

# Simple In-Office Test To Identify Folate Deficiency

*"... people will sleep better, have less anxiety and frustration in life, less depression, less fatigue, and experience less inflammation..."*

One of my colleagues and good friend Dr. Walter Schmitt has said for years that his favorite vitamin is B9, folic acid. More recently at his seminar "Better Results with Injury, Inflammation and Pain," he commented about a very specific form of folic acid called 5-methyltetrahydrofolate or 5-MTHF.

Dr. Schmitt has a unique research type practice where chronic unresponsive patients come from all over the country to see him. Dr. Schmitt and his colleague Dr. Gangemi find that this form of folic acid is the most commonly used nutrient in their practice.

Both doctors have waiting list practices and both have difficult patients. Usually that means other doctors have seen and referred these challenging patients to Dr. Schmitt and his colleague. To quote him from his seminar, "5-methyltetrahydrofolate or 5-MTHF is the most common thing other doctors miss..."



Let's explore why this nutrient is so important and how we can avoid missing it. First of all the term folic acid refers to the synthetic form used in most supplements and in food fortification. Folic acid is in an oxidized form and must be converted by the body to the reduced form called folate.

Folate is converted to dihydrofolate then into tetrahydrofolate then into methylene tetrahydrofolate and finally into the 5-methyltetrahydrofolate or 5-MTHF.

Folate → dihydrofolate → tetrahydrofolate ↔ methylene-THF → 5-methyltetrahydrofolate or 5-MTHF

It may seem a little technical, but here's why Dr. Schmitt uses so much of the 5-MTHF. The final conversion step into the metabolically active form depends on an enzyme called 5-MTHF reductase. There is a lowered conversion of the biologically active form due to the 5-MTHF reductase gene polymorphism.

Up to 1/3 of the population has one or no 5-MTHF

reductase genes. In a crowd, look to your left then look to your right, one of the three of you has a 5-methyltetrahydrofolate reductase polymorphism. Biochemically, a single carbon group is a methyl group. To move a methyl group, the body needs the activated form of folic acid called 5-MTHF.

Folate plays a significant role in the synthesis of RNA and DNA. So right off the bat any function that involves cell division like GI health needs folate. It's a crucial piece to reducing the inflammatory effects of homocysteine by changing it to the amino acid methionine. Folate is essential for vitamin B12 metabolism as well as in the functioning of the central nervous system and the immune system.

But here's an application that most of us don't think about and that's the neurotransmitter connection. Dr. Schmitt showed how folate is important in the metabolism of most neurotransmitters: aspartic acid, glutamic acid, GABA, glycine, taurine, dopamine, epinephrine, norepinephrine, serotonin, histamine and acetylcholine.

Once the need for 5-MTHF is identified and treated, people will sleep better, have less anxiety and frustration in life, less depression, less fatigue, and experience less inflammation among other things.

Biotics Research Corporation created Methylfolate Plus which combines 800 mcg of methyltetrahydrofolate with 50 mcg of methylcobalamin. To identify a need for folic acid, the 5-MTHF form Methylfolate Plus, the phosphorylated form of B6, B6 Phosphate or niacin, Niacin 100, Dr. Schmitt demonstrated the following workshop.

Perform a Romberg test by having the patient place feet together and close their eyes. Be prepared to catch them. Observe direction of their first movement. Observe for overall

movement and stability.

Now have them stand on one foot with eyes open, see how long it takes to lose balance. The average person should be able to stand on one foot for 10- 20 seconds. Repeat it again to make sure they know how to do it. Now have them stand on the other foot in the same manner. Note times for both right and left feet.

Have them stand on one foot again and once they become stable close their eyes. Remember, be prepared to catch them. Note the time it takes them to lose balance on each foot.

Look for range of motion and pain. Record levels of pain and flexibility. Now use the weakest indicator; in this case the situation which caused the poorest balance and have them systematically taste the following: Folic Acid 800, Methylfolate Plus, B6 Phosphate and Niacin 100. See which nutrient increases their strength, increases balance time or reduces pain.

If the Methylfolate Plus gives a better response than the Folic Acid 800, chances are strong they have a genetic weakness and an inability to convert to 5-MTHF. Below, you can download written instructions and also obtain information where to attend this seminar.

I think you can see why Dr. Schmitt uses so much Methylfolate Plus. This type of testing provides a functional way to evaluate and prevent falls with our elderly patients as well as screen for neurotransmitter imbalances with our day to day patients.

This is prevention at its best; because if you can detect this type of genetic weakness, you are literally changing someone's life... and that's exciting.

Thanks for reading this week's edition of the Tuesday Minute. I'll see you next Tuesday.