

MTHFR & Methylation

Common signs and symptoms of Methylation imbalances

Methylation is an extremely important biochemical metabolic process of the body. Disruptions of the methylation process can cause systemic health problems. Methylation occurs where a methyl group (CH₃) is donated to another compound within the body so that compound can perform a specific function. S-adenosylmethionine (SAME) is the major methyl donor in the body and donates its methyl group from within the methionine cycle to support more than 200 enzymatic processes within the body. There are many reasons why methylation can be compromised including nutritional, environmental, physical and psychological stressors. Having a MTHFR polymorphism can be major contributing factor to an impaired methylation process. Examples of where methylation is required include;

- Methylation of neurotransmitters and hormones such as dopamine, histamine, estrogen and melatonin, facilitating their excretion and recycling.
- Energy production
- Mobilisation and elimination of toxins and fats
- DNA methylation to modify transcription of genes
- Support the metabolism of drugs and excretion of toxins from the body

Methylation imbalances are linked to a number of conditions including bipolar disorder, autoimmune disease, atherosclerosis, ADHD, autism, schizophrenia, behavioural disorders and many more. The following symptoms are common with methylation imbalances;

Suffering from three or more of the below symptoms may suggest a methylation problem.

Symptoms	Common	Sometimes	Rarely
Depression			
Anxiety			
Obsessive compulsive disorder (OCD)			
Food sensitivities			
Addictions			
PMS / fertility issues			
Panic attacks			
Perfectionism			
Violent outbursts			
Headaches			
Tinnitus			
Thyroid disorder			
Chronic infections			
Trouble with weight gain or loss			
Skin issues			

Undermethylation Vs Overmethylation

Methylation imbalances require a carefully targeted individualised treatment protocol. Certain individuals may produce too little methyl while others produce too much. People with methylation disturbances therefore can often fall into the categories of undermethylation or overmethylation.

Undermethylation Traits

Symptoms	Common	Sometimes	Rarely
High achievers			
Inner tension/turmoil with a calm exterior			
Perfectionist/OCD tendencies			
Addiction – more toward OCD type behaviour			
High Libido			
Seasonal allergies / headaches			
Social isolation / anxiety			
Do well on SAME / SSRI antidepressants/anti-histamines			
Highly competitive			
High salivary & tear flow, low pain tolerance, sparse body hair, reach orgasm easily, never get dry eyes			

Overmethylation Traits

Symptoms	Common	Sometimes	Rarely
Under achievers/dislike traditional learning environment			
Creative and sensitive - High artistic/musical ability			
Low motivation / depression			
Addiction – often drugs			
Low libido			
Anxiety that is evident to others			
Suspicion of people / think people are out to get them			
Do not do well on SSRI antidepressants–suicidal tendency			
Do not do well on SAME / anti-histamines			
Low salivary & tear flow, high pain tolerance, thick body hair, don't reach orgasm easily, often get dry eyes			

While each methylation type has unique traits, these traits should not be relied upon solely to determine your methylation status prior to supplementation, incorrect supplementation can make symptoms worse.

A whole blood histamine or SAME/SAH ratio blood test should be conducted to determine methylation status.