

The Ultimate
MTHFR
TREATMENT GUIDE



DR JANELLE SINCLAIR

The Ultimate MTHFR TREATMENT GUIDE

BACKGROUND AND SYMPTOMS

What is the MTHFR gene?

MTHFR stands for methylene-tetra-hydro-folate reductase. The MTHFR gene encodes for an enzyme that helps convert folic acid into the active form of folate (known as methylfolate or MTHF).

The Two Most Common MTHFR Genetic SNPs* are C677T and A1298C

*NOTE: I prefer to use the term single-nucleotide polymorphisms (SNPS) or genetic weaknesses rather than genetic mutation, but these can usually be used interchangeably.

Symptoms and Health Conditions Associated With MTHFR Genetic Weaknesses

- Mental health concerns: depression, schizophrenia, autism, bipolar disorder
- Infertility, miscarriage, pre-eclampsia, PCOS
- Cardiovascular disease: Coronary heart disease, stroke, migraine, blood clotting conditions
- Various types of cancer

MTHFR Genetic Weaknesses and a Reduction in MTHFR Enzyme Activity can lead to:

- A methylfolate deficiency
- Reduced biopterin levels (which affects serotonin and dopamine production)
- Increased homocysteine levels (involved in Cardiovascular disease and migraines)
- Reduced methylation

Methylation is involved in:

- Neurotransmitter synthesis
- Turning genes on and off (epigenetics)
- Repairing DNA
- Cell membrane structure
- Fighting infections
- Getting rid of environmental toxins
- 400+ biochemical processes

Key Terms & Definitions

Methylfolate (also known as MTHF)

Methylfolate is the biologically active form of folate in the body. It is also available as a supplement. In some countries methylfolate is a prescribed medication, that is used as an antidepressant. Methylfolate is not the same as folic acid, although it is related.

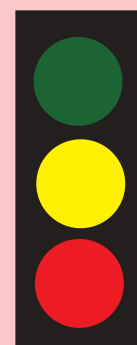
SNP

Single nucleotide polymorphisms, frequently called SNPs, are the most common type of genetic variation among people. Each SNP represents a difference in a single DNA building block, called a nucleotide. You can simply think of a SNP as a "genetic change" at a particular position within a gene.

Methylation

Methylation is a simple biochemical process – it is the transfer of one carbon atom and three hydrogen atoms (CH₃) from one substance to another. It is involved in over 400+ biochemical processes. See what methylation does in the body to the left.

What do my genetic results mean?



Homozygous wildtype

- 2 copies of the "normal" SNP

Heterozygous for the genetic weakness

- 1 copy of the "normal" SNP
- 1 copy of the "weak" SNP

Homozygous for the genetic weakness

- 2 copies of the "weak" or "mutant" SNP

DETAILS ON MTHFR C677T & A1298

MTHFR C677T Genetic Weakness

- Also known as MTHFR 677C>T, MTHFR 677CT, or by its unique identifying number: rs1801133.
- What it means: At base position 677 on the MTHFR gene, the normal “C” (Cytosine) is changed to a “T” (Thymine).
- How common is this? 57% of the Caucasian American population has a MTHFR C677T genetic weakness. 45% have one copy (i.e. heterozygous) and 12% have two copies (i.e. homozygous) of this particular genetic weakness.
- How does this genetic weakness cause a problem? The genetic change in the MTHFR gene, leads to the activity of the MTHFR enzyme being reduced.
- If you have one copy of the C677T genetic weakness (i.e. heterozygous) the MTHFR enzyme activity is only 67% of its normal activity (that's a reduction of 33% activity!). This leads to reduced methylation in the body (see methylation note on page 2).
- If you have two copies of the C677T genetic weakness (i.e. homozygous), the MTHFR enzyme activity is only 25% of its normal activity (that's a reduction of 75% activity!). This leads to significantly reduced methylation in the body.

Keep this all in perspective: Depression, mental illness and most other health conditions are not caused by one faulty gene. They are multifactorial disorders- they occur as the result of weaknesses in multiple genes coupled with psychological, nutritional and environmental factors.

