

WHAT IS MTHFR?

What is a MTHFR mutation? MTHFR is a gene responsible for giving the genetic instructions on how to make an enzyme called methylenetetrahydrofolate reductase. MTHFR is the abbreviation for this enzyme. Mutations in this gene can change the way some people metabolize and convert important nutrients from their diet into active vitamins, minerals and proteins. The methylation system detoxifies all the chemicals and metals we get in our bodies from eating, drinking, and breathing.

Depending on different variants in the MTHFR gene, it can cause a decrease in the body's ability to eliminate waste products and toxins, which can lead to a wide range of symptoms such as headaches, difficulty sleeping, fatigue and increased risk of developing cardiovascular disease. It is also possible that these changes in the body's ability to utilize nutrients may cause decreased production of neurotransmitters which can make some people more prone to experiencing anxiety and depressed mood. It can also create Vitamin B deficiencies.

MTHFR mutations that have the greatest influence on health are:

- Homozygous A1298C (C1298C) and homozygous C677T (T677T)
- Compound heterozygous A1298C + C677T

Compound heterozygous is considered the most severe or "at risk", but it is thought that homozygous mutations can inhibit MTHFR enzyme function by up to a whopping 70%

What can be done to reduce the impact of MTHFR mutation on health? The good news is, just because you have a genetic mutation in the MTHFR gene does not mean it will affect your health negatively. This is partly because not all mutation combinations lead to changes in nutrient activation in the body. Even if you have the mutation combination more likely to affect health, it does not necessarily mean it will negatively impact your health. The body is amazingly resilient and capable of finding ways to be as well as possible.

In addition, there are things you can do to help support your body! Here are some suggestions of ways to improve your body's ability to detoxify and utilize nutrients even if you have an MTHFR mutation.

Support detoxification:

- Drink at least 64-100 oz of water per day.
- Sweat regularly: Exercise until you sweat regularly, use a sauna, or take Epsom salt baths.
- Eat 5 servings of vegetables per day.

Supply your body with adequate folate:

- Eat a folate rich diet: dark leafy greens, beans, lentils, broccoli, asparagus, avocado ect.
- Avoid medications that can deplete folate or interfere with methylation when possible: birth control pills, anticonvulsants, antacids, antidepressants, Ibuprofen, aspirin, Metformin, cholesterol-lowering medications like cholestyramine, colestipol and colesevelam, some antibiotics, and some estrogen replacement medications.
- Take a methylated folate and B complex vitamin. Methylated form may only be needed in some cases, talk to a provider before starting a methylated supplement.
- Manage stress and get enough quality sleep: High levels of stress and poor sleep make MTHFR symptoms worse.
- Deep breathing exercises, yoga, and meditation are proven ways to help with stress management.
- Have a relaxing nightly routine, avoid caffeine, avoid electronic device use 1 hour before bed and aim to get at least 7 hours of sleep per night.

Talk to your provider about other nutrition and vitamin supplements to keep you in the very best of health.