to decreased memory, reasoning and understanding. Fortunately it has little effect on movement and coordination. Drug treatment for Alzheimer's has focused on preserving what Acetylcholine is present already in the brain, not on trying to increase its production or supplement it. More recently additional drug therapy for moderate to severe cases has focused on the neurotransmitter glutamate. Glutamate is a strong excitatory neurotransmitter produced by nerves in the brain and is responsible for communication between brain neurons. Glutamate is believed to play an important role in memory and therefore learning.

4. Recent studies have shown that a multi-therapeutic approach can be beneficial in helping patients suffering with neurocognitive disorders such as Alzheimer's, Parkinson's and Pre-Dementia. Although research is still ongoing there is evidence that inflammation and immune response (autoimmune mechanisms) may be involved. It is my belief that this will be confirmed as research and testing becomes more complete. It is no surprise to me that the following multi-therapeutic approach shows some promise. Here it is.
  - A. Diet – Intermittent fasting. The Keto Adaptation Diet in our pull down menu above would be a great fast to do. Even water fasting, the Basic Suero fast limiting caloric

intake to 800 or less calories per day will do. Following the diet we laid out in month one will be beneficial, reducing sugar and grains significantly and eating healthy organic meat and dairy products are important. This will reduce inflammation and increase growth hormone which is very protective to the brain. Supplements B12, DHEA and CoQ10 for support are recommended.

- B. Exercise – High intensity short duration exercise, also called burst training, for 10-15 minutes 3x per week at least. For some elders this may be just walking on a treadmill or up and down stairs to start. Begin where you can and work your way up. This type of exercise is also known to boost growth hormone significantly. Growth hormone not only protects the brain but lean muscle as well.
- C. Improve oral hygiene – Low level infections in the blood stream have long been known to continue to produce bacteria, an immune response and drive chronic inflammation in the body. This is especially true of people with multiple root canals. Sometimes the tooth is better off being pulled and replaced with an implant to remove the latent infection. Brushing, flossing and using antibacterial mouthwash may help reduce the infection, inflammation and immune response.
- D. Improve gut bacteria – This goes back to our intermittent fasting. We must heal the gut and restore the gut bacteria to a healthy state. Our SIBO Fast is a great way to do this although a little more intense than some of the other fasts. We must starve down the bad bacteria and then inoculate with good bacteria and fiber. There is definitely a gut-brain connection which is a topic for a later update that I will provide by video but we must heal the gut when dealing with these patients.
- E. True brain detox at the cellular level – Following our Brain Phase Detox Protocol will help pull toxins and heavy metals driving inflammation in the brain. As mentioned above the evidence now suggests an inflammatory and immune response being linked to neurocognitive disorders. We need to cover all of the bases

The patients in the study following the protocol above showed significant improvement in memory, focus and cognitive ability. Two who had lost their ability to work or drive a car due their condition were able to go back to work and begin driving again. Approximately 80% in the study showed a favorable response to the above regimen.

Neurocognitive disorders such as Parkinson's and Alzheimer's appear to have an autoimmune component driven by inflammation. Help your loved ones by applying the strategies listed above and stick with them. Healing takes time.