

Presented by SeekingHealth®

# **Prepared For: FemaleHet**

What you're about to uncover in these upcoming pages is extremely powerful!

You finally have the opportunity to 'peek under the hood' and see You.

By discovering your unique genetic makeup using StrateGene®,you'll learn how you can truly optimize your life.

There is no such thing as a "bad" report, or a "good" report—just unique. You won't find any 'red' or 'yellow' colors here that symbolize 'bad' or 'warning'. Instead, you'll learn that some of your genesnaturally work slower and some naturally work faster. It's important that you know this information so you can adapt. If you don't know how your genes are built, you've no idea how your choices impact you.

You can change the way your genes function by changing your environment, mindset, food, and lifestyle. Your StrateGene®Report helps you make targeted choice after targeted choice which creates the optimal environment for your genes—onechoice at time. The result?You'll ultimately function at your best—andyou'll know why.

Your journey to the best version of You is about to begin!

Here is where you start: /"How to Understand Your StrateGene®Report "  $\infty$ 

To get the most out of your report, we encourageyou to have a health professional help you analyze your StrateGene®Report. They will help you implement specific recommendations. It will be more efficient, cost-saving, and rewarding.

#### Important Disclaimer:

Although this report may provide useful diagnostic information, StrateGene.Me,Dirty GenesLLC,and Seeking Health LLCdo not make or suggest any specific diagnosis or therapeutic course of treatment or action. Any such diagnosis and/or treatment plan is strictly a matter between the patient and his or her qualified healthcare professional.

The StrateGeneV1array is a single-nucleotide polymorphism (SNP)-basedassay, used to detect variants for the generation of the StrateGenereport. It demonstrates a 99.98% concordance internally and 99.67% concordance with previously validated SNP-based assay.

To best navigate this report, we highly recommend saving and reading it on Acrobat Reader (For PCusers) or Preview (For Macusers).

Lab Work Completed Date: 09-10-19 UTC SpecimenCollection Date: 06-22-20 UTC Kit Type / Kit ID: Swab Kit SH1620346892 Report Date: 05-07-21 00:22:23 UTC Report Version: StrateGene®Core v1.0 (33.3) Report ID: FemaleHet1620346892

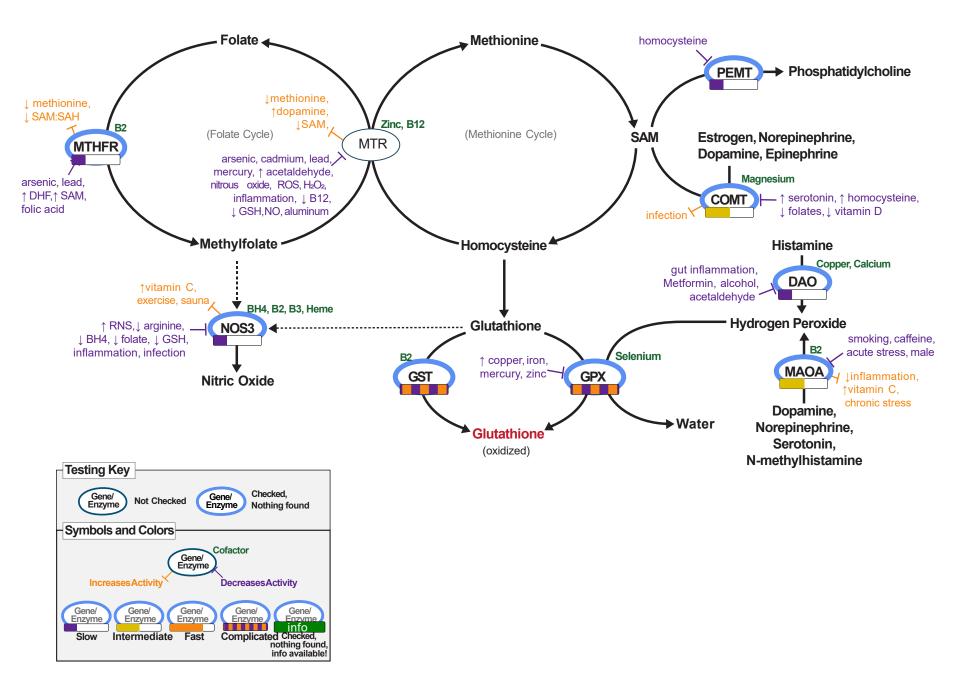
#### Go To:

