

# Health Benefits of Berberine

**Berberine is contraindicated for newborns, pregnant and nursing women because it may harm the fetus causing a condition known as Kernicterus. Berberine lowers blood sugar, so Diabetics need to monitor closely. People with low blood pressure or on blood pressure lowering medication should avoid this product since it may aggravate this condition. It also inhibits platelet aggregation, so do not take it with blood thinners unless approved by your health care practitioner.**

## **Metabolic conditions:**

- Has hypoglycemic effects and helps to lower blood glucose (monitor carefully if taking insulin or Diabetic medications); if not Diabetic on medications, it will not lower blood sugar below normal levels. One study showed that taking 1000 mg./day for 3 months lowered fasting blood sugar by 20% and glucose tolerance by 26%.
- Helps with lipid metabolism by lowering high cholesterol and triglycerides. One study showed that participants taking 1000 mg./day for 3 months lowered LDL cholesterol 25%, total cholesterol 29%, and triglycerides by 35%. Another study showed 21% reduction in LDL, 18% reduction in total cholesterol, and 36% reduction in triglycerides.
- May reverse Insulin Resistance
- Increases glycolysis which is the breakdown of sugars inside the cells
- Slows the breakdown of carbohydrates in the gut
- Regulates metabolism by activating an enzyme called AMPK (referred to as the “metabolic master switch”)
- Promotes weight loss by improving the fat regulating hormones such as insulin, adiponectin, and leptin and inhibits the growth of fat cells at the molecular level
- May combat Diabetic complications such as Neuropathy, Nephropathy, and Endothelial dysfunction

## **Promotes Heart health:**

- Can reduce the symptoms and lower the death rate of people with Congestive Heart Failure by improving lipid metabolism
- May decrease heart arrhythmias
- Stimulates the release of Nitric Oxide which is a signaling molecule that relaxes blood vessels thereby increases blood flow, lowers blood pressure, and protects against hardening of the arteries. Be cautious when using anti-hypertensive medications.

### **Promotes Brain Health:**

- Research has shown it inhibits the activity of cholinesterase which is the enzyme that breaks down Acetylcholine vital for memory, focus, and concentration.

### **Promotes Digestive/Liver Health:**

- May inhibit pathogenic bacteria in your gastrointestinal tract without harming the beneficial bacteria.
- May provide digestive relief by decreasing gas and bloating as well as acid indigestion
- Berberine has been shown to inhibit E. Coli, V. cholera, and H. pylori which can cause digestive distress, and one preliminary study found that it may inhibit the growth of C. difficile.
- Cirrhosis occurs when there is a large amount of scar tissue (fibrosis) inside the liver. This recent study showed that berberine significantly reduced liver inflammation, fibrosis, and lipid peroxides (oxidation of fat within the liver).

**Potent anti-inflammatory and antioxidant:** research has shown Berberine specifically reduces inflammation and oxidative stress in the pancreas, liver, and kidneys.

### **Cancer prevention and promotes healing of Cancer:**

- Research has shown anti-tumor properties, promotes Cancer cell apoptosis, and reduces cancer cell migration
- Research has shown inhibitory effects in various types of Cancer including: Colorectal, Lung, Esophagus, Liver, Breast, Ovarian, Cervical, Prostate, and Oral Cancers.

**Anti-microbial:** fights harmful microorganisms including:

- Bacteria including Pseudomonas aeruginosa (Gram -), Escherichia coli resistant and sensitive (Gram -), Bacillus subtilis (Gram +), and Staphylococcus aureus (Gram +), and Streptococcus agalactiae which can cause septicemia, meningitis, and pneumonia. It may damage the bacterial cell membrane and inhibit synthesis of protein and DNA.
- Viruses including Cytomegalovirus, Respiratory syncytial virus (RSV), Influenza A
- Fungi including Aspergillus niger, Penicillium chrysogenum, Mycosporum gypseum, Aureobasidium pullulans (black and white strain), Trichoderma viride (green strain and brown mutant strain), Fusarium nivale
- Yeasts including Candida albicans and Saccharomyces cerevisiae
- Parasites including Protozoas (Amoebas) including Giardia and Helminths (worms such as Tapeworms, Flukes, and Roundworms)