



## **Supercharge Your Health with a Methylation Diet: Boost Energy, Improve Mood, and Enhance Cognitive Function**

*Compliments of EatRight-LiveWell™ with Tam John | FNTP | Functional Nutrition expert*

Discover the power of methylation nutrition and unlock a whole new level of health and well-being. By focusing on the role of methylation in your body, nutrition offers a holistic approach to supercharging your health. From boosting energy and improving mood to enhancing cognitive function, the benefits can be truly transformational.

Methylation is a vital process that occurs in every cell of your body, playing a crucial role in gene expression and overall health. By knowing your genomic methylation status, and following an appropriate nutrition plan, you can support your body's natural ability to methylate, leading to improved energy levels, a more balanced mood, increased mental clarity, and other positive health.

This article will dive deep into the principles of genomic methylation testing, nutrition, related health, and explore the key nutrients and foods that promote proper methylation. We will uncover the top choices for optimizing your methylation process.

If you're ready to take control of your health and harness the power of methylation, join us on this journey to unlock new levels of energy, vitality, and well-being. Let's dive in!

### **What is methylation and why is it important for health?**

Methylation is a biochemical process that occurs in our cells, involving the addition of a methyl group to specific molecules, such as DNA, proteins, and neurotransmitters. This process plays a critical role in gene expression, cell repair, detoxification, and the synthesis of important compounds in your body.

One of the key players in the methylation process is a molecule called S-adenosylmethionine (SAME), which acts as a methyl donor. SAME is involved in various vital functions, including the regulation of gene expression, neurotransmitter production, and DNA repair. Without proper methylation, your body's ability to carry out these essential processes can be compromised.

According to [Alan Miller, ND for Thorne](#), "CH<sub>3</sub> is provided to the body through a universal methyl donor known as SAME (S-adenosylmethionine). SAME readily gives away its methyl group to other substances in the body, which enables the cardiovascular, neurological, reproductive, and detoxification systems to perform their functions.



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Unfortunately, the system that produces SAME is reliant on one switch being turned on by a critical B vitamin, 5-MTHF (also known as active folate or methylfolate).

Simply put, if enough 5-MTHF is present, the methylation cycle will work efficiently.”

Rather than guessing at dietary and nutritional supplementation, 77 gene [nutrigenomic testing](#) is the way to know your body’s genetic code for methylation. Using the genomic test results - knowledge as power, you will be equipped to make wise dietary and supplementation choices to support your health.

Methylation is also important for maintaining optimal health because it helps to prevent the accumulation of toxins and oxidative stress in your cells. By supporting your body's natural detoxification pathways through methylation, you can reduce the risk of chronic diseases, including cancer, cardiovascular disease, and neurodegenerative disorders.

In a study titled ‘[DNA methylation: a cause and consequence of type 2 diabetes](#)’, “This review posits that DNA methylation is both a possible cause and consequence of T2D.” The study adds “Environmental factors contribute to type 2 diabetes (T2D) development through epigenetic mechanisms including DNA methylation. Changes in driver methylation lead to changes in driver gene expression. Knowledge of DNA methylation changes can inform the development of biomarkers for T2D and enhance the prediction of T2D risk.”

Personalized Functional Nutritional Therapy in the proprietary [Eat Right – Food for Life™](#) program with [Nutrigenomic Testing](#) is a means to use your genetic information with the ease of a privatized cheek swab and everyday health data like symptoms to evolve a sustainable nutrition plan by optimizing your choices of food, beverages, and performance habits. This reflects the power of Epigenetics to determine your health and genetic expression.

### **Understanding the methylation cycle**

To fully grasp the importance of methylation, it's crucial to understand the methylation cycle. This cycle involves a series of chemical reactions that take place in our cells, ultimately leading to the formation of SAME, the key methyl donor mentioned earlier.

The methylation cycle starts with the conversion of methionine, an essential amino acid, into SAME. This conversion is catalyzed by an enzyme called methionine adenosyltransferase. Once SAME is formed, it can donate its methyl group to various molecules in our body, including DNA, proteins, and neurotransmitters.

After donating its methyl group, SAME is converted into another molecule called S-adenosylhomocysteine (SAH). SAH is then broken down further into homocysteine, which can



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be either remethylated back into methionine or converted into other compounds through a process called transsulfuration.

It's important for the methylation cycle to function properly, as imbalances or deficiencies in any of the enzymes or cofactors involved can disrupt the methylation process and lead to various health issues. Understanding the methylation cycle allows us to identify potential areas of dysfunction and take steps to optimize our methylation process.

### **Signs and symptoms of methylation imbalances**

Imbalances in the methylation process can manifest in various signs and symptoms, which can vary from person to person. Get your [nutrigenomic test](#) and a Functional Nutritional Assessment with [EatRight-LiveWell](#) to begin evolving your personalized plan.

Too often indicators that may suggest methylation imbalances are ignored. Doing something about them is supportive for your body to come back to a more healthful balance.

Common indicators may include:

1. **Fatigue:** Reduced energy levels and persistent fatigue, even after getting adequate rest.
2. **Mood Disorders:** Mood swings, depression, anxiety, irritability, or difficulty coping with stress.
3. **Brain Fog:** Difficulty concentrating, memory problems, and a feeling of mental cloudiness.
4. **Cardiovascular Issues:** Increased risk of cardiovascular disease, high blood pressure, or elevated homocysteine levels.
5. **Digestive Problems:** Digestive issues, such as bloating, gas, irritable bowel syndrome (IBS), or food sensitivities.
6. **Neurological Disorders:** Neurological conditions like autism spectrum disorders, attention deficit hyperactivity disorder (ADHD), or Alzheimer's disease.
7. **Recurrent Miscarriages:** Methylation imbalances can affect fertility and increase the risk of recurrent miscarriages.

