

Prepared For: RandomFemale

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 genes naturally 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—one choice at a time. The result? You'll ultimately function at your best—and you'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"](#) 🖱️

To get the most out of your report, we encourage you 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 Genes LLC, and Seeking Health LLC do 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 StrateGeneV1 array is a single-nucleotide polymorphism (SNP)-based assay, used to detect variants for the generation of the StrateGene report. 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 PC users) or Preview (For Mac users).

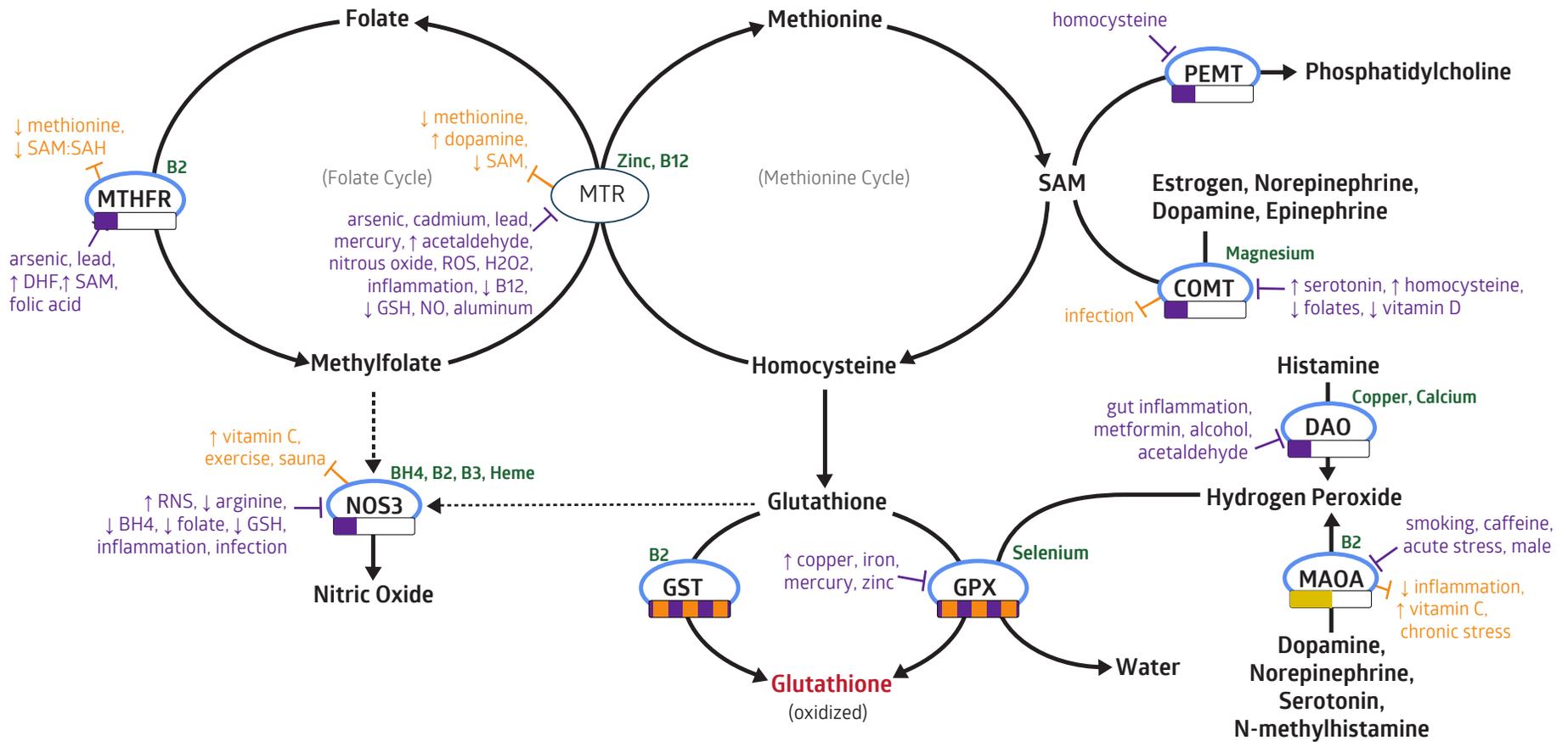
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Specimen Collection Date: 06-22-20 UTC
Kit Type / Kit ID: Swab Kit SH1601652441

