NORTH CENTURY PHARMACY
COLUMBIA, KENTUCKY

UNLOCK
FUNCTIONAL GENETIC TEST

Client Name: SAMPLE REPORT
Client DOB:
Client Sex:
Sample Type: Buccal Swab
Sample ID:
Account: Easton Bryant, PharmD
Office: North Century Pharmacy

Sample Received:
Report Date:
MGPTID#:

SAMPLE REPORT

UNLOCK
FUNCTIONAL GENETIC TEST

Get Ready to UNLOCK Your Unique Nutrigenomic Information

We designed this report for you with extreme intention. In a market full of overpriced tests providing very little information or overbearing tests leaving patients even more confused than before, we've sought to give you meaningful insights that can truly help you enhance your health and well-being. Always discuss any dietary or supplement changes with your provider, especially if medications or complex health issues are involved.

Nutrigenomics Overview

Nutrigenomics is the study of how our genes interact with our diet and lifestyle to influence health and disease. This emerging field focuses on understanding the relationship between nutrition, gene expression, and overall well-being. By examining genetic variations, known as single nucleotide polymorphisms (SNPs), nutrigenomics helps identify how individual genetic differences can affect nutrient metabolism, dietary needs, and responses to various foods. This personalized approach allows for tailored dietary and lifestyle recommendations that can optimize health and prevent disease.

Importance of Nutrigenomics

The importance of nutrigenomics lies in its ability to provide personalized health insights based on an individual's unique genetic makeup. Traditional dietary guidelines often adopt a one-size-fits-all approach, which may not be effective for everyone due to genetic differences. By leveraging the principles of nutrigenomics, we can develop customized nutrition plans that address specific genetic predispositions, enhance nutrient absorption, and mitigate potential health risks. This not only improves dietary effectiveness, but it also empowers individuals to make informed lifestyle choices that support long-term health and wellness.

How to Use This Report

This report is intended to be a valuable tool you may refer to for years to come. You don't need to implement all the recommendations at once -focus on one section at a time and make gradual changes. Progress is a journey, and taking it one step at a time will help you achieve the best results.

Remember that genetics is about probabilities, not certainties. The recommendations are based on your genetic tendencies, but they are not absolute. Your lifestyle, environment, and other factors also play significant roles in your health.

Here's to a life fulfilled,

The NCP Team

Terminology

DNA and Genes: DNA (deoxyribonucleic acid) is the molecule that carries genetic information in your cells. Genes are specific segments of DNA that contain instructions for the development, functioning, growth, and reproduction of your body.

Alleles: An allele is a variant form of a gene, represented by different sequences of DNA bases (A, T, C, and G) at a specific location on a chromosome. These variations can result in different traits, such as eye color, and can be either dominant or recessive.

SNPs (Single Nucleotide Polymorphisms): SNPs are the most common type of genetic variation among individuals. Each SNP represents a variation in a single DNA building block, known as a nucleotide. These variations can influence how individuals respond to certain drugs, their susceptibility to environmental factors, and their risk of developing particular diseases.

Genotype Information:

Wild Type (WT): Refers to the typical or 'normal' sequence of a gene.
Heterozygous (+/-): Indicates the presence of two different alleles for a particular gene.