If you experience any of these symptoms, it's worth considering the role of methylation in your health and exploring [Eat Right – Food for Life™](#) with nutrigenomic testing to know your methylation status. Methylation nutrition supports your body's natural methylation process and



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is part of the return on your investment to evolve a nice and easy food lifestyle based on your data. After all, health is your most valuable asset!

## **The role of diet in methylation**

Diet plays a crucial role in supporting optimal methylation. By consuming foods rich in methyl donors, cofactors, and other nutrients essential for methylation, you can provide your body with the necessary building blocks to carry out this vital process.

### **Foods Rich in Methyl Donors**

Methyl donors are compounds that can donate methyl groups during the methylation process. Including these foods in your diet can help support your body's natural methylation process:

- Leafy Greens: Vegetables like asparagus, spinach, kale, and broccoli are excellent sources of folate, a B-vitamin that plays a key role in methylation. Folate is converted into its active form, 5-methyltetrahydrofolate (5-MTHF), in the body and acts as a methyl donor.
- Cruciferous Vegetables: Vegetables like cauliflower, Brussels sprouts, and cabbage contain sulfur compounds that are important for methylation and detoxification processes.
- Eggs: Eggs are rich in choline, a nutrient that is essential for methylation. Choline acts as a methyl donor and is involved in the synthesis of neurotransmitters like acetylcholine.
- Seafood: Fish, especially fatty fish like salmon and sardines, are excellent sources of Omega-3 fatty acids, which have been shown to support methylation and brain health.
- Legumes: Beans, lentils, and chickpeas are good sources of folate and other nutrients involved in methylation.

Including a variety of these foods in your diet can help ensure an adequate intake of methyl donors and other essential nutrients for methylation.

### **Foods to Avoid for Optimal Methylation**

While certain foods can support methylation, there are also some that can hinder the process.

- Processed Foods: Highly processed foods often contain artificial additives, preservatives, and trans fats that can interfere with methylation and overall health.



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- Excessive Alcohol: Alcohol consumption can deplete important methyl donors and disrupt the methylation process.

- Refined Grains and Sugars: Refined grains and sugars lack essential nutrients needed for methylation and can contribute to inflammation and oxidative stress.

By minimizing the consumption of these foods and focusing on whole, nutrient-dense options, you can optimize your methylation process and support your overall health.

**Proper methylation is essential for maintaining optimal energy levels.** Methylation plays a role in the production of adenosine triphosphate (ATP), which is the primary source of energy for your cells. ATP is produced through a process called oxidative phosphorylation, which relies on the methylation of certain compounds involved in energy metabolism.

Methylation is involved in the regulation of mitochondrial function. The mitochondria are the powerhouse of our cells, responsible for producing ATP. Proper methylation ensures optimal mitochondrial function, enabling efficient energy production.

**Imbalances in methylation can lead to neurotransmitter imbalances, affecting mood stability and mental well-being.** For example, reduced methylation can result in low levels of serotonin, which is often associated with depression and anxiety.

**Methylation is involved in the breakdown of homocysteine,** an amino acid that, when elevated, has been linked to depression and other mood disorders. By supporting proper methylation, you can help prevent the buildup of homocysteine and maintain a more stable mood.

**Optimal methylation is essential for maintaining cognitive function and preventing age-related cognitive decline.** Methylation supports the production and metabolism of neurotransmitters involved in cognitive processes, such as memory, attention, and learning.

Research has shown that individuals with certain genetic variations that affect methylation are more susceptible to mental health conditions such as depression, anxiety, and bipolar disorder. These genetic variations, known as single nucleotide polymorphisms (SNPs), can lead to impaired methylation and subsequently affect the production and regulation of neurotransmitters.

**Methylation plays a role in the regulation of genes associated with neurodegenerative diseases, such as Alzheimer's and Parkinson's diseases.** By supporting methylation through a healthy diet, you can potentially reduce the risk of cognitive decline and improve cognitive performance.



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Neuroplasticity refers to the brain's ability to change and adapt in response to experiences and environmental stimuli. Methylation plays a vital role in regulating genes involved in neuroplasticity, influencing the brain's ability to form new connections and adapt to new information.

By supporting optimal methylation through a nutrient-rich diet and lifestyle choices, you can enhance neuroplasticity and promote healthy brain aging.

**Stress can have a significant impact on methylation.** When we experience chronic stress, our body's demand for methyl groups increases, as they are needed for various biochemical reactions involved in the stress response and hormone synthesis. This increased demand can deplete your methyl reserves and impair proper methylation. Deciding for [Eat Right – Food for Life™](#) is a means to reduce physiological stress too, because our program offers an integrative health approach including personalized stress mitigation techniques.

**Individual nutrient needs vary, and not all healthy food is healthy for all.** Eat Right – Food for Life™ respects bio-individuality and preferences, never insisting that our client consume disagreeable foods.

In conclusion, knowing your methylation status via nutrigenomic testing and supporting your unique bio-individuality with personalized methylation nutrition offers a holistic approach to supercharging your health. Better health and living are a natural result.

Take the guesswork out of what is right for you to [optimize your nutrition for performance and live well](#) with Tam John's EatRight-LiveWell™ proprietary approach to personalized functional methylation nutrition.

We've been [guiding clients well since 2015](#) and will be honored to help you too!

Thank you.



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