Report Date: 10-02-20 15:29:10 UTC
Report Version: StrateGene® Core v1.0 (23b.1)
Report ID: RandomFemale1601652441

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The Super Seven (from Dirty Genes)



Symbols and Colors

Gene/Enzyme Cofactor

Increases Activity (orange arrow) Decreases Activity (purple arrow)

Gene/Enzyme Checked, nothing found

Gene/Enzyme Slow

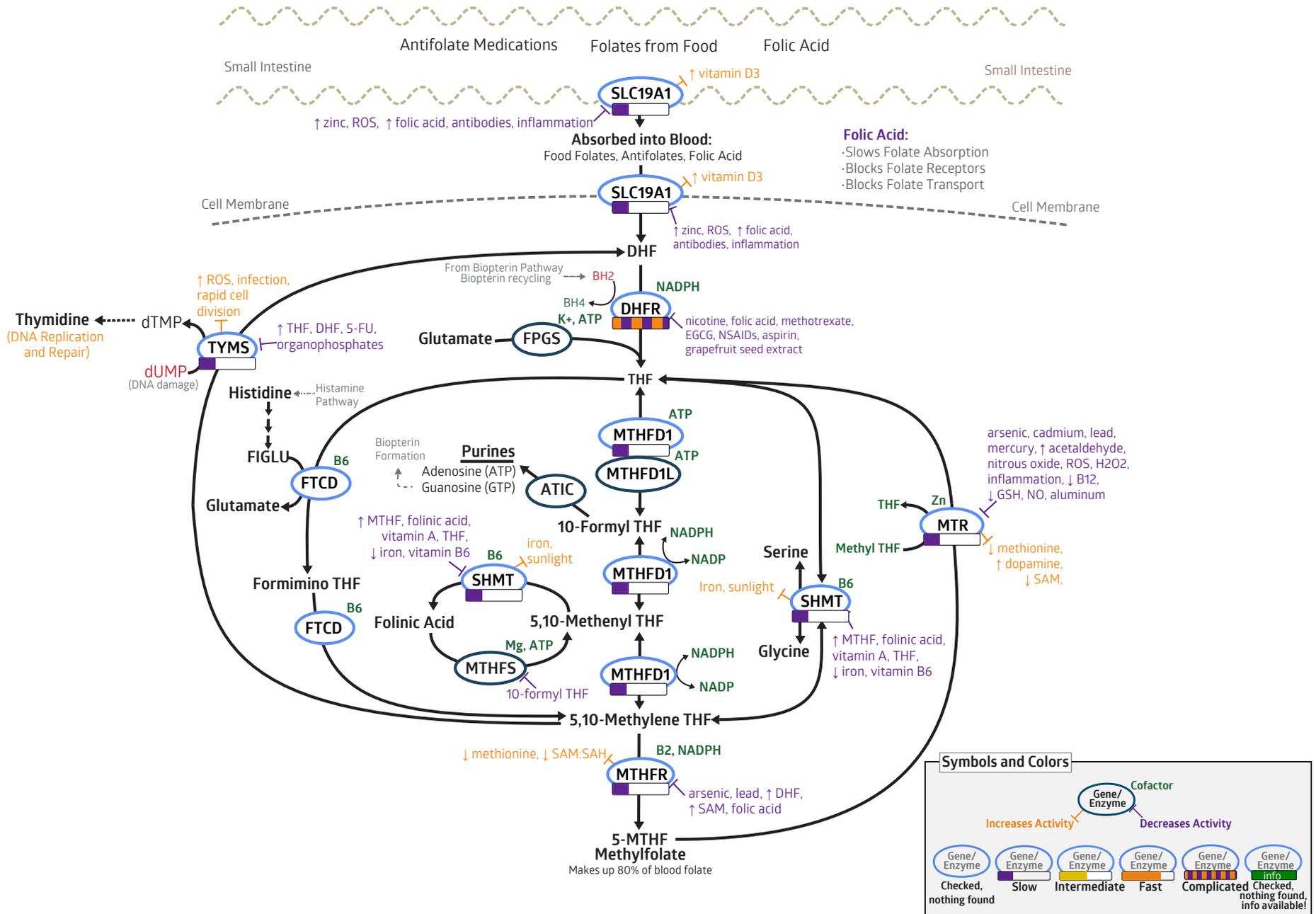
Gene/Enzyme Intermediate

Gene/Enzyme Fast

Gene/Enzyme Complicated

Gene/Enzyme info Checked, nothing found, info available!

Folate



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 MTHFR enzyme 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 process of SAM production.

The MTHFR gene connects the folate pathway, via 5-MTHF, with the SAM cycle via the MTR gene. This is why a slow MTHFR may increase homocysteine levels.

Dirties your MTHFR gene

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

Lifestyle: Hyper and hypothyroidism, insulin resistance

Food: Foods or beverages enriched with synthetic folic acid

Supplements and Medications: Avoid synthetic folic acid, aspirin, other salicylates (NSAIDs). Many medications interact with this enzyme. Consult your healthcare provider or pharmacist.

Cleans your MTHFR gene

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: Choose riboflavin (B2) rich, choline and betaine rich, natural folate rich, polyphenol rich, low sugar. See "Your Clean Genes Recipes" in the *Dirty Genes* book.

Notable variation:

SNP: **MTHFR C677T rs1801133 (+/-, GA)**

This GA variant decreases binding of the cofactor, riboflavin (B2), which decreases MTHFR enzyme 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: **MTHFR A1298C rs1801131 (+/-, TG)**

