

Methylene Blue's (MB) MANY Documented Functions

by Max MacCloud, DO, ND, PhD "The Nutrition Ninja Doc"

Whole Body (aka Systemic) Effects:

- **Metabolism & Energy!** Mitochondria are subcellular organelles that produce 95+% of the body's energy needs. MB works at the final stage of the mitochondrial energy production pathway known as the ETC (electron transport chain). The energy is converted & packaged as ATP, it powers pretty much everything else. This includes the **synthesis of Proteins, DNA, RNA, Enzymes, & ALL cellular products and processes.**
- **Chronic Disease Prevention & Treatment?** It is now well-established, yet little-known, that **damaged mitochondria** are the root cause of virtually all chronic degenerative diseases.
- **Antidote for Multiple Poisonous Substances like cyanide and carbon monoxide.**
- **Healing & Repair:** Energy is vital to heal, repair, replace, and regenerate cells, tissues, and organs.
- **Pain Relief:** MB has been used successfully to treat pain since the 1890s!
- **Additional Roles:** Boosts NAD to NADH ratio, Antioxidant Functions, Anti-Bacterial, Anti-Viral, Anti-Fungal, Anti-Parasite, Anti-Tumor Effects; Supports Immune System Functions; it was the first, and still most effective, treatment for Malaria. MB has also been successfully used to treat anaphylaxis, septic shock, Kaposi's sarcoma, West Nile Virus, Staph aureus, and more. **Bio-oxidative medical** effects via its ability to absorb light energy. MB used in combination with red light therapy can provide a more potent anti-microbial effect.

Brain & Nervous System:

- MB increases the release of neurotransmitters, reduces amyloid beta levels (a hallmark of Alzheimer's), and increases cholinergic transmission.
- Used to treat, &/or may help with, psychosis, bipolar disorders, anxiety, depression, dementia, Autism, Alzheimer's Disease, and a variety of degenerative neurological conditions including Parkinson's Disease. Well-documented for cognitive enhancement; used extensively as a Nootropic.

Thyroid: MB increases thyroid hormone production and lowers TSH.

Heart & Circulation: MB has been shown to enhance heart health. Oxygen delivery is one of the most important roles that the blood performs. MB enhances hemoglobin's ability to carry oxygen which leads to increased oxygen consumption by the mitochondria and therefore ATP production. It also increases glucose consumption since better oxygenated cells burn more fuel more efficiently.

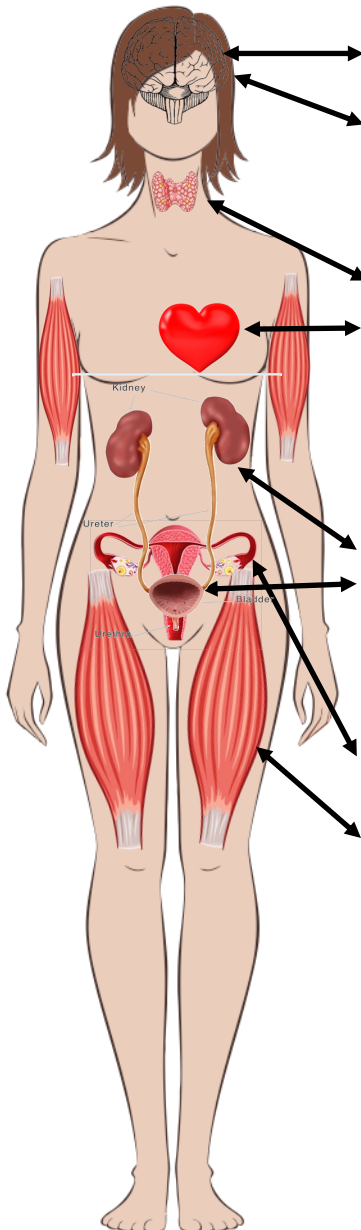
Bladder & Kidneys: MB was successfully used to treat a variety of urinary tract infections for decades prior to the discovery of antibiotics. Once antibiotics were in production and Big Pharma began to flex its marketing muscles, MB and many other 'off-patent,' and therefore less profitable interventions were left behind.

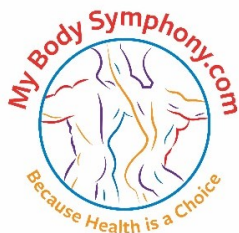
Ovaries & Testes: Modulates estrogen & prolactin while enhancing testosterone levels. Both are particularly beneficial as we age.

Muscles: The largest organ system in the body and where most of our mitochondria are located. Maintaining proper muscle mass is a key to longevity.

