

The Power of Berberine

"At the end of the day, Berberine may be the single greatest supplement that exists."

Dr. Jack Wolfson, a cardiologist, made an off-the-cuff statement that kind of shocked me. He said, "At the end of the day, Berberine may be the single greatest supplement that exists." That's a pretty bold statement, because a lot of supplements have some amazing properties. I thought it would be good to review some of the newer research on Berberine.

Berberine is a yellow-colored alkaloid and comes from a variety of plants such as barberry, goldenseal, goldthread, Oregon grape, phellodendron, and tree turmeric. Berberine has been shown to have significant antimicrobial activity against bacteria, fungi, parasites, worms, and viruses. In terms of bacteria, Berberine has demonstrated highly significant

activity against Chlamydia, Staphylococcus, Streptococcus, Salmonella, Klebsiella, Clostridium, Pseudomonas, Cryptococcus and others. Yet even though Berberine shows effectiveness in these areas, it appears to have no effect on our healthy indigenous Lactobacilli and Bifidobacteria.

Let's pause for a minute and think about that statement, Berberine shows antimicrobial effectiveness, yet it appears to have no effect on our healthy bacteria. A product that is effective against so many microbial factors yet has no effect on the healthy bacteria in our microbiome. This is a product we want to remember.

Berberine has a positive effect on blood sugar. Published in the journal, *Metabolism*, 36 people with newly diagnosed type 2 diabetes were randomly divided into groups and assigned to take Metformin (Glucophage) or Berberine. At the study's conclusion, the average blood sugar dropped 65% in both groups. "Hemoglobin A1c was reduced from 9.5% to 7.5%." The author concluded that "Berberine helped fight diabetes every bit as effectively as Metformin." The researchers concluded that the two had "identical effects in the regulation of glucose metabolism."

Since then, other studies have confirmed Berberine's effectiveness. As a cardiologist, Dr. Wolfson was not only interested in Berberine and blood sugar but also to reduce triglycerides and cholesterol. One study

showed an 18% decrease in total cholesterol and a drop in LDL cholesterol particles by 21%. In terms of heart health, Berberine also demonstrates antioxidant and anti-inflammatory properties, improves congestive heart failure, and lowers mortality in congestive heart failure patients.

Berberine also appears to regulate the integrity of tight junctions in the gut. Many of us are familiar with the term "leaky gut." Here's a product that, at least in animal models, reduces the amount of toxins that are absorbed through the gut lining and into the blood stream when pretreated with Berberine.

Another 2016 study gives us a clue that perhaps Berberine's role in so many pathogens is its ability to affect the biofilm that protects the organism. Biofilms are manufactured by bacterial or fungal colonies to protect them from environmental factors that may kill them, like antibiotics. Authors describe its use with Methicillin-Resistant Staphylococcus Aureus infections, MRSA for short. Berberine can "inhibit MRSA biofilm formation" and "enhance bactericidal activity of antibiotics."

Another area to watch in the future is Berberine and cancer. Dr. Wolfson quoted that of the 2,800 articles on Berberine in the last 5 years, over 500 have been on the treatment of cancer. It is one of the few compounds that is known to help activate AMPK, short for adenosine mono-

phosphate-activated protein kinase. AMPK activation induces cancer cell suicide or apoptosis. While the exact way it does induce cancer suicide is incomplete, authors summarize: "Basically, Berberine's antioxidant activation of AMPK 'turns on' the process of aerobic healthy cell growth within the energy factories or mitochondria of the cancer tumors, causing cancer cells to starve and eventually self-destruct." Because of its ability to activate AMPK, Berberine has attracted great attention as an alternative anti-metastasis therapy of various lines of cancers such as gastric, breast, prostate, lung, oral, bladder, colorectal, and liver cancers.

Here's what researchers had to say about Berberine and advanced prostate cancer cells. "Berberine exerted inhibitory effects on the migratory and invasive abilities of highly metastatic prostate cancer cells."

Biotics Research makes a 500 mg capsule called Berberine HCI. Dr. Wolfson uses Berberine for lipid and blood sugar issues at 1 twice a day, or 2 three times a day for more advanced cases. As a cardiologist, he doesn't treat cancer, but if someone has an elevated PSA, or history of colon polyps, he uses 2 three times a day. After reading more of the research on Berberine, Dr. Wolfson's off-the-cuff comment that, "At the end of the day, Berberine may be the single greatest supplement that exists," has a lot more credibility than I thought.