This TG variant 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 MTHFR C677T/ A1298C Haplotype

This haplotype combination causes approximately 50% reduction in MTHFR activity.

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

👉 Cleans your MTHFR gene, continued...

Supplements and Medications: The MTHFR enzyme produces methylfolate (5-MTHF). Thus, supplementing with L-5-MTHF may 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 MTHFR with 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 gene is 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. Choose non-GMO soy or sunflower derived phosphatidylcholine. Consider choline, betaine, omega-3: alpha-linolenic acid (ALA) and docosahexaenoic acid (DHA) fatty acids. Vitamin C showed ability to decrease hypermethylation of MTHFR in a positive way. Consider more folic acid, L-5-MTHF or choline, whichever is well tolerated, during exposure to summer sun especially while pregnant or breastfeeding.

Folate

Gene	SNP rsID	Call	Impact	Variant Allele	Alias	Result
SLC19A1	rs1051266	TC		T	G80A	+/-
DHFR	rs70991108	II		D	19bp Del/Ins	-/-
MTHFD1	rs2236225	GG		A	G1958A	-/-
MTHFD1	rs1076991	TC		T	T105C	+/-
MTHFR	rs1801133	GA		A	C677T	+/-
MTHFR	rs1801131	TG		G	A1298C	+/-
FTCD	rs61735836	CC		T	C301T	-/-
SHMT1	rs1979277	GA		A	C1420T	+/-
TYMS	rs779037237	ID		D	Ins/Del	+/-

• **An MTHFR C677T/ A1298C Haplotype Found** 

-/- variant allele not present; +/- heterozygous genotype; +/+ homozygous genotype; +/-* hemizygous genotype (male X);
 = much slower;  = slower;  = intermediate speed;
 = faster;  = much faster;  = ambiguous;  = unknown