MTHFR A1298C Genetic Weakness:

- Also known as MTHFR 1298A>C, MTHFR 1298AC or by its unique identifying number: rs1801131.
- What it means: At base position 1298 on the MTHFR gene, the normal “A” (Adenosine) is changed to a “C” (Cytosine).
- How does this genetic weakness cause a problem? The genetic change in the MTHFR gene, leads to the activity of the MTHFR enzyme being reduced.
- If you have one copy of the A1298C genetic weakness (i.e. heterozygous) the MTHFR enzyme activity is only 81% of its normal activity (that's a reduction of 19% activity!). This leads to reduced methylation in the body (see note on methylation on page 2)
- If you have two copies of the A1298C genetic weakness (i.e. homozygous) the MTHFR enzyme activity is only 61% of its normal activity (that's a reduction of 39% activity!). This leads to significantly reduced methylation in the body.

TREATMENT CONSIDERATIONS

To help compensate for the MTHFR genetic weaknesses and the effect this has on the body, there are three strategies to consider:

1) Dietary recommendations

Ensuring that dietary intake of folate and vitamin B12 are sufficient

2) Lifestyle and environmental recommendations

To support methylation in the body

3) Supplement recommendations

To further support methylation through supplementation.

Continue scrolling to find out more about each of these strategies.

If you are...

Heterozygous for MTHFR C677T or A1298C: Incorporate the dietary and lifestyle recommendations listed below. Possibly consider taking a B Complex or Multivitamin containing methylfolate and methylB12.

Homozygous for MTHFR C677T or A1298C: Incorporate the dietary and lifestyle recommendations listed below. If you're currently healthy, consider taking a B complex or multivitamin containing methylfolate and methylB12. If you have some current health challenges, especially those mentioned above, consider taking a methylB12 and methylfolate supplement (see below).

Heterozygous for both MTHFR C677T and MTHFR A1298C: Incorporate the dietary and lifestyle recommendations listed below. If you're currently healthy, consider taking a B complex or multivitamin containing methylfolate and methylB12. If you have some current health challenges, especially those mentioned above, consider taking a methylB12 and methylfolate supplement (see below).

TREATMENT CONSIDERATIONS

1. DIETARY RECOMMENDATIONS

Eat Folate and Vitamin B12 Rich Foods

FOLATE RICH FOODS

To help support healthy methylation"

@drjanellesinclair



Citrus Fruits



Broccoli



Romaine Lettuce



Spinach



Beets



Avocado



Seeds & Nuts



Asparagus



Beans, Peas & Lentils

Vitamin B12 and folate are methylating agents in the body and help promote methylation. The first thing you should do to improve the methylation in your body is to increase the folate and vitamin B12 rich foods in your diet.

Eat raw food and be cautious with a vegan or vegetarian diet.

Ensure that you eat some of the folate foods in raw form, as cooking destroys folate. I also would caution against a vegan or vegetarian diet, as they are very low in vitamin B12. Vitamin B12 is critical for the process of methylation, and not consuming optimal levels (especially if you are homozygous for either of the MTHFR SNPs) may put you at higher risk of neurological and mental health conditions. Alternatively, be vigilant at supplementing with vitamin B12.

VITAMIN B12 RICH FOODS

To help support healthy methylation"

@drjanellesinclair



Beef



Liver



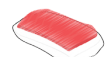
Poultry



Eggs



Shellfish



Fish



Milk



Cheese



Fortified Foods

 Dr.Janelle

TREATMENT CONSIDERATIONS

2. LIFESTYLE AND ENVIRONMENTAL RECOMMENDATIONS

Improve Your Sleep and Manage Your Stress.

Poor sleep and increased stress can impact your methylation, so create good habits to improve your sleep and manage your stress levels.



Shut off screens at least one hour prior to going to bed. If you absolutely must use one, install a blue-light filter. Blue light is known to reduce the production of melatonin, your sleep hormone.



Go to bed at the same time each night, before 10.30pm.



Make sure that your room is dark when you sleep. Get blackout curtains and remove any clocks or devices from your room that emit light.



Don't drink caffeine after 2pm, and if you struggle with anxiety I'd suggest that you give up coffee altogether. Check out my video on coffee and anxiety for more information on that.



Diaphragm breathing can help reduce stress levels and improve your sleep. So consider doing that for 10 minutes before bed each day.

Remove Toxins From Your Environment.

