

Methylene Blue for all chronic infections

Methylene blue (MB) has some properties that make it very desirable for the human body. It is remarkably safe and has been used in humans for decades. This makes it very undesirable for Big Pharma, so its properties are not reported to the medical profession.

Historical Note - Methylene blue is often referred to as "the first fully synthetic drug used in medicine." Methylene blue was first prepared in 1876 by German chemist Heinrich Caro (1834 – 1910). During and after 1891, its use in the treatment of malaria was pioneered by Paul Guttman (German pathologist, 1834 – 1893) and Paul Ehrlich (Nobel Prize-winning German physician and scientist, 1854 – 1915). Methylene blue was also used (as an anti-malarial) in World War II, where soldiers observed, "Even at the loo, we see, we pee, navy blue." Later, clinicians could monitor whether depressed patients were complying with their treatment regimens by observing whether these patients had blue stained urine.

There are two major drivers of disease namely poor energy delivery mechanisms and chronic inflammation. MB impacts on both. A further problem arises because as we become ill, the immune system starts to fail, and we acquire not just one but multiple infections. Methylene blue has activity against many infections (viral, bacterial and fungal), but what is so interesting is that its effects are activated by far infra-red light. This is called photodynamic therapy.

The French national library (Bibliothèque Nationale de France) lists over a hundred references on MB some dating back to 1891.

[https://catalogue.bnf.fr/rechercher.do?](https://catalogue.bnf.fr/rechercher.do?motRecherche=bleu+de+m%C3%A9thyl%C3%A8ne&critereRecherche=0&depart=0&facetteModifiee=ok)

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Desirable properties of methylene blue (MB)

Action	Disease	Refs
MB improves mitochondrial function and so energy delivery mechanisms. MB can also trap leaking electrons produced by mitochondrial inhibitors and preserve the metabolic rate by bypassing blocked points of electron flow, thus improving mitochondrial respiration	Any disease process associated with poor energy delivery Chronic fatigue, heart disease, dementia possibly cancer	See "From Mitochondrial Function to Neuroprotection-an Emerging Role for Methylene Blue" https://pubmed.ncbi.nlm.nih.gov/28840449/ <i>MB can reroute electrons in the mitochondrial electron transfer chain directly from NADH to cytochrome c, increasing the activity of complex IV and effectively promoting mitochondrial activity while mitigating oxidative stress Low dose MB also acts as an antioxidant in mitochondria. MB interacts with oxygen to form water, which would decrease the superoxide radicals produced during the process of oxidative phosphorylation.</i>

	<p>Potential for use in stroke, global cerebral ischemia, Alzheimer's disease, Parkinson's disease, and traumatic brain injury</p>	<p>See "From Mitochondrial Function to Neuroprotection-an Emerging Role for Methylene Blue" https://pubmed.ncbi.nlm.nih.gov/28840449/ <i>In both in vitro and in vivo studies, MB has shown impressive efficacy in mitigating neurodegeneration and the accompanying behavioural phenotypes in animal models for such conditions as stroke, global cerebral ischemia, Alzheimer's disease, Parkinson's disease, and traumatic brain injury.</i></p>
		<p>See "Methylene Blue: Revisited" https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3087269/ <i>It has been shown to attenuate the formations of amyloid plaques and neurofibrillary tangles and partial repair of impairments in mitochondrial function and cellular metabolism.</i></p>
	<p>Chronic fatigue syndrome – due to its effect on mitochondria and possibly through reducing cytokines</p>	<p>See "Methylene blue in covid-19" https://www.sciencedirect.com/science/article/pii/S0306987720333466 <i>The only drug known to inhibit the excessive production of reactive species and cytokines is methylene blue, a low-cost dye with antiseptic properties used effectively to treat malaria, urinary tract infections, septic shock, and methemoglobinemia.</i></p>