Client Name: SAMPLE REPORT **DOB:** **Sample ID:** **Received:**

Practitioner: Easton Bryant, PharmD **Sex:** **MGPTID#:** **Report Date:**

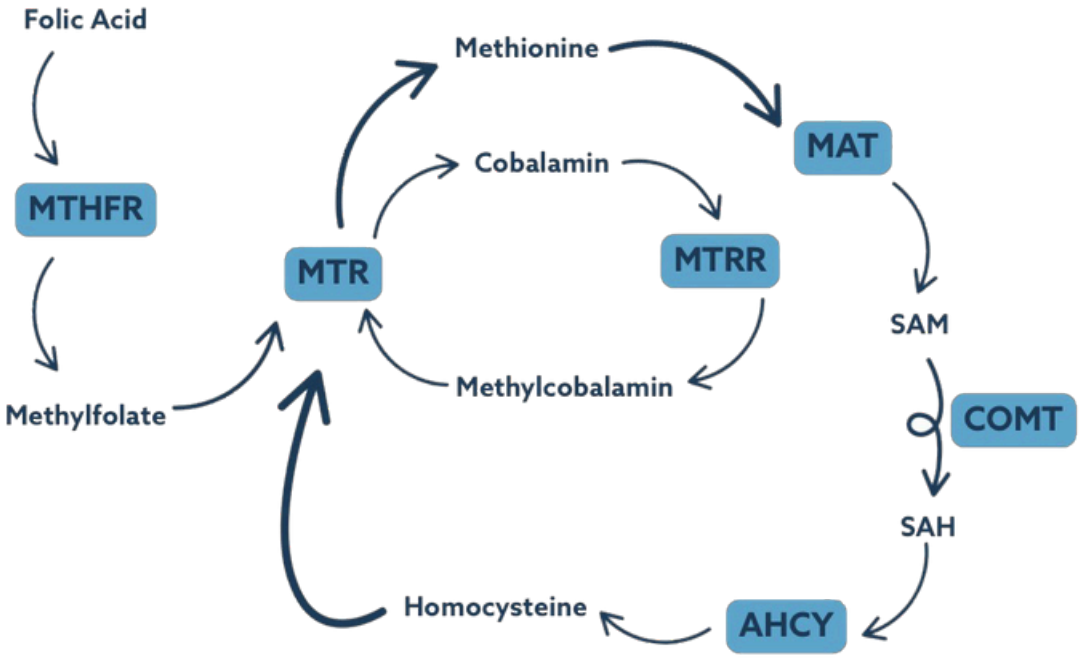
MTHFR/ Folate	· You are homozygous for the C677T variant. This results in a 60-70% reduction in MTHFR enzyme activity. You may benefit from methylfolate.
Methyl-B12	· You have a normal need for methylcobalamin. You are likely to tolerate methylcobalamin well.
Methyl Sensitivity	· You have low sensitivity to methylated nutrients and generally tolerate methylated supplements well.
COMT	· WithtwoValalleles(Val/Val),yourCOMTenzymefunctionsmore quickly, efficiently metabolizing neurotransmitters such as dopamine and norepinephrine.
Cholesterol	· You have a normal genetic predisposition for HDL cholesterol levels; maintain a balanced lifestyle to sustain healthy levels.
Oxidative Stress	· You have a normal genetic predisposition for oxidative stress; maintaining a balanced diet rich in antioxidants is beneficial.
ApoE	· ε3/ε4 -Your genotype indicates you have the ε3/ε4 variant, which may increase your risk for Alzheimer's disease.
BDNF	· You likely have mildly reduced BDNF levels, slightly impacting neuroplasticity.
Caffeine	· You have moderate sensitivity to caffeine, and you may experience some side effects like increased heart rate or mildjitteriness withhigher caffeineintake.
Melatonin	· Moderate CYP1A2 activity allows for standard melatonin metabolism. A typical dose (0.5–3 mg) taken 30–60 minutes before bedtime is generally effective.
Vitamin D	· Vitamin D Receptor Sensitivity: Normal. Active Vitamin D Levels : Reduced. Vitmin D Transport: Normal .
Iron Overload	· Normal iron control. Eat normally; routine check-ups are enough.
B6	· There is a moderate risk for vitamin B6 deficiency.
Vitamin C	· Both T alleles further cut SVCT2 activity, raising the risk of sub-optimal vitamin C even with a “normal” diet.
Zinc	· One copy of the risk form makes the zinc pump a bit less efficient, nudging diabetes risk slightly upward.
Vitamin E	· Typical APOA5 expression and average vitamin E transport. Lipid and vitamin E levels should follow standard population norms with usual diet.

Client Name: SAMPLE REPORT | **DOB:** | **Sample ID:** | **Received:**

Practitioner: Easton Bryant, PharmD | **Sex:** | **MGPTID#:** | **Report Date:**

Methylation

B vitamins provide building blocks for growing cells, which are constantly being renewed, and play an important role in many physiological processes. These vitamins –including folate and vitamins B6 and B12 –help make new DNA for cells that are constantly growing and renewing themselves. B vitamins are also involved in turning many genes on and off, and they help repair DNA as well. The process of DNA repair is called methylation, and it's responsible for how we make energy, respond to stress, handle inflammation, how well our cells detoxify, and how our brain chemistry works. We may be able to reduce our risk of developing certain diseases and some types of cancers by optimizing methylation.



Folate

Folate isan essential B-vitamin naturally present in foods such as leafy greens, legumes, and eggs. Once consumed, folate must be converted into its active form, methylfolate (5-MTHF), to be used effectively by the body. This critical conversion is carried out by the enzyme methylenetetrahydrofolate reductase (MTHFR). Active methylfolate is fundamental to over 200 vital biochemical processes, including DNA synthesis, neurotransmitter production, detoxification, and homocysteine metabolism within the methylation cycle. Variants in the MTHFR gene, primarily C677T and A1298C, can reduce the enzyme's efficiency, leading to lower levels of methylfolate production. This reduced efficiency may impact overall health by influencing cardiovascular risk, neurological functions, mood regulation, and fertility. Individuals with these genetic variants often benefit from consuming methylated forms of folate or carefully monitoring dietary folate intake to support optimal methylation and overall well-being.

MTHFR C677T	**Your Result:Homozygous (TT)**
MTHFR A1298C	**Your Result:Wild Type (AA)**
Methylenetetrahydrofolate reductase, plays a critical role in the methylation cycle by creating the active form of folate. This active form is essential for converting homocysteine to methionine, a process vital for DNA synthesis, neurotransmitter production, detoxification, and various metabolic functions.	You are homozygous for the C677T variant. This results in a 60-70% reduction in MTHFR enzyme activity. You may benefit from methylfolate.

