

# Depression: Part 2

“Address multiple mechanisms with a few key nutrients and lifestyle changes. Just one of these ideas can change someone’s life forever.”

In a previous video, we talked about the rise of depression and anxiety and how supporting the gut brain connection is a key component to restore health. We focused on the microbiome as the first step to healing a leaky gut. You can see a link to the right for a review. One of the points we didn't cover was the possibility of Small Intestinal Bacterial Overgrowth, SIBO for short. Anytime probiotics or simple carbs cause bloating, look closely at digestion and consider the SIBO protocol. Also present on a link to the right.

Here's the healing process we identified. Support the microbiome, which includes healing the gut. Increase the release of anti-inflammatory cytokines. Reduce the production of pro-inflammatory cytokines. Increase the activity of the T-regulatory cells that keep excess inflammation in check. And address lifestyle factors that create sympathetic dominance and encourage parasympathetic support.

We discussed that one of the best ways to heal the gut is to support the microbiome by



using BioFiber Complete and BioDoph-7 Plus. One of the premier products to feed and heal the stomach and small intestine is GI-Resolve. GI-Resolve contains 4 grams of glutamine per serving as well as botanicals that encourage the production of healthy mucus. It has a mild iced tea flavor. Use 2 tsp bid with 8 ounces of water. For reflux relief, mix 2 tsp in 2-3 ounces of water and sip slowly over a 30-minute period.

How can we increase the anti-inflammatory cytokines, while reducing the production of pro-inflammatory cytokines? A simple way is to optimize Vitamin D, give therapeutic levels of fish oil, as well as the botanicals in KappArest. Bio-

DK-Mulsion is an emulsified form of vitamin D3 to increase absorption. 5 drops contain 5,000 IU's of D3 and 300 mcg of K1 and K2 in a 4:1 ratio. Increase dose to bring blood levels of 25- hydroxyvitamin D up to 55 -80 ng/ml. I start at 10 drops and reduce as optimal levels are achieved.

We know fish oil reduces inflammatory cytokines. But beyond that, fish oil, especially DHA, increases BDNF, Brain Derived Neurotrophic Factor, which enhances brain growth and repair. For maintenance, use fish oil at 2 grams a day. For therapeutic levels, clinicians use 3-5 grams, and with concussions and other brain injuries, even higher doses for a

short period of time. 5 grams is easily accomplished with 2 tsp of BioMega-3 Liquid or 5 capsules of Biomega 1000. Other botanicals shown to increase BDNF are curcumin, green tea extract, resveratrol, and lipoic acid. Interestingly, Biotics Research put these same nutrients in a formula called KappArest to reduce NF-kappa B. KappArest contains an emulsified form of curcumin to increase absorption. Three capsules 2-3 times a day provide a therapeutic dose.

Years ago, Dr. Court Vreeland did a webinar on depression and taught me a valuable lesson. He shared that when the brain is inflamed, free radicals, specifically the reactive oxygen species or ROS, abound. He found Superoxide Dismutase, SOD, to be extremely effective. He uses Biotics Research's product Dismuzyme Plus Granules 1 tbsp 2-3 times a day added to food or juice. As a reminder, vitamins and minerals donate an electron to quench free radicals, but then they must be reduced or recharged. Polyphenols will quench thousands of free radicals. But SOD will quench billions of free radicals. Also, in that webinar, Dr. Vreeland shared that he uses the botanical Mucuna Pruriens, in DopaTrophic Powder to raise dopamine in the brain. Mucuna Pruriens, a natural form of L-Dopa, allows L-Dopa to cross the blood brain barrier converting to dopamine, norepinephrine, and epinephrine neurotransmitters, often low in people with depression.

Two other low-tech strategies for reducing inflammation are magnesium and zinc. Magnesium increases blood flow, prevents excessive blood clotting, and protects the brain by modulating excitotoxicity. Under conditions of inflammation, a great deal of magnesium is lost from the body. Also, low zinc levels are associated with

depression and anxiety. Zinc modulates excitotoxicity. Going on to T-regulatory cells, I learned from Dr. Vasquez the importance of providing the nutrients that increase the activity of the T-regulatory cells. T-regulatory cells reduce inflammatory cytokines and upregulate anti-inflammatory cytokines. Vitamins A, D, probiotics, and green tea have been shown effective.

Have you ever thought exercise could reduce inflammation? We forget exercise can relieve even serious cases of depression and stress. Exercise causes your muscles to produce and release BDNF. I was excited to learn that BDNF is made in both your muscles and your brain and easily crosses the blood brain barrier. BDNF fights depression and repairs the stress-linked atrophy. It also restores lost memory. Exercise also causes the brain to release pain-relieving compounds. We know obesity is associated with several inflammatory conditions because "adipose tissue macrophages" secrete extremely high levels of IL-6 and TNF-a. At the same time, obesity causes a reduction in adiponectin. Adiponectin is a major inhibitory factor for NF-kappa B, tumor necrosis factor alpha and interferon-gamma (IFN-g). Adiponectin also increases anti-inflammatory cytokines.

I know I have been covering a lot of territory in our time together. But depression is a big subject, and I wanted to give you ways to address multiple mechanisms with a few key nutrients and lifestyle changes. Just one of these ideas can change someone's life forever. But perhaps even more important is the constant reminder that you believe in them and will help them on this journey.

Thanks for watching. I look forward to being with you again next Tuesday.