

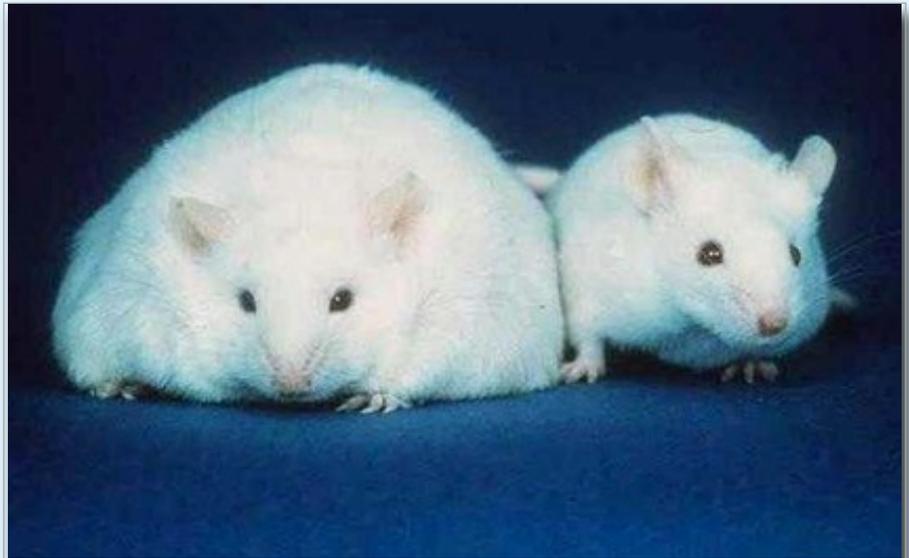
Berberine HCl: New Weapon For Obesity & Diabetes

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More and more we hear how microbes in the gut have a profound influence on our health. During his webinar, which you can view below, Dr. Alex Vasquez tells about a morbidly obese scientist who went on a plant based diet of whole grains, Chinese medical foods and prebiotics to eliminate bacteria called Enterobacter. He subsequently lost 113 lbs in 23 weeks and recovered from both hypertension and hyperglycemia.

His scientific curiosity led him on to inoculate the bacterium into germ free mice. The result in mice was fully developed obesity and insulin resistance. "The obese Enterobacter-induced mice showed increased serum endotoxin load and aggravated inflammatory conditions."

In light of this and other studies, Biotics Research Corporation has added another natural antimicrobial to its arsenal, Berberine HCl. Each capsule contains 500 mg of Berberine HCl isolated



from *Berberis vulgaris*. Berberine is a bitter tasting alkaloid and is common to many plants especially golden seal, goldthread, barberry and Oregon grape. It's found in the bark, roots and stems of many plants and protects the plant against environmental attacks such as bacteria and fungus.

In both Chinese and Ayurvedic medicine, berberine has demonstrated significant antimicrobial activity against a variety of organisms including streptococcus, staphylococcus, Chlamydia,

diphtheria, Salmonella, *Vibrio cholerae*, *Diplococcus pneumoniae*, gonorrhea, candida, and many parasites including Giardia, *Trichomonas vaginalis* and *Entamoeba histolytica*. The historical uses of berberine include bacterial diarrhea, intestinal parasite infection and ocular trachoma infections. However, berberine is the main active component of an ancient Chinese herb *Coptis chinensis* which has been used to treat diabetes for thousands of years.

In 2008 researchers compared berberine to metformin individually and together in the treatment of diabetes. One research project involved two experimental studies. Both compared 500 mg berberine three times a day to 500 mg of metformin three times a day, in a 13 week trial. In the first study of 36 individuals at the end of 3 months, average blood glucose dropped from 191 to 124 in the berberine group. Postprandial glucose also fell from 356 to 199. Hemoglobin A1c dropped from 9.5% to 7.5% and fasting triglycerides dropped from an average 99 to 78. These results were similar to the metformin group however the metformin group did not show reductions in triglycerides.

The second study was performed with 48 individuals already under medical treatment who sustained poor blood sugar control. Sugar dropped from 172 to 135, postprandial blood sugar dropped from 266 to 189. Hemoglobin A1c dropped from 8.1% to 7.3%. Fasting insulin decreased by 28% and total and low density LDL cholesterol were both significantly reduced. The researchers summarized "Berberine is a potent oral hypoglycemic agent with modest effect on lipid metabolism. It is safe and the cost of treatment by berberine is very low."

One of the few newsletters I subscribe to is Dr. Jonathon Wright's "Nutrition and Healing." It is always thought provoking and full of clinical pearls. In his February 2013 newsletter he made this statement about berberine and blood sugar management. "In case after case berberine has lived up to its research reputation." In clinical observations he shared that "where most cases of type-2 diabetes didn't respond to berberine they were misdiagnosed, and careful testing of their insulin responses revealed that they were actually type-1 diabetics."

Although the researchers didn't address a direct gut connection, based on Dr.

Vasquez's discussion on microbes and intestinal dysbiosis you can see why berberine could be the X-Factor for those diabetic patients that are following a good diet, exercising and taking glycemic regulatory nutrients and still seem to be stuck.

You may be familiar with Bio-HPF by Biotics Research Corporation, which Dr. Gary Lasneski developed for H. pylori and other unwanted microbes that take up residence in the gut. Until recently I didn't know that one of the underlying reasons why Bio-HPF works is because it contains a low potency berberine complex as well as herbs that encourage healthy mucus formation. Berberine HCL however is a more concentrated version and should be considered for unresponsive cases. H. pylori has not only been indicated in ulcers but "specific H. pylori DNA has been detected in human coronary atherosclerotic plaque."

As a caveat to all this encouraging news, some people may experience minor gastric distress and or constipation with the 500 mg used three times a day in most studies. This is particularly true of people who have been on long term medication. Researchers found that by cutting the dose in half most complaints were resolved. The dosage can be increased slowly with time.

Most of us realize that any time we are restoring healthy gut microflora, temporary changes may occur. However, I just wanted you to be aware of the possibility. Berberine is a very exciting botanical compound and we have just scratched the surface of the research that is being done with cancer, cardiovascular disease, Alzheimer's, and as discussed diabetes. Clearly, other lifestyle factors must be put into place, but the use of berberine is a welcome addition to our assortment of natural compounds that enhance health and wellness.

Thanks for reading this week's edition. I'll see you next Tuesday.