



# NUTRIGENOMICS REPORT 2.0

The information contained within this report is intended for educational purposes only and should not be used for self-diagnosis or as a substitute for professional medical advice, diagnosis, or treatment. Before making any changes to your healthcare routine, consult with a licensed healthcare professional. The recommendations and explanations provided are based on genetic testing performed by MaxGen Labs and NSI, as well as current medical research, which may evolve. These results have not been evaluated or approved by the Food and Drug Administration (FDA). MaxGen Labs, NSI, and its staff are not liable for any damages resulting from the use of this test or its recommendations. By using this test, you agree to consult your healthcare provider before making any health-related decisions. If you have health concerns, always seek the advice of a licensed healthcare professional.

## MY NUTRIGENOMICS REPORT

Client Name:  
Client DOB:  
Vial Number:  
Client Sex:  
Referring Account:  
Practice:  
Sample Received:  
Report Date:  
MGPTID#:

## NOTES

Admin Notes:

Lab Notes:

## TABLE OF CONTENTS

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| <b>04  </b>    | <b>HOW TO READ THIS REPORT</b>                                  |
| <b>05  </b>    | <b>WHAT IS GENETICS &amp; NUTRIGENOMICS</b>                     |
| <b>06  </b>    | <b>ALLERGY AND SENSITIVITY ( HISTAMINE &amp; YOUR GENETICS)</b> |
| <b>07  </b>    | <b>BLOOD SUGAR &amp; CARDIOVASCULAR</b>                         |
| <b>08  </b>    | <b>ELIMINATION   METHYLATION</b>                                |
| <b>09  </b>    | <b>ENERGY   METABOLISM</b>                                      |
| <b>10  </b>    | <b>GI &amp; DIGESTION</b>                                       |
| <b>11  </b>    | <b>NEUROLOGICAL &amp