<p>1880s Nobel laureate Paul Ehrlich discovered Methylene Blue as a malaria treatment, and it is considered safe and effective. Current studies have been investigating whether MB treatment alongside other antiparasitic drugs could prevent the parasites from developing drug resistance. Photodynamic therapy using the light-activated antimicrobial agent, MB kills methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) in superficial and deep excisional wounds</p>	<p>Any chronic infection may be susceptible to MB. It is biologically plausible that combining MB with Far Infra Red light (ideally at a wavelength of 670nm – this activates MB) may potentiate the antimicrobial action of each other.</p>	<p>See “Methylene Blue: Revisited” https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3087269/ <i>Photodynamic therapy using the light activated anti-microbial agent, Methylene blue kills methicillin resistant staphylococcus aureus (MRSA) in superficial and deep excisional wounds. Methylene blue in combination with light also inactivates viral nucleic acid of hepatitis-C and human immunodeficiency virus (HIV-1) and treats cases of resistant plaque psoriasis.</i></p> <p>See also “Efficacy and safety of methylene blue in the treatment of malaria: a systematic review” G Lu et al, https://pubmed.ncbi.nlm.nih.gov/29690878/</p> <p><i>MB was consistently shown to be highly effective in all endemic areas and demonstrated a strong effect on P. falciparum gametocyte reduction</i></p>
<p>MB in combination with light (this is called photodynamic therapy) also inactivates viral nucleic acid of hepatitis-C and human immunodeficiency virus (HIV-1), Zika, Ebola, West Nile, Middle East respiratory syndrome, and treats cases of resistant plaque psoriasis</p>	<p>Anti- viral</p>	<p>See “Methylene Blue has a potent antiviral activity against SARS-CoV-2 and H1N1 influenza virus in the absence of UV-activation in vitro” https://www.nature.com/articles/s41598-021-92481-9 <i>Our work supports the interest of testing methylene blue in clinical studies to confirm a preventive and/or therapeutic efficacy against both influenza virus H1N1 and SARS-CoV-2 infections</i></p> <p>See also “Methylene Blue: Revisited” https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3087269/</p>

<p>Evidence suggests MB is effective against all the herpes viruses including herpes 1 and 2, EBV, CMV and VCZ Effective against Lyme Effective against covid 19 (hydroxychloroquine, of proven benefit, is derived from methylene blue)</p>		<p>See this US patent application for more details - https://patentimages.storage.googleapis.com/de/67/80/359dcdc11bdf03/US20060264423A1.pdf</p>
<p>And covid 19</p>		<p>See "METHYLENE BLUE FOR TREATMENT OF HOSPITALIZED COVID-19 PATIENTS: A RANDOMIZED, CONTROLLED, OPEN-LABEL CLINICAL TRIAL, PHASE 2" Daryoush Hamidi-Alamdari et al, https://pubmed.ncbi.nlm.nih.gov/34019535/ which states that- <i>The addition of MB to the treatment protocols significantly improved SpO₂ and respiratory distress in COVID-19 patients, which resulted in decreased hospital stay and mortality.</i> See also "Repurposing methylene blue in the management of COVID-19: Mechanistic aspects and clinical investigations" Neha Dabholkar et al https://www.sciencedirect.com/science/article/pii/S0753332221008064 which states that- <i>Thus, MB can be termed as a "rescue magic bullet" for COVID-19 treatment</i></p>
<p>MB is an antifungal agent and may inhibit <u>candida</u> by causing mitochondrial dysfunction in this species</p>	<p>Anti-fungal</p>	<p>See "Antifungal Action of Methylene Blue Involves Mitochondrial Dysfunction and Disruption of Redox and Membrane Homeostasis in <i>C. albicans</i>" https://pubmed.ncbi.nlm.nih.gov/27006725/</p>
<p>Methylene blue (MB) binds to methaemoglobin and converts it to a more efficient form, thereby improving the symptoms of methemoglobinemia</p>	<p>Carbon monoxide poisoning</p>	<p>See "Top 6 Benefits of Methylene Blue" https://drugs.selfdecode.com/blog/methylene-blue-the-cheapest-cognitive-enhancer/</p>

MB is a monoamine oxidase inhibitor	Depression – the dose used is very small – just 15mg per day	See “A controlled trial of methylene blue in severe depressive illness” https://pubmed.ncbi.nlm.nih.gov/3555627/ <i>Methylene blue, 15 mg/day, was compared with placebo in treatment of severe depressive illness. The 3-week trial was designed to avoid bias by placebo response and also to avoid observer bias. Improvement in patients receiving methylene blue was significantly greater than in those receiving placebo. Methylene blue at a dose of 15 mg/day appears to be a potent antidepressant, and further clinical evaluation is essential</i>
MB dissolves the rubbery clots that form with CV19 vaccines	Vaccine injured	https://anamihalceamdphd.substack.com/p/methylene-blue-effects-against-micro <i>I have previously shown my experiment with C19 unvaccinated blood - 30 ml drawn and left overnight in comparison with using Methylene Blue. The rubbery yellow clot developed in the blood without anything, but appeared to be over 90% reduced in the blood treated with Methylene Blue (0.5 cc of a 10mg/ml vial)</i>

So, to tackle any chronic infection

Start with groundhog Chronic (PK diet, sort the gut, supplements, detox, sort the thyroid and adrenal glands) See Appendix 3

THEN DMSO (see chapter 16)

THEN MB

THEN FIR light – read on! (chapter 18) Both DMSO and MB are activated by FIR light. This is a package which is biologically plausible, intrinsically safe and very affordable.