B12

Sinceyour body cannot produce B12, it's crucial to ensure you obtain adequate amounts from your diet or supplements. Vitamin B12 is vital for numerous bodily functions, including neurotransmitter production, energy metabolism, and red blood cell formation. Many people experience significant improvements in well-being by switching to the correct form of B12 based on their genetics or by increasing their intake. Consider incorporating

MTRR A66G	**Your Result:Heterozygous (GA)**
MTRR	**Your Result:Wild Type (CC)**
Methionine synthase reductase (MTRR) supports methylation by regenerating active vitamin B12 (methylcobalamin), essential for converting homocysteine back into methionine, crucial for DNA synthesis and cellular function.	You have a normal need for methylcobalamin. You are likely to tolerate methylcobalamin well.
CUBN	**Your Result:Homozygous (AA)**
Cubilin (CUBN) supports methylation by aiding absorption of vitamin B12 in the intestine, ensuring adequate availability of this critical nutrient for proper methylation and neurological functions.	You have a variant in the CUBN gene that significantly reduces Vitamin B12 absorption. It is important to increase your intake of B12-rich foods and consider high-dose B12 supplements. Injectable B12 may be required if B12 levels are low and/or you are symptomatic.
FUT2	**Your Result:Heterozygous (GA)**
FUT2 gene variants may artificially elevate serum vitamin B12 levels by up to 20%, potentially masking true B12 deficiency despite normal or high lab results.	You carry one copy of the FUT2 variant. This may slightly affect your B12 levels. To ensure accuracy, aim for B12 levels within 540-700 pg/mL. Discuss with your healthcare provider if you need further testing or supplementation. PMID 29040465

Additional Methylation Genes

MTR	**Your Result:Heterozygous (GA)**
The MTR gene produces methionine synthase, converting homocysteine to methionine using folate and vitamin B_{12}. The rs1805087 (A2756G) variant boosts enzyme activity, often lowering homocysteine but increasing B_{12} and folate needs, impacting cardiovascular and neurological health.	Moderately increased enzyme activity may improve homocysteine clearance. Higher B_{12} and folate demands; maintain good nutritional support.
MAT1A	**Your Result:Wild Type (GG)**
MAT1A produces an enzyme converting methionine into SAM-e, essential for methylation. Variants such as rs3851059 reduce SAM-e availability and may mildly elevate homocysteine, suggesting supplementation with SAM-e and optimized nutrition for better methylation health.	Normal SAM-e production and methylation capacity. Standard dietary and nutritional approaches sufficient to support methylation pathways.
AHCY	**Your Result:Wild Type (TT)**
The AHCY gene encodes an enzyme breaking down S-adenosylhomocysteine (SAH), a methylation inhibitor. Variants like rs819147 decrease enzyme function, leading to methylation issues.	Optimal enzyme function, efficiently manages methylation by-products. Maintain balanced diet with adequate methylation nutrients.

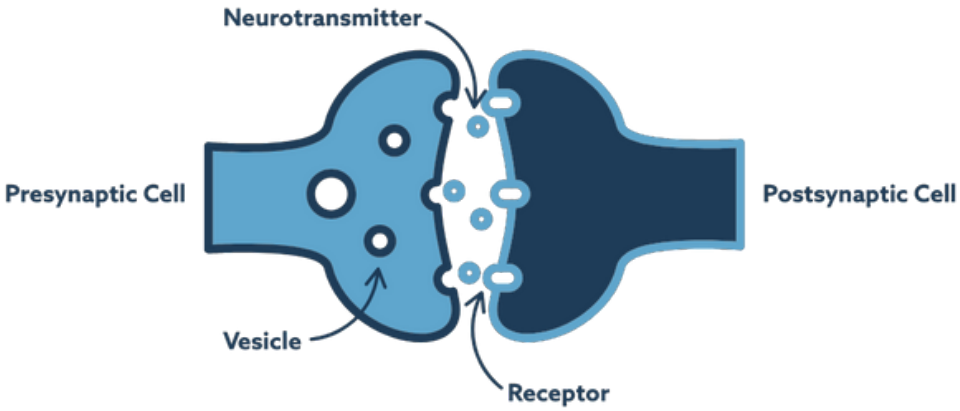
COMT

COMT influences the regulation of dopamine and other catecholamines, such as norepinephrine and epinephrine, which are critical for maintaining optimal neurological function and emotional well-being. Understanding this genetic factor can provide insights into individual differences in mood regulation, stress response, cognitive function, pain tolerance, stress resilience, and susceptibility to mental health disorders. Because COMT breaks down these neurotransmitters, individuals with slow COMT activity may experience higher levels of them, which can enhance mood and cognitive function, but may also lead to increased sensitivity to stress and symptoms like anxiety.

Methyl Sensitivity

The COMT V158M genetic variant influences how effectively the COMT enzyme metabolizes neurotransmitters, particularly dopamine, by altering its enzymatic activity. Individuals with the "slow" (Met/Met) variant have decreased COMT activity, leading to higher baseline dopamine levels. Because methylated vitamins, especially methylfolate and methylcobalamin (active B12), can further enhance neurotransmitter production, those with slow COMT enzyme activity may be more susceptible to increased anxiety, irritability, headaches, insomnia, or other overstimulation symptoms when supplementing with these forms. Conversely, individuals with the "fast" (Val/Val) COMT variant, characterized by higher enzyme activity and lower baseline dopamine levels, typically tolerate—and may even benefit from—methylated vitamins, experiencing improved mood, energy, or cognitive function. Therefore, understanding an individual's COMT V158 genotype can help personalize supplementation strategies to support optimal mental health and neurotransmitter balance without causing adverse reactions.

