

10 Tips for MTHFR Mutation Management

rs2236225	AA	A	MTHFD1	G1958A	+/+
rs1801131	TT	G	MTHFR	A1298C	-/-
rs1801133	AG	A	MTHFR	C677T	+/-
rs1801394	AG	G	MTRR	A66G	+/-
rs1532268	CC	T	MTRR	C524T	-/-

Your genes are not your destiny! Your genes are the loaded gun, but your environment pulls the trigger. MTHFD1, MTHFR A1298C, MTHFR C677T, etc. SNPs (Single Nucleotide Polymorphisms) are important, but I will focus only on MTHFR in this post as I have more and more people calling my practice with “My doctor diagnosed me with MTHFR mutation! I am a mutant! What do I do and where can I get help?” As you can see, I am heterozygous for MTHFR C677T, and I am still alive (even though I am a mutant:)

Here is a short video that explains how methylation works and shows Epigenetics in action:

So, what is all the fuss when it comes to MTHFR SNP (Single Nucleotide Polymorphism), as well as some other SNPs that are processing folate and what to do about it?

1. Methylation **protects our cell membranes** and keeps them intact. Guess what happens if you have holes in your cell membranes? The good stuff is leaking out and the bad stuff can squeeze in. Just like leaky gut, leaky cell membranes are adding to the inflammation in our bodies. Also, good stuff such as glutathione needed by our cells, cannot get in into a cell (even though there are holes in it!) Phosphatidylcholine is super important

for our cell walls and it is built with the help of the methyl group donated by SAMe.

2. Methylation **protects our DNA and RNA**. Our DNA is exposed to a number of toxins, viruses, bacteria, and other substances that may damage it and wreak havoc on our bodies. This damage may result in chronic inflammation and chronic diseases, as well as cancer.
3. Methylation **helps process hormones (estrogen)**.
4. Methylation **produces energy (ATP) in our cells**.
5. Methylation **makes myelin** – a protective coating on our nerves. De-myelination is the process of stripping our nerve cells of myelin and is one of the symptoms of MS (Multiple Sclerosis).
6. And on, and on! The list does not end here!

Here are some suggestions if you have been diagnosed with an MTHFR mutation, as well as if you do not know your MTHFR status.

1. Throw away all B vitamins or multivitamins that contain “Folic Acid” or other synthetic forms of B vitamins.
2. Incorporate the whole rainbow of colors from fruits and vegetables. Give preference to low-glycemic fruits, such as berries.
3. Avoid processed foods that have been fortified with folic acid. Basically, all bread and cereals have been fortified with this synthetic nutrient. The synthetic folic acid used to be the only option for women to prevent the neural tube defects in their babies. Fortunately, now there are other options that are more bioidentical for our bodies. For example, methylfolate is a great option. Pay attention when you choose a prenatal or a regular multivitamin.
4. Use goat milk dairy instead of cow milk. In the U.S. cow milk has been bred to produce Casein A1 – a type of casein that is harder to digest. It is also one of the causes of food allergies/sensitivities. The issue with

cow dairy blocks folate receptors preventing the utilization of folate by cells. See the study about folate receptor antibodies and cow dairy [here](#). Unlike cow's dairy, goat milk products have Casein A2 which is easier to digest.

5. Eat 2-3 cups of uncooked leafy green vegetables every day. I love making kale salads or adding spinach to my shakes. Collard greens, arugula, and swiss chard are other green options!
6. Ask your healthcare provider to check your **homocysteine levels** in blood and, possibly, order a methylation profile functional blood test from Doctor's Data. If your homocysteine is high, you may be deficient in folate (Vitamin B9) or vitamin B12 (methylcobalamin is a natural form of B12).
7. Avoid antacids, such as TUMS, proton-pump inhibitors (Prilosec or omeprazole), and histamine-2 blockers (ranitidine). They decrease stomach acid and prevent the absorption of minerals, vitamins, and other nutrients. Vitamin B12 could be especially decreased due to antacids.
8. Avoid drugs that deplete B vitamins (metformin, birth control, beta blockers, methotrexate). Supplement if needed under the guidance of your healthcare provider, if you cannot avoid the above-mentioned drugs.
9. If you decide to supplement with methyl-B12 or methylfolate (B9), be careful as some people get adverse reactions. If you notice new symptoms of irritability, anger, depression, stop B12 and folate for a while and see if your symptoms magically disappear.
10. Get tested with 23andme yourself – you do not need a doctor's order. **23andme** provides the raw data that can be plugged in into different SNP interpretation tools. Some of the best ones are Stratagene from Dr. Ben Lynch, as well as Genetic Genie. There are other options for genetic testing that can be done through your insurance. The only downside is that the insurance companies do not

tell you upfront how much the testing would cost and usually only 1 or 2 SNPs are tested, which does not provide the whole picture if your case is complex.

As I am diving in deeper into the folate metabolism and methylation, I think most people would do better without an artificial "folic acid" and should avoid it as much as possible, no matter the MTHFR status.