Build up very slowly to mitigate DDD reactions – see Appendix 4

Dose of MB

MB should always be taken in low doses. The safe low dose is 1-2mg per Kg of body weight.

Regardless of body weight start with 10mgs per day. Indeed it is so safe it can be used directly into a vein, in doses of 15mgs/kg of body weight.

Always purchase pharmaceutical grade MB (this is clean and free from impurities). You could start by purchasing a 1% solution but since most come in small volumes you will get through this very quickly! As your need for MB increases, it is much more economical to purchase MB as the pure powder. Make sure this is British Pharmaceutical standard (it will have BP 73 on it so it conforms to the standards set in 1973) It may also be marked “Harmful if swallowed” – that simply reflects the fact that the powder is pure and needs to be diluted with water. Available at <https://www.salesatdrmyhill.co.uk/>

This comes in a 10 gram pot (approximate cost about £90). Take the whole pot and dissolve in 1,000ml (one litre) of water. This gives a 1% solution ie 10mgs/ml. So for a daily dose of 120mgs (2mg per Kg) or 12ml this would last 80 days. (This makes it a perfect treatment for my PBs). Be careful mixing it up. Should you spill the blue crystals or liquid (and I did!) you will spend the rest of your day washing out the colour! And I did!

Start with 1ml per day in a single dose at night. Put this into a large of water. I suggest you also add one to two grams of ascorbic acid – this converts much of the MB to leucoMB which is colourless. This may take several minutes but you get round the tooth/tongue staining issue. Drink the pale blue solution. In the body MB alternates between MB and leuco MB as it donates or accepts electrons. This explains the many desirable actions of MB. Expect to pee blue.

Start with 1ml per day (use a 10ml syringe to measure) in a single dose at night and put this into a glass of water. Drink the blue solution. Your teeth and tongue may be temporarily stained blue, but this soon disappears. To avoid this drink it through a straw. You may also pee blue – unavoidable!

Increase the dose in 10mgs ie 1ml increments depending on how you tolerated this. A 60kg person could end up on 6ml per day for 1mgs per Kg, or 12ml per day for 2mgs/kg. How long to use? See chapter 22.

MB is well absorbed in the upper gut and excreted in urine – this means it has no malign effect on the microbiome of the lower gut.

FINALLY

MB is a mild monoamine oxidase inhibitor (MAOI) which partly explains its anti-depressive and anti-anxiety effects. See “Methylene blue and its analogues as antidepressant compounds”, Anzelle Delpont et al

<https://pubmed.ncbi.nlm.nih.gov/28762173/>

MAOIs can cause dangerous interactions with certain foods and beverages. You'll need to avoid foods containing high levels of tyramine — an amino acid that regulates blood pressure — such as aged cheeses, sauerkraut, cured meats, draft beer and fermented soy products (for example, soy sauce, miso and tofu). The interaction of tyramine with MAOIs can cause dangerously high blood pressure. Care with coffee, chocolate, broad beans, see “Monoamine Oxidase Inhibitors (MAOI): Significant Drug-Drug/Drug-Food Interactions with MAOIs” <https://aapp.org/guideline/maoi/interactions>

Alcohol must be tyramine free so avoid beer, wine, port, sherry. Spirits (gin rum vodka) and cider are safe in modest amounts.

MAOIs can cause serious reactions when you take them with certain medications, such as other antidepressants, certain pain drugs, certain cold and allergy medications, amphetamines, blood pressure drugs, migraine drugs, some antibiotics or antifungals, recreational drugs, Tegretol, disulphiram and some herbal supplements such as St John's Wort or ginseng.

If you are taking ANY medication, do check for interactions with MAOIs. See “Serious Risks with MAOIs | MAO Inhibitors”, <https://maoinhibitors.com/serious-risks/>

More useful information here “Resolving Colds to Advanced COVID with Methylene Blue” from the Orthomolecular Medicine News Service

<https://orthomolecular.activehosted.com/index.php?>

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Summary

- Methylene Blue has many desirable properties including-
 - It improves mitochondrial function and so energy delivery mechanisms.
 - It has multiple anti-microbial actions: anti-parasitic, anti-bacterial, anti-fungal and anti-viral action, including Covid-19
 - It has anti-depressant effects.
- Methylene blue can be easily obtained and used.

- There are some advisory notes – e.g., care with certain food types and monoamine oxidase inhibitors.