COMT V158M	**Your Result:Wild Type (GG)**
Catechol-O-methyltransferase (COMT) is responsible for breaking down neurotransmitters such as dopamine, norepinephrine, and epinephrine, playing an essential role in regulating mood, cognitive function, stress response, and emotional balance.	With two Val alleles (Val/Val), your COMT enzyme functions more quickly, efficiently metabolizing neurotransmitters such as dopamine and norepinephrine. This rapid clearance can contribute to lower overall neurotransmitter levels, often linked to greater resilience to stress and a higher tolerance for caffeine and stimulants. Consider lifestyle practices that support cognitive stimulation and mood enhancement.
Methyl Sensitivity	**Your Result:Low Sensitivity**
Sensitivity to methylated nutrients can cause heightened reactions—such as anxiety, irritability, or insomnia—when taking supplements like methylfolate or methylcobalamin.	You have low sensitivity to methylated nutrients and generally tolerate methylated supplements well.



Cholesterol

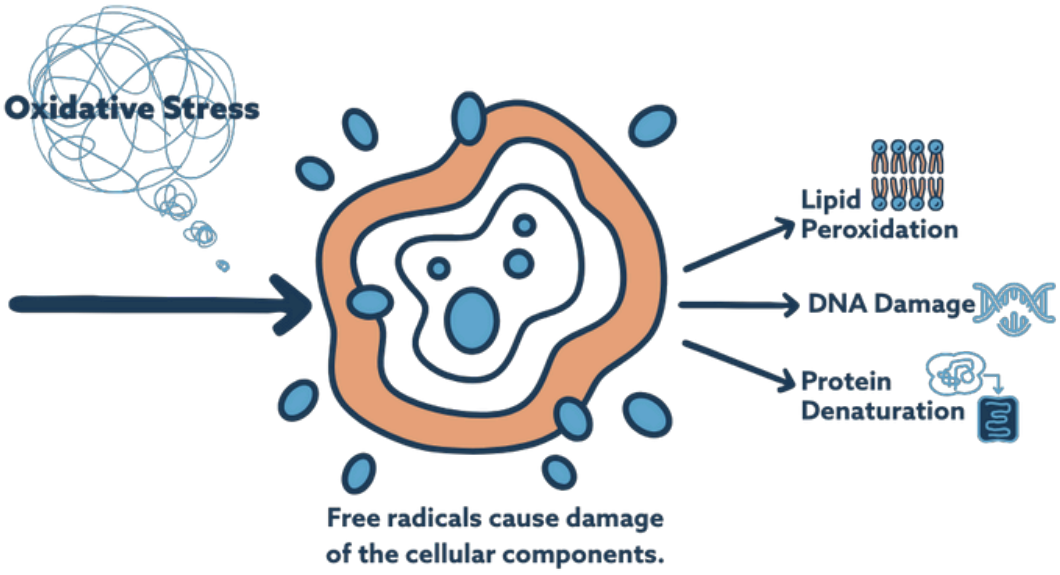
Hearthealth depends on a complex balance of environmental, dietary and genetic factors. Certain genes influence LDL and HDL cholesterol levels. Higher levels of LDL, or 'bad' cholesterol, and lower levels of HDL or 'good' cholesterol, are associated with a higher risk of heart disease. Triglycerides are a type of fat found in the blood, essential for storing energy but potentially harmful at high levels. Genetics also play a significant role in regulating triglyceride levels, influencing how your body processes and stores fats. Ultimately, suboptimal cholesterol processes may result in an imbalance in the accumulation and breakdown of fats in the bloodstream, which most commonly leads to cardiovascular diseases like heart disease and stroke.

LIPC	**Your Result:Wild Type (CC)**
LIPC produces hepatic lipase, an enzyme critical for breaking down fats, especially influencing HDL ("good cholesterol") metabolism. Variants in LIPC can impact HDL cholesterol levels and overall cardiovascular risk.	You carry the typical form of the LIPC gene, meaning your hepatic lipase enzyme functions effectively in regulating HDL ("good cholesterol") metabolism. This supports balanced HDL levels and a generally favorable cholesterol profile.
ADIPOQ	**Your Result:Wild Type (GG)**
The ADIPOQ gene encodes adiponectin, a hormone secreted primarily by adipose tissue that plays a crucial role in regulating lipid metabolism and cardiovascular health. Adiponectin enhances insulin sensitivity, promotes fatty acid oxidation, and facilitates reverse cholesterol transport by activating the ABCA1 transporter, thereby increasing HDL ("good cholesterol") levels and reducing LDL ("bad cholesterol") concentrations.	You carry the standard form of the ADIPOQ gene, typically associated with optimal adiponectin production. This beneficial hormone helps maintain balanced cholesterol levels, promoting higher HDL and lower LDL cholesterol, contributing positively to cardiovascular health.