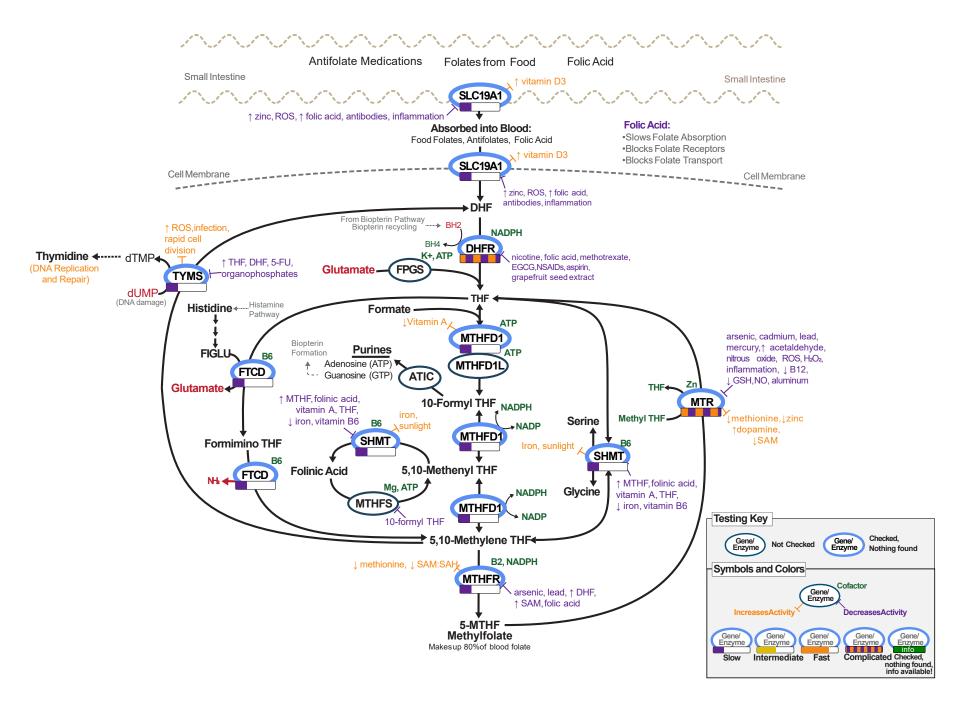
The Super Seven | Histamine | Dopamine | Serotonin | Folate | SAM | Methylation | Glutathione | Biopterin | Advanced Tables | Glossary | Education | FAQ Dirty Genes | Seeking Health

This test's performance has been validated by Diagnomics, Inc. according to high-complexity testing under Clinical Laboratory Improvements Amendments (CLIA) Diagnomics, Inc. | Lab Director: Hong Shen, MD | CLIA:05D2103644 | CAP:9050024 | 5795 Kearny Villa RD., San Diego, CA92123

# The Super Seven (from Dirty Genes)

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# THE MTHFR GENE

The MTHFR(methylenetetrahydrofolate reductase) gene expresses an enzyme which produces the body's primary form of folate called 5-MTHF(aka 5-methyl THF, L-5-MTHF, methylfolate), which represents over 80% of the body's folate. In the process, the MTHFRenzyme uses FAD, a form of riboflavin (B2), as a cofactor.

5-MTHF is utilized in the production of S-adenosylmethionine (SAM), which subsequently regulates around 200 processes including DNA methylation, neurotransmitter and phospholipids production. Since the MTHFR gene is the rate-limiting step in the generation of 5-MTHF, it is subsequently also the rate-limiting enzyme in the whole processof SAM production.

The MTHFRgene connects the Folate Pathway, via 5-MTHF, with the SAM cycle via the MTR gene. This is why a slow MTHFRmay increase homocysteine levels.

### Dirties your MTHFRgene

**Environment:**Avoid lead and arsenic. Living in sunny areas leads to increased folate demand to repair sun-damagedskin. Naturally dark skin can reduce demand, but not entirely.