The reason we want to remove toxins from our environment is because toxins can lower methylation in the body.

FRUIT & VEGES WITH THE MOST PESTICIDES

AKA The "Dirty Dozen"

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Strawberries



Apples



Pears



Nectarines



Spinach



Grapes



Tomatoes



Cherries



Kale



Peaches



Celery



Potatoes

Tips to 'Clean Up' Your Environment

- 1) Filter your water
- 2) Avoid plastic for use with food
- 3) Avoid nonstick pans or cookware
- 4) Use natural cleaning products and cosmetics
- 5) Eat organic. If getting ahold of organic food is difficult, try to avoid fruit and vegetables that are most contaminated with pesticides.

Avoid these Medications for Optimal Methylation:

- Supplements and food containing folic acid
- Folic-acid-blocking drugs such as birth control or methotrexate
- Nitrous oxide "gas" (most used in dentistry & childbirth)
- Antacids (they block absorption of vitamin B12 and other nutrients)

TREATMENT CONSIDERATIONS

3. SUPPLEMENTS FOR COMPENSATING FOR THE MTHFR GENETIC WEAKNESSES

Option 1: Supplement with a B complex or multivitamin with methylfolate and methylB12

Consider these supplements if...

- You have one copy of the "mutant" MTHFR gene
- OR you have two copies of the "mutant" MTHFR gene, and you do not have a current health condition.

Click the product images to purchase



You can't change your genetic code but you can compensate for it!

Option 2: Supplement with methylfolate and vitamin B12

Consider these supplements if...

You have two copies of the "mutant" MTHFR gene and you have a current health condition.

Vitamin B12 supplementation:

- Adult dose: 500-1000mcg/day

Methylfolate /MTHF supplementation:

- Adult dose: 800-1200mcg/day (sometimes as high as 1600mcg/day)
- Start on low doses and build up slowly

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CAUTION: Do not take methylfolate if you are on chemotherapy or anti-convulsant medications.



TROUBLESHOOTING

What if I don't tolerate methylation supplements but I have the MTHFR genetic mutation?

If you experience side-effects from the vitamin B12 and/or methylfolate (MTHF) supplements BUT you have an MTHFR genetic SNP, here is a troubleshooting guide to help you. This will help reduce side-effects so that you can tolerate the supplements and allow you to experience their benefits.

Potential Side-Effects of Methylfolate (MTHF)*


- Anger outbursts
- Headache
- Migraine
- Rashes
- Irritability
- Anxiety
- Joint pain
- Muscle pain
- Insomnia
- Depression

Potential Benefits of Methylfolate (MTHF)

- Improved mood
- Increased energy
- Improved fertility
- Reduced migraines
- Reduced homocysteine levels and better Cardiovascular health
- Healthy detoxification is promoted

*NOTE: Regarding Methylfolate Side-Effects: Look for new symptoms that have only begun after starting the methylfolate/MTHF supplements. If you had a pre-existing health complaint mentioned above then do not consider this as a side-effect of the methylfolate supplement.

TROUBLE-SHOOTING TIPS:

1. Start on low doses of the supplements and build up slowly. More is not always better.
2. Start on only vitamin B12 first for 2 weeks before adding in methylfolate (MTHF).
[Click the product image to purchase](#) 
3. Consider taking an electrolyte supplement especially if methylfolate gives you muscle aches.



**Seeking Health
Optimal Electrolyte**

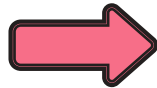
TROUBLESHOOTING

4. Support detoxification

- Remember that by increasing methylation, you may be increasing detoxification
- Ensure you are having a bowel motion at least once per day
- Drink adequate water (1.5-2L/day) and consider vegetable juicing to support the kidneys
- Consider other detoxification techniques or supplements: epsom salt baths, infrared sauna, charcoal or zeolite supplements

5. Consider taking a small amount of niacin (50mg) alongside the methylB12 and methylfolate.

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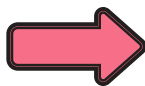


Seeking Health Niacin

6. Consider hydroxyB12 and folic acid supplements (instead of methylated B12 and methylfolate)

- Despite following all the troubleshooting tips above some people just do not tolerate methylB12 and methylfolate, even though genetically we would expect that they would.
- To help support methylation and provide health benefits, an alternative is to take vitamin B12 and folate in the form of hydroxyB12 and folic acid. These nutrients help support the methylation pathways, but reduce the likelihood of side-effects. These supplements may be helpful for anyone with the COMT++(Val158Met) genetic weakness.
- Follow the same dosage recommendations for hydroxyB12 and folic acid, as provided for the methylB12 and methylfolate supplements above (see page 7).

