

Genova NEUROGENOMIC PROFILE

The NeuroGenomic profile evaluates single nucleotide polymorphisms (SNPs) in genes that modulate methylation, glutathione conjugation, oxidative protection and the potential to evaluate vascular oxidation.

Why is the NeuroGenomic Profile clinically useful?

Specialised genomic testing can provide a glimpse into ones potential health future. Genetic testing enables one to minimise the risk by:

- Identifying hidden gene mutations that may promote chronic disease
- Preventing disease through early intervention
- Modifying gene expression through more precise, targeted, individualised interventions
- Identifying key areas for follow-up testing
- Monitoring therapeutic effectiveness of intervention strategies with laboratory testing

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The NeuroGenomic Profile evaluations include:

Methylation Metabolism

- MTHFR (Methylene TetraHydroFolate transferase), COMT (Catechol-O-Methyl Transferase)

Variations in COMT control dopamine levels and is associated with OCD in men.

Detoxification

- GSTM1 (Glutathione S-Transferase M1), GSTP1 (Glutathione S-Transferase P1)

The GST family of enzymes have broad detoxifying abilities against carcinogens, drugs, or other toxins. Although there are a few SNPs in the GSTM1 gene, the main polymorphism of interest is the null allele - in other words, some individuals are lacking one or even both copies of GSTM1. Individuals with fewer copies of GSTM1 may be somewhat more prone to allergies, asthma, and certain cancers, especially if they are missing copies of other GST genes such as GSTP1 which is known to influence asthma and breast cancer risk.

Oxidation

- SOD (superoxide dismutase)

Is related to increased oxidative stress. It has been associated with higher risk for heart disease in hereditary hemochromatosis, increased risk of a more aggressive form of prostate cancer.

GENOVA NEUROGENOMIC PLUS (buccal swab) [Test code: 8006]

- ❖ SNPs for COMT, GSTM1, GSTP1, MTHFR, SOD

Other genomic tests available

- **Genova CardioGenomic Plus Profile [8002]:** SNPs for Apolipoprotein-E (APOE), Cholesteryl ester transfer protein (CETP), Selectin E (SELE), MTHFR, Guanine Nucleotide-binding protein (GNB3), Angiotensin II Receptor-1 (AGTR1), Prothrombin (Factor 2), Leiden (Factor 5), Plasminogen Activator Inhibitor-1 (PAI-1), Glycoprotein 3 (GP3A)
- **Genova DetoxiGenomic Profile [8003]:** SNPs for Phase I: Cytochrome P-450 (CYP1A1, CYP1B1, CYP2A6, CYP2D6, CYP2E1, CYP2C9, CYP1C19, CYP3A4); SNPs for Phase II: Methylation (COMT), Acetylation (NAT1, NAT2), Glutathione conjugation (GSTM1, GSTP1), Oxidative protection (SOD1, SOD2)
- **Genova EstroGenomic Profile [8004]:** SNPs for Estrogen metabolism (CYP1A1, CYP1B1, COMT, GSTM1, GSTP1), Hypercoagulation (GP3A, PAI-1, Factor 2, Factor 5), Cardiovascular (APO-E, MTHFR, TNF α , IL-6), Osteoporosis (VDR, TNF α , IL-6)
- **Genova ImmunoGenomic Profile [8005]:** SNPs for Chronic Inflammation (IL-1 β), Th-1 Cytokines (TNF α), Th-2 Cytokines (IL-4, IL-6, IL-10, IL-13)
- **Genova CardioGenomic Plus Profile:** APOE, CETP, SELE, MTHFR, GNB3, AGTR1, Factor 2, Factor 5, PAI-1, GP3A.
- **Phase 1 Detoxification Enzymes [8007]:** SNPs for Superoxide dismutase Cu/Zn (SOD1), Superoxide dismutase Mn (SOD2), N-Acetyltransferase-2 (NAT2), Cytochrome P450-1A1 (CYP1A1)
- **Phase 2 Detoxification Enzymes [8008]:** SNPs for Glutathione S-Transferase (GST-T1, GST-P1, GST-M1)
- **Advanced Methylation Genes [8009]:** SNPs for methylenetetrahydrofolate reductase (MTHFR), 5-methyltetrahydrofolate-homocysteine methyltransferase (MTR), methionine synthase reductase (MTRR), Adenosylhomocysteinase (AHCY), Catechol-O-methyltransferase (COMT)

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on **1300 688 522**.

