Power Supplement: Berberine

8 reasons we love it

By Michael Turner M.D.

Greetings Friends!

As an Integrative Physician with a passion for natural measures, I am excited to bring to your attention the next installment in our series called "Power Supplements". The goal is to educate and inspire you towards optimal health, always with an emphasis on natural, inexpensive, and practical ideas.

So what's next? Berberine.

Berberine is a component of several historical medicinal herbs (e.g. Goldenseal, Barberry), features strongly in Chinese traditional medicine, and more recently has been extensively studied and validated to have significant medicinal value. It has been making waves in the supplement world and has featured prominently in several FLCCC protocols.

Why all the hype? Let's dive in!

1. Weight loss

Berberine enhances blood sugar uptake and utilization, promotes fat burning, and reduces insulin levels: The end result is your cells receive metabolic signals to burn energy instead of store it.

And how, pray tell, does it do all that?.. It is a potent stimulator of AMPk.

You know what else stimulates AMPk?

Ozempic, **Wegovy**, and all the other **GLP-1 agonists** (<u>read more here</u>), as well as one of my other favorite supplements, <u>EGCG</u> (aka green tea extract).

And because it stimulates AMPk, Berberine protects and promotes mitochondrial health and efficiency (<u>read here</u>).

2. Diabetes / blood sugar reduction

As mentioned above, Berberine enhances blood sugar uptake and utilization, and greater cellular uptake = less blood sugar floating in circulation. One study found lowering of the Hemoglobin A1c from 9.5% —> 7.5% (<u>read here</u>) and another from 7.5% to 6.6% (<u>read here</u>) — results equivalent to the prescription medications Metformin and rosiglitazone!

Learn more:

- Berberine and Pancreatic Beta Cells.
- How Berberine Helps Manage Type 2 Diabetes



3. Produces beneficial changes to all aspects of your cholesterol levels.

There are 3 main parts of your cholesterol panel: triglycerides, HDL and LDL. Turns out that nattokinase produces favorable changes *in all three* (triglycerides and LDL go down; HDL goes up). (Read more here)

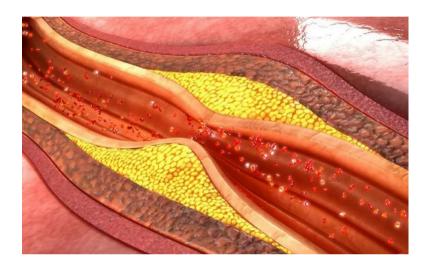
- My favorite talk explaining cholesterol levels: watch here
- Why is there so much controversy about cholesterol and heart disease? watch here
- Challenging talk describing goal LDL targets: watch here
- Increases effectiveness of statin drugs: read here

But even better....

4. Actually shown to reverse atherosclerosis.

People come to me all the time for anti-aging advice: You know what I tell them? The single most important anti-aging concept — ahead of hormones, ahead of cancer screening, ahead of any particular exercise or diet — *is the health of your blood vessels* (aka "cardiovascular health").

Why? Because cardiovascular health is responsible for 2 of the top 3 leading causes of death (heart attacks and strokes) and because the function of every other organ system in your body depends on a sufficient level of blood flow.

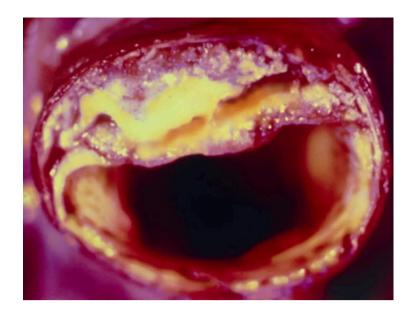


Atherosclerosis (aka "hardening of the arteries") is the pathologic condition describing damage to the artery walls, progressive cholesterol and calcium deposition, inflammation, narrowing, and propensity for clotting.

• Great video of atherosclerosis: click here

There are multiple factors that conspire to drive atherosclerosis (inflammation, high blood pressure, smoking, diabetes, and lack of exercise, to name a few) but the most important of these is *circulating* cholesterol levels.

Here's the million-dollar question: Can it be reversed? Once you have created arterial damage, can it resolve and heal? Or only be slowed?



Landmark intervention programs (including the <u>Ornish method</u> and <u>Dr. Esselstyn's program</u> at Cleveland Clinic) have already answered that question. In addition, certain supplements — like nattokinase, aged garlic, Vitamin K, and Berberine — have also been shown to reverse it. Amazing!

Learn more: Berberine Treats Atherosclerosis Via Vitamin-Like Effect

5. Stimulates the immune system.

Berberine increases blood supply to the spleen (read here), activates macrophages (read here) and has been used in China since 1972 to boost white blood cell counts in patients undergoing chemo and radiation (read here).

6. Fights Cancer

Multiple mechanisms against cancer, including stimulating white blood cells (as above), regulating autophagy, and inhibiting metastasis (read here).

It also has *direct killing activity* against tumor cells, most notably demonstrating activity against one of the most feared brain tumors — glioblastoma multiforme (GBM) (read **here** and **here**).

7. Anti-bacterial and anti-fungal properties

- Strong, broad-spectrum antibacterial actions, especially against group A Strep (hence traditional use of Goldenseal as a remedy for Strep Throat).
- FYI: sold in China for decades as an over-the-counter (OTC) treatment for bacterial-caused diarrhea.
- Potent anti-fungal activity against candida.

8. Brain Booster: Cognition-Enhancing Properties of Berberine

The roles of Berberine in the brain are, truly, too extensive to all list here, but let's hit some highlights:

- Reduces enzymatic activity involved in the development of Alzheimer's
- Reduces beta-amyloid plaque formation in Alzheimer's
- Promotes autophagy
- Stimulates nerve growth in the hippocampus (= memory formation)
- Anti-inflammatory and anti-oxidant effects (including reducing microglial overactivation)
- Promotes healthy cellular turnover ("autophagy")

"Beam me up some Berberine, Scotty!"

Full scientific overview: **Berberine and neurologic health**

Safety and Usage of Berberine

Safe when used as directed (500 mg 2-3x a day).

Not recommended during pregnancy.

It also interferes with a number of prescription medications (because it inhibits CYP3A): <u>check here</u> for the list.

How to Take Berberine

For an effective dose of Berberine, take **500 mg of Berberine two or three times a day** (1000mg – 1500mg total).

Next steps?

If you are interested, here is my best brand recommendation (availability, quality, potency, and cost).

You may also enjoy my other Power Supplements Series articles:

- 6 Reasons to Love Fish Oil
- 6 Reasons to Love Nattokinase
- 8 Reasons to Love NAC

With Very Best Wishes for Your Ongoing Health and Wellness,

I Remain, Very Truly Yours,



Dr. Turner

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