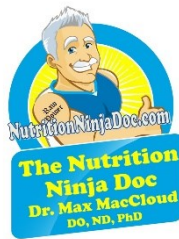
Methemoglobinemia: this is damaged hemoglobin that becomes oxidized and unable to carry oxygen. There are many different causes of methemoglobinemia. MB is able to fix it and has been used as the primary medical intervention for this condition for decades.

Deficiency: MB is not a nutrient so there is no such thing as a deficiency, however, Methylene Blue, AKA 'The Magic Bullet' seems to go where it is needed to help restore proper functioning of the Mitochondria's Electron Transport Chain.





Manufacturing-
Production & Sales



R&D, IP, Education,
Influencer



Clinical Testing &
Proving Ground

Mito Boost = Magic Bullet = Methylene Blue (MB)

First synthesized in 1876 as a blue dye for the textile industry. It has been described as ‘the first fully synthetic drug used in medicine.’ In 1891 it was tried as a medication to treat malaria with great success. Since then, Methylene Blue has been used for a wide array of conditions with an exceptional safety profile. It is on the WHO’s list of Essential Medications. See the other side for a list of beneficial uses based on research & experience.

MB inhibits Nitric Oxide...this is very important once we realize that virtually everything we’ve been told about NO’s benefits may be dead WRONG. N.O. is an important signaling molecule, BUT that doesn’t mean that more is necessarily BETTER. As with all things, it is about balance and harmony.

MB & Metabolic/Mitochondrial Dysfunction. MB Increases oxygen binding to hemoglobin, oxygen transport, oxygen consumption, and ATP production (energy); increases glucose consumption (because it is burning more fuel since the cells & mitochondria are being better oxygenated); increases NAD⁺/NADH ratio (because it is enhancing the functional efficiency of the mitochondria); Decreases lactic acid production (because it is enhancing oxygen use by the mitochondria which means increased percentage of aerobic cellular & mitochondrial function and decreased need to shift into anerobic metabolism that makes lactic acid as a waste product); Is a potent antioxidant (it reduces oxidative damage); Inhibits MAO (monoamine oxidase, an enzyme that breaks down neurotransmitters, thereby increasing levels of various neurotransmitters); Acts as an alternative electron carrier in the electron transport chain (it is able to step in and replace the cytochrome enzymes thereby helping to repair or patch holes in the electron transport chain which translates into increased energy production); Inhibits prolactin & estrogen; Increases testosterone production; Increases thyroid hormone and lowers TSH (by increasing the energy production in thyroid cells thereby increasing the natural production of thyroid hormone, this lowers the need for TSH to stimulate the thyroid to produce more thyroid hormone).

Top 11 Benefits of MB: 1. Antidote for chemical poisoning. 2. Best Anti-Malarial drug ever. 3. It’s a Virus Warrior. 4. Very beneficial in Dementia, Alzheimer’s, and Parkinson’s. 5. Cognitive Enhancement/Brain booster. 6. Significant Anti-Depressant effects. 7. Believed to offer significant Hope for Autism. 8. A great Pain Reliever. 9. Promotes a healthier heart. 10. Potential Cancer preventive & treatment (since mitochondrial damage is the single primary cause of cancer). 11. Broad spectrum anti-parasite, anti-bacteria, anti-fungal (candida), and anti-viral (Covid, Zika, West Nile, Ebola, Hepatitis, HIV). By combining it with red light therapy activation, an even stronger anti-microbial effect is achieved (called photodynamic therapy). Both Chinese & French researchers have confirmed its ability to wipe out numerous viruses including what is believed to be SARS-CoV-2.

Bioavailability after oral administration is 72%, peak concentrations 2 hours with a working half-life of 5-10 hours. Used IV in ERs for a variety of conditions including methemoglobinemia, cyanide, carbon monoxide, sodium nitrite/nitrate, Acetaminophen, formaldehyde, numerous pharmaceutical drugs, amyl nitrate (poppers), lidocaine, benzocaine and other anesthetics, heavy metals like aluminum, copper, cadmium, etc., fluoride, chlorine dioxide-based cleaning products, and certain viruses (SARS Cov-2?). Interestingly, MB is the parent compound that hydroxychloroquine is derived from.

MB has a somewhat unique ability to absorb light energy and can be combined with various light therapy/ PhotoBioModulation procedures. Use with Caution if taking SSRIs as it will increase serotonin levels.

Suggested use based on the research: A full therapeutic dose is considered to be between 0.5mg to 4mg per Kg of body weight. Dosing can be done twice a day if desired. Theoretically, benefits can occur with much smaller amounts as well due to its unique ability to enhance &/or replace the cytochrome enzymes in the Electron Transport Chain. One drop is 0.5mg.

Consultation & Health Coaching Contact Info:

MyBodySymphony.com, ARTC.health, Doc@MyBodySymphony.com, Doc Max 941-328-2462