

The PureGenomics™ Methylation Protocol

Developed with Nathan Morris, M.D.[†]

Gene	SNP	What it means	Recommendations	Pure Encapsulations® Products
MTHFR	C677T (rs1801133) or A1298C (rs1801131)	Reduced ability to activate folates to 5-MTHF	<ul style="list-style-type: none"> • 5-MTHF (Metafolin®) 	<ul style="list-style-type: none"> • Folate 1 000 • PureGenomics™ Multivitamin*
COMT	Val/Met 158 (rs4680)	Reduced detoxification of catecholamines and estrogen	<ul style="list-style-type: none"> • Magnesium • Hydroxycobalamin • DIM 	<ul style="list-style-type: none"> • Magnesium (glycinate) • Adenosyl/Hydroxy B₁₂ • DIM & Detox • PureGenomics™ Multivitamin*
MTR	A2756G (rs1805087)	Potential B ₁₂ depletion	<ul style="list-style-type: none"> • 5-MTHF (Metafolin®) • Vitamin B₁₂ 	<ul style="list-style-type: none"> • Methylcobalamin • B₁₂ Folate (use Adenosyl/Hydroxy B₁₂ if COMT +/- or -/+) • PureGenomics™ Multivitamin*
MTRR	A66G (rs1801394)	Slower regeneration of B ₁₂	<ul style="list-style-type: none"> • Vitamin B₁₂ 	<ul style="list-style-type: none"> • Methylcobalamin (use Adenosyl/Hydroxy B₁₂ if COMT +/- or -/+) • PureGenomics™ Multivitamin*
CBS	C699T (rs234706)	Reduction of intermediates required for transsulfuration and detoxification	<ul style="list-style-type: none"> • P₅P 	<ul style="list-style-type: none"> • P₅P 50 • PureGenomics™ Multivitamin*
FUT2	G772A (rs602662)	Lower intestinal microbial diversity, lower B ₁₂	<ul style="list-style-type: none"> • Vitamin B₁₂ • Probiotics 	<ul style="list-style-type: none"> • B₁₂ 5 000 liquid (use Adenosyl/Hydroxy B₁₂ if COMT +/- or -/+) • Probiotic-5 • PureGenomics™ Multivitamin*

Please note that patients may not require all supplements listed. The selection can be fine-tuned by assessing nutrient levels (refer to suggested monitoring below) or by other testing you would normally include in the patient evaluation.

SNP	Assessment Method(s) to evaluate progress
MTHFR (C677T and/or A1298C)	<ul style="list-style-type: none"> • Serum homocysteine is useful as an indicator of overall methylation competence and a nonspecific test for folate, B₁₂ and B₆ status. • Formiminoglutamate (FIGLU) is a functional marker of folate status.
COMT (Val/Met 158)	<ul style="list-style-type: none"> • Estrogen methylation ratio (2-OHE1: 2-OMeE1) indicates how effectively a patient methylates 2-hydroxyestrone to 2-methoxyestrone and is suggested when DIM is used.
MTR (A2756G)	<ul style="list-style-type: none"> • Methylmalonate (MMA) is a marker of vitamin B₁₂ status. In contrast to serum B₁₂, MMA reflects intracellular levels of the vitamin.
MTRR (A66G)	
CBS (C699T)	<ul style="list-style-type: none"> • Serum homocysteine may be informative, as CBS activity is inversely associated with homocysteine levels.

*Coming Soon

[†]Dr. Morris has been retained as a consultant in advising Pure Encapsulations. Metafolin® is a registered trademark of Merck KGaA, Darmstadt, Germany.

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Available for download at [PureGenomics.ca](https://www.puregenomics.ca)



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