Click the product images to purchase



Seeking Health Hydrox B12 with Folic Acid



Seeking Health Hydroxo B12



Seeking Health Folic Acid Lozenge

GENETICS FOR MENTAL HEALTH

I want to ask you to keep all of this information in perspective. Depression, mental illness and most other health conditions are not caused by one faulty gene. They are multifactorial disorders- they occur as the result of weaknesses in multiple genes coupled with psychological, social, nutritional and environmental factors.

For my clients with depression and anxiety I don't usually start with genetic testing unless they have a very strong history of mental unwellness running in their family. I prefer to start with optimising a person's diet, improving gut health and addressing any vitamin or mineral deficiencies. For me these are the foundational keys for mental health and I recommend that you do this too!

You don't have to do this on your own. I have an online course that helps step you through these foundational keys. It's called Real Relief Foundations and I created it for people just like you to help them resolve their depression and anxiety naturally. It's comprehensive and easy to follow and it really does work.

Join Real Relief Foundations Now to overcome depression and anxiety naturally, and get your life back!

Real Relief Foundations Masterclass



Join Dr Janelle's
revolutionary online
course today!

Learn:

- what foods you must eat to improve your mood (including an easy to follow guide)
- what foods to avoid to increase your energy & lower your brain fog
- how and why to support your gut health to decrease depression & anxiety
- what blood tests to get your doctor to order for you (which are frequently overlooked)
- the essential vitamins and minerals to enhance your energy & increase your happiness
- therapeutic supplement dosage recommendations specifically for mental health
- and so much more!

Get your mind and body back to balance, so that you can experience true happiness, enhanced resilience and inner calm today.

Enroll in Dr Janelle's online course now!

www.drjanellesinclair.com/ecourse



ABOUT DR JANELLE

A little about me

Hi, my name is Dr Janelle Sinclair. I'm a biochemist (PhD) and a registered natural medicine practitioner. I've been working in the natural medicine field for over 14 years and I've been consulting with clients for 5 years, specifically focused on mental health. I have a PhD of biochemistry, a Postgraduate Certificate in Health Sciences (Mental Health), completed FitGenes accreditation and NeuroLinguistic Programming (NLP) certification. As you can see, I have a thirst for knowledge and I love to apply it in a practical way that has an impact on others.

Lives changed

Many of my clients have called me a lifesaver (literally). I've helped them go from feeling hopeless and that life was not worth living, to having more energy, working again, enjoying their families and excited about what the future holds. While working in my clinic I found that for some women there were dramatic changes in a short period of time in their mental health by using a couple of supplements and/or a simple dietary change. For others a slow and steady improvement in emotions, stamina and motivation were experienced.

I'm now on a mission

It got me thinking, that more people like you needed to know about what works, and how to figure out what supplement or diet would be effective for them! It breaks my heart to think that you are struggling with distressing symptoms that affect you every day, when it might be possible to turn your life around with a natural approach.

I believe that through addressing biochemical imbalances such as nutritional deficiencies, hormonal imbalances, food intolerances, gut dysbiosis, and poor detoxification, that many people can overcome their struggle with depression, anxiety and fatigue.

This approach has helped hundreds before you, and I'd love to help you resolve your depression and anxiety too!

NEED REAL RELIEF FROM DEPRESSION & ANXIETY?

Not sure how to get started? Follow these steps.

STEP 1: DOWNLOAD THE FREE REPORT



www.drjanellesinclair.com/checklist

STEP 2: WATCH THE WEBCLASS



www.drjanellesinclair.com/webclass

STEP 3: JOIN THE ONLINE COURSE



Real Relief
FOUNDATIONS

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STEP 4: HAVE A CONSULTATION WITH DR JANELLE



www.drjanellesinclair.com/consulting

Have a Question or Need Help?

Email our support desk at: info@drjanellesinclair.com

Click the links to find out more!