Lifestyle:Hyper and hypothyroidism, insulin resistance

Food:Foodsor beverages enriched with synthetic folic acid

**SupplementsandMedications:**Avoid synthetic folic acid, aspirin, other salicylates (NSAIDs). Many medications interact with this enzyme.Consultyour healthcare provider or pharmacist.

## Cleans your MTHFRgene

**Environment:**Protect skin from strongest sun rays of the day (10 a.m. to 4 p.m.)by using zinc oxide, hats and sun protective clothing.

**Food:**Chooseriboflavin (B2) rich, choline and betaine rich, natural folate rich, polyphenol rich, low sugar. See "Your CleanGenesRecipes" in the *Dirty Genes*book.

### Notable variation:

### □SNP: MTHFRC677Trs1801133(+/-, GA) □

This GAvariant decreasesbinding of the cofactor, riboflavin (B2), which decreasesMTHFRenzyme activity by about 30% less than wild type. The enzyme loses stability as body temperature rises, so its function becomes compromised during fevers. The activity and stability of the enzyme improves by consuming sufficient folate (B9) and riboflavin (B2).

#### □SNP: MTHFRA1298Crs1801131(+/-, TG) □

This TGvariant reduces enzyme activity by approximately 20% less than wild type. The activity and stability of the enzyme improves by consuming sufficient folate (B9) and riboflavin (B2).

### □An MTHFRC677T/ A1298CHaplotype □

This haplotype combination causes approximately 50% reduction in MTHFRactivity.

Gene	rsID	Alias	Variant Allele	Call
MTHFR	rs1801133	C677T	А	GA
MTHFR	rs1801131	A1298C	G	TG

### □Cleans your MTHFRgene, continued...

**SupplementsandMedications:**The MTHFRenzyme produces methylfolate (5-MTHF). Thus, supplementing with L-5-MTHFmay be useful. Be careful, however, as this is a very powerful type of folate. Often it is over-prescribed and leads to many side effects. If using it, consider lower amounts such as 400 mcg to 1,000 mcg of L-5-MTHF.

A way to support MTHFRwith fewer side effects is to optimize the cofactor riboflavin (B2), although sufficient B2 cannot help if one is folate deficient.

Another way to support this geneis by indirectly supporting methylation by using supplements which conserve SAM. The body's production of both creatine and phosphatidylcholine use up nearly 80% of SAM; so by supplementing with them, one conserves SAM and generates less homocysteine. Choosenon-GMO soy or sunflower derived phosphatidylcholine. Consider choline, betaine, omega-3:alpha-linolenic acid (ALA) and docosahexaenoicacid (DHA) fatty acids. Vitamin Cshowed ability to decrease hypermethylation of MTHFRin a positive way. Consider more folinic acid, L-5-MTHFor choline, whichever is well tolerated, during exposure to summer sun especially while pregnant or breastfeeding.

# **Advanced Tables**

## Folate

Gene	SNP rsID	Call	Impact	Variant Allele	Alias	Result
SLC19A1	<u>rs1051266</u>	TC		Т	G80A	+/-
DHFR	<u>rs70991108</u>	DI	Ψ	D	19bp Del/Ins	+/-
MTHFD1	rs2236225	GA		А	G1958A	+/-
MTHFD1	<u>rs1076991</u>	TC		Т	T105C	+/-
MTHFR	<u>rs1801133</u>	GA		А	C677T	+/-
MTHFR	<u>rs1801131</u>	TG		G	A1298C	+/-
FTCD	rs61735836	СТ		Т	C301T	+/-
SHMT1	<u>rs1979277</u>	GA		А	C1420T	+/-
TYMS	<u>rs16430</u>	ID		D	Ins/Del	+/-

• An MTHFR C677T/ A1298CHaplotype Found

-/- variant allelenot present; +/- heterozygousgenotype; +/+

homozygous genotype; +/+\* hemizygous genotype (male X);

 $\Box$  = muchslower;  $\Box$  = slower;  $\Box$  = intermediatespeed;

 $\Box$  = faster;  $\Box$  = muchfaster;  $\Box$  = contextual;  $\Psi$  = unknown

Click <u>here</u> to get the same test I got and use code BEN10 to get a 10% discount on your first order.