Oxidative Stress

Freeradicals are a normal byproduct of the body's energy-generating biochemical processes. They are highly reactive with other molecules, and can damage DNA, proteins and cellular membranes. Antioxidants are free radical scavengers that interact with the free radical to ensure it is no longer a reactive molecule. Antioxidants are found naturally in the body in the form of enzymes, but can also be consumed in a wide variety of foods, especially from vegetables and fruit. However, the major role in antioxidant defense is fulfilled by the body's own antioxidant enzymes. Oxidative stress occurs when there is an imbalance between free radicals and antioxidants in your body, leading to cellular damage and contributing to various health issues, including chronic diseases and aging. While oxidative stress is necessary for your immune system to fight off invaders, it is the imbalance between oxidative stress and antioxidants that is important.

SOD2	**Your Result:Wild Type (AA)**
SOD2 produces an enzyme essential for neutralizing superoxide radicals within mitochondria. Genetic variants can alter enzyme efficiency, influencing vulnerability to oxidative stress and cellular damage.	You have the standard form of the SOD2 gene, enabling optimal mitochondrial antioxidant defense. Your enzyme efficiently neutralizes harmful superoxide radicals, supporting strong cellular health and resilience.
GPX1	**Your Result:Wild Type (GG)**
GPX1 encodes an enzyme crucial for reducing oxidative stress by neutralizing harmful hydrogen peroxide into harmless water. Variants can affect antioxidant protection and susceptibility to oxidative damage.	You carry the standard GPX1 genotype, meaning your glutathione peroxidase enzyme functions effectively in neutralizing hydrogen peroxide and reducing oxidative stress. This generally indicates robust antioxidant capacity.
GSTP1	**Your Result:Wild Type (AA)**
GSTP1 encodes an enzyme involved in detoxification, protecting cells from oxidative damage by aiding in removal of harmful toxins and oxidative byproducts. Variations in GSTP1 may influence antioxidant defenses and cellular resilience.	Your GSTP1 enzyme functions normally, efficiently supporting detoxification processes and protecting your cells from oxidative damage. This optimal activity generally confers robust resistance to environmental toxins and oxidative stressors.



APOe

APOE (Apolipoprotein E) is a gene involved in fat metabolism and cholesterol transport, and it's significant for cardiovascular and neurological health. It exists mainly in three variants (alleles): APOE2, APOE3, and APOE4. Each person inherits two copies of this gene, and the combination determines their genotype (e.g., E2/E3, E3/E3, E3/E4, etc.). APOE3 is the most common variant and is considered neutral regarding disease risk. APOE2 is associated with a decreased risk of Alzheimer's disease but can be linked to a higher risk for a rare condition called Type III hyperlipoproteinemia. APOE4, conversely, is linked to increased risk for Alzheimer's and cardiovascular disease, with the risk being dose-dependent—individuals with one copy (E3/E4) have a moderate increase in risk, whereas those with two copies (E4/E4) have significantly higher risk. Knowing APOE status can help guide personalized lifestyle interventions and preventative strategies, such as dietary modifications, exercise, and cardiovascular monitoring.

APOe	Your Result: ε3/ε4
Apolipoprotein E (APOE) plays a key role in lipid metabolism, cholesterol transport, and brain health. It has three isoforms—APOE2, APOE3, and APOE4—with APOE4 notably linked to increased Alzheimer's risk. Variations affect amyloid-beta clearance, neuronal repair, and cognitive resilience.	ε3/ε4 - Your genotype indicates you have the ε3/ε4 variant,

BDNF

Brain-derived neurotrophic factor (BDNF) supports the survival, growth, and differentiation of neurons during development and throughout adulthood. It is essential for neuroplasticity, which allows the brain to adapt and reorganize itself in response to new experiences, learning, and memory formation. Variations in BDNF levels and activity have been linked to various neurological and psychiatric conditions, including depression, anxiety, and neurodegenerative diseases.

BDNF	Your Result:Heterozygous (CT)
Brain-Derived Neurotrophic Factor (BDNF) promotes neuron survival, growth, and neuroplasticity, crucial for learning and memory. Variations in BDNF are linked to depression, anxiety, and neurodegenerative diseases.	You likely have mildly reduced BDNF levels, slightly impacting neuroplasticity. Engage in high-intensity exercise, consume antioxidant-rich foods like berries and leafy greens, and consider lithium orotate supplementation to support brain health.

CYP1A2: CAFFEINE & MELATONIN

CytochromeP4501A2 (CYP1A2) isaliver enzyme responsible for metabolizing various substances, notably caffeine and melatonin, significantly influencing their effects on the body. Genetic variations in CYP1A2 affect whether an individual metabolizes caffeine quickly or slowly, impacting how long caffeine remains active. Fast metabolizers experience brief stimulation from caffeine and may feel inclined to consume more to maintain alertness. However, consumption should still be limited to no more than four cups of coffee per day to avoid potential cardiovascular stress.

Conversely, individuals with slower caffeine metabolism break down caffeine less efficiently, resulting in prolonged stimulant effects, including anxiety, insomnia, jitteriness, elevated heart rate, and headaches. This condition, known as caffeine intolerance, requires caution. People sensitive to caffeine should reduce or entirely avoid caffeine-containing products, carefully reading labels to identify hidden sources such as chocolate, energy drinks, supplements, and some medications.

For melatonin metabolism, CYP1A2 genetic variants similarly influence how rapidly melatonin is processed. Slower melatonin metabolizers have increased melatonin levels, potentially enhancing sleep-promoting effects but also raising the risk of morning drowsiness or cognitive impairment. These individuals may benefit from lower melatonin doses taken earlier in the evening. In contrast, faster metabolizers might require higher doses or extended-release formulations to achieve desired sleep benefits.

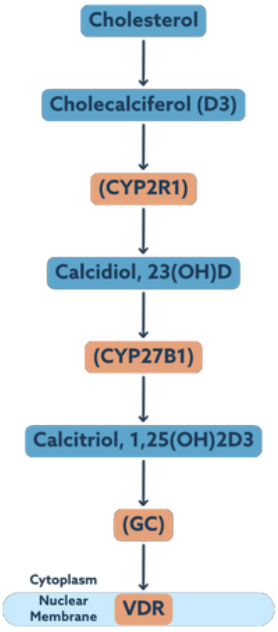
Caffeine - CYP1A2	**Your Result:Heterozygous (CC)**
Cytochrome P450 1A2 (CYP1A2) is the primary enzyme responsible for metabolizing caffeine, influencing how quickly caffeine is broken down and cleared from the body. This difference can significantly impact caffeine's effects on alertness, anxiety, sleep quality, and cardiovascular health, guiding personalized recommendations for caffeine intake.	You have moderate sensitivity to caffeine, and you may experience some side effects like increased heart rate or mild jitteriness with higher caffeine intake.
Caffeine - COMT V158M	**Your Result:Wild Type (GG)**
Individuals with slower COMT activity may experience amplified caffeine-related anxiety or overstimulation due to heightened neurotransmitter levels.	You have fast COMT activity, allowing efficient breakdown of neurotransmitters, making you generally less sensitive to caffeine-induced anxiety or overstimulation.

Melatonin - CYP1A2	**Your Result:Heterozygous (CC)**
CYP1A2 is the primary liver enzyme responsible for metabolizing melatonin into its inactive form, 6-hydroxymelatonin. Genetic variations in the CYP1A2 gene influence the enzyme's activity, affecting how quickly melatonin is broken down. This variability can impact the effectiveness and duration of melatonin's sleep-promoting effects.	Moderate CYP1A2 activity allows for standard melatonin metabolism. A typical dose (0.5–3 mg) taken 30–60 minutes before bedtime is generally effective.

Vitamin D

Vitamin Dplays a vital role in bone health, immune function, and overall well-being by helping the body absorb calcium and supporting immune responses. It must be converted in the liver and kidneys, with limited dietary sources making sunlight exposure or supplementation necessary for preventing deficiency, which is associated with an increased incidence as well as the progression of a broad range of diseases. Ideally, UV exposure from 10AM to 3PM for 10-30 minutes at least twice a week is recommended.

Vitamin D Conversion - CYP2R1	Your Result:Homozygous (GG)
CYP2R1 – Encodes the main hepatic 25-hydroxylase that converts dietary or skin-derived vitamin D (cholecalciferol or ergocalciferol) into 25-hydroxy-vitamin D [25(OH)D], the form measured in blood tests.	CYP2R1 activity is low, placing you at higher risk for sub-optimal 25-OH-D despite typical intake. Routine blood testing and supplementation (often ≥2,000 IU/day) are recommended.
Vitamin D Conversion - CYP27B1	**Your Result:Wild Type (GG)**
CYP27B1 – Converts 25(OH)D into the biologically active hormone 1,25-dihydroxy-vitamin D [calcitriol]. Variants that decrease enzyme activity limit this second activation step, potentially lowering active hormone levels.	CYP27B1 activity is normal, efficiently converting 25-OH-D into the active hormone 1,25-OH_2-D. Calcium balance, bone health, and immune signaling should function as expected.
Vitamin D Transport - GC	**Your Result:Wild Type (TT)**
GC encodes the vitamin D-binding protein (VDBP), the principal carrier that shuttles 25-hydroxy-vitamin D and its active form, 1,25-dihydroxy-vitamin D, through the bloodstream.	GC binding activity is normal, ensuring efficient transport and stable blood levels of vitamin D metabolites. Standard intake and sun exposure should translate into reliable lab values and tissue availability.
Vitamin D Recepter - VDR-FOK	**Your Result:Wild Type (GG)**
VDR encodes the nuclear vitamin-D receptor that turns on hundreds of genes once it binds the active hormone (1,25-dihydroxy-vitamin D).	VDR-FokI shows normal activity (FF). Gene regulation in response to vitamin D should be efficient at typical hormone levels.



OtherCore Nutrients

Essential nutrients play vitalroles in maintaining overall health and well-being. Vitamin B6 supports brain function, aids in the production of neurotransmitters, and is important for red blood cell production and immune function. Vitamin C acts as an antioxidant, helps form collagen for skin and connective tissue, and enhances iron absorption. Iron is crucial for oxygen transport in the blood, forming hemoglobin, and supporting energy production. Magnesium helps maintain muscle and nerve function, supports bone health, and regulates blood sugar and blood pressure. Zinc is vital for immune function, wound healing, DNA synthesis, and growth and development. Together, these nutrients are key to energy levels, immune health, and proper bodily functions.

Iron Overload - HFE	**Your Result:Wild Type (GG)**
This variant in the HFE gene alters a protein involved in controlling iron absorption in the gut. This alteration reduces the protein's ability to regulate iron uptake, allowing more iron to enter the body. As a result, iron can accumulate gradually in tissues—mildly in individuals carrying one variant, and significantly in two.	Normal iron control. Eat normally; routine check-ups are enough.
Vitamin B6 - NBPF3	**Your Result:Wild Type (CC)**
NBPF3 is thought to regulate how quickly vitamin B6 (pyridoxal-5-phosphate, PLP) is cleared from the bloodstream. The C allele speeds that clearance, so people who carry it tend to show lower circulating PLP—about 1.5 ng/mL lower per copy in large studies.	There is a moderate risk for vitamin B6 deficiency. Focus on consuming a variety of high vitamin B6 foods, such as salmon, potatoes, and fortified cereals, and consider supplementation if necessary.
Vitamin C - SLC23A2	**Your Result:Homozygous (AA)**
SLC23A2 encodes SVCT2, the pump that pulls vitamin C from the bloodstream into almost every tissue. A common change in this gene can dial down transporter output, so blood and cellular vitamin C tend to run lower unless intake is on the high side.	Both T alleles further cut SVCT2 activity, raising the risk of sub-optimal vitamin C even with a “normal” diet. Consider higher or divided-dose supplements and periodic plasma ascorbate checks, especially during illness or stress.
Zinc - SLC30A8	**Your Result:Heterozygous (TC)**
SLC30A8 facilitates the transport of zinc into insulin secretory granules, essential for proper insulin storage and secretion. Variants in SLC30A8 can alter ZnT8 function, impacting insulin processing and influencing the risk of developing type 2 diabetes.	One copy of the risk form makes the zinc pump a bit less efficient, nudging diabetes risk slightly upward. Keep weight, exercise, and dietary zinc (meat, legumes, nuts) on point and screen glucose periodically.
Vitamin E - ZNF259-APOA5 (intergenic)	**Your Result:Wild Type (CC)**
The G allele up-regulates APOA5 expression, which raises VLDL-triglyceride export and—because vitamin E travels in these lipoproteins—tends to increase circulating α-tocopherol (vitamin E) while also nudging triglycerides upward.	Typical APOA5 expression and average vitamin E transport. Lipid and vitamin E levels should follow standard population norms with usual diet.

Client Name: **SAMPLE REPORT** DOB: Sample ID: Sample Received:

Practitioner: Easton Bryant, PharmD Sex: MGPTID#: Report Date:

High Impact Supplement Recommendations

Gene	RS#	NCP Supplement
CYP2R1	rs10741657	THE WORKS; D3 Micellized Drops; D3 & K2 Optimal; D3 & K2 Micellized Liquid
PEMT	rs7946	Phosphatidylcholine Micellized Liquid
MTHFR C677T	rs1801133	THE WORKS; Active B Complex; 5-MTHF 3,400mcg DFE; Liquid B12
CYP1B1 L432V	rs1056836	7-Day Detox; THE WORKS
CUBN	rs1801222	THE WORKS; Active B Complex; Liquid B12
SLC23A2	rs1279386	C Active

Low Impact Supplement Recommendations

Gene	RS#	NCP Supplement
HLA-DQ8	rs7454108	Gluten-Free Diet
FUT2 W143X	rs601338	GoodBiotic; Vitality Mix
MTRR A66G	rs1801394	THE WORKS; Active B Complex; 5-MTHF 3,400mcg DFE; Liquid B12
APOE	rs429358	NCP NEURO Magnesium Blend Capsules; OptiOmega 3X; OptiOmega TG (Chewable)
HLA-DQ2.5	rs2187668	Gluten-Free Diet
BDNF	rs6265	NeuroMAG PLUS; Mineral Complex
CYP19A1	rs4646	BERBERINE 5X
FTO	rs9939609	BERBERINE 5X
CYP1A2	rs762551	Melatonin 3mg
DAO(AOC1)	rs2052129	DAO BOOST
DRD2	rs1800497	BERBERINE 5X
CYP1A1	rs1048943	
DAO(AOC1)	rs10156191	DAO BOOST
SLC30A8	rs13266634	Mag Chelate; Zinc Up; THE WORKS
MTR	rs1805087	THE WORKS; Active B Complex; 5-MTHF 3,400mcg DFE; Liquid B12
MYO9B	rs2305764	GoodBiotic; Vitality Mix; Gluten-Free Diet

Client Name: **SAMPLE REPORT** DOB: Sample ID: Sample Received:

Practitioner: Easton Bryant, PharmD Sex: MGPTID#: Report Date:

Gene	RS#	Result	MAF	Description
ADIPOQ 11391	rs17300539	Wild Type (GG)	G-7%	Associated with increased monounsaturated fat diet, normal BMI and obesity risk.
AHCY-01	rs819147	Wild Type (TT)	C-32%	No variant found. No predicted impact on Methylation.
AMY1	rs4244372	Wild Type (TT)	T-18%	High amylase levels for efficient starch digestion.
APOA2	rs5082	Wild Type (AA)	A-37%	Normal risk of increased BMI with high fat dairy diet.
APOE	rs429358	Heterozygous (CT)	C-7%	ε3/ε4 - Your genotype indicates you have the ε3/ε4 variant, which may increase your risk for Alzheimer's disease.
APOE	rs7412	Wild Type (CC)	T-8%	
BDNF	rs6265	Heterozygous (CT)	T-19%	Mild association with decreased BDNF secretion.
CBS A360A	rs1801181	Wild Type (GG)	A-30%	No variant found. No predicted impact on Sulfation.
COMT V158M	rs4680	Wild Type (GG)	A-37%	Main COMT) Fast COMT gene. Lower dopamine and lower estrogen issues. (Val/Val)
CUBN	rs1801222	Homozygous (AA)	A-31%	Lowered intestinal/oral absorption of B12. Lowered Serum B12.
CYP19A1	rs4646	Heterozygous (CA)	C-69%	(Aromatase) Better response to Aromatase inhibitors.
CYP1A1	rs1048943	Heterozygous (CT)	C-8%	Mild increase in 2-OHE1. Possible Glyphosate and Air Polution sensitivity.
CYP1A2	rs762551	Heterozygous (CA)	C-32%	Slightly slower caffeine metabolism.
CYP1B1 L432V	rs1056836	Homozygous (GG)	C-42%	Elevated 4-OHE1. Consider Dutch hormone testing. Slow COMT compounds risk. (Val)
CYP27B1	rs10877012	Wild Type (GG)	T-29%	Normal 1,25(OH)2D3 conversion. (Vitamin D)
CYP2R1	rs10741657	Homozygous (GG)	A-37%	Risk of vitamin D deficiency. Slower cholecalciferol (D3) to calcidiol (25-oh Vit D) conversion.
DAO(AOC1)	rs10156191	Heterozygous (CT)	T-31%	Most likely no influence on DAO activity or Histamine intolerance.
DAO(AOC1)	rs2052129	Heterozygous (GT)	G-24%	Mild reduction in DAO production.
DIO1	rs2235544	Wild Type (CC)	A-50%	Normal T4 to T3 conversion.
DRD2	rs1800497	Heterozygous (AG)	A-26%	Mild association with lowered dopamine binding sites in the brain.
FTO	rs9939609	Heterozygous (AT)	A-39%	Moderately decreased weight gain on mediterranean diet.
FUT2 W143X	rs601338	Heterozygous (GA)	A-32%	Norovirus susceptibility.
GC	rs2282679	Wild Type (TT)	G-27%	Normal risk of vitamin D deficiency.
GPX1	rs1050450	Wild Type (GG)	A-22%	No variant found.
GSTP1	rs1695	Wild Type (AA)	G-35%	No variant found. (Primary)
HFE (C282Y)	rs1800562	Wild Type (GG)	A-1%	Most influential HFE gene. No variant found.
HLA-DQ2.5	rs2187668	Heterozygous (CT)	T-11%	Mild increased risk for gluten intolerance and celiac disease.
HLA-DQ8	rs7454108	Heterozygous (CT)	C-10%	Elevated celiac and gluten-sensitivity risk. Monitor symptoms, consider gluten moderation.
Intragenic	rs12272004	Wild Type (CC)	A-7%	Associated with lower vitamin E.
LIPC	rs1800588	Wild Type (CC)	T-17%	Normal potential response to high carb diet.
MAT1A	rs3851059	Wild Type (GG)	A-30%	No variant found.
MC4R	rs17782313	Wild Type (TT)	C-25%	Normal cardio metabolic risks seen with low adherence to DASH and Mediterranean Diet.
MTHFR A1298C	rs1801131	Wild Type (AA)	C-30%	No variant found.
MTHFR C677T	rs1801133	Homozygous (TT)	T-25%	Significant Methyl-Folate deficiency and Homocysteine elevation. Neuro/Cardio Risk.
MTR	rs1805087	Heterozygous (GA)	G-22%	Considered to be a slight upregulation.
MTRR	rs1532268	Wild Type (CC)	T-27%	No variant found.
MTRR A66G	rs1801394	Heterozygous (GA)	G-36%	Slight B12 deficiency. Methyl-B12 might be advised.
MYO9B	rs2305764	Heterozygous (GA)	A-42%	Mild increased risk for gluten intolerance and celiac disease.
NBPF3	rs4654748	Wild Type (CC)	T-47%	Increased risk for low Vitamin B6 levels.
PEMT	rs7946	Homozygous (TT)	T-69%	Phosphatidylcholine deficiency. Consider supplementation. (Secondary PEMT)
SLC23A2	rs1279386	Homozygous (AA)	A-44%	Significantly impaired vitamin C uptake; strongly recommend higher dietary intake.
SLC30A8	rs13266634	Heterozygous (TC)	T-28%	Moderate impairment in insulin secretion. Use moderate zinc supplementation (15–25 mg/day).
SOD2	rs4880	Wild Type (AA)	G-41%	Conflicting studies. SOD could be an upregulated. Can overload GPX and CAT.
SRD5A1	rs1691053	Wild Type (TT)	G-16%	No variant found.
VDR-FOK	rs2228570	Wild Type (GG)	A-33%	More active Vit D receptor. Lower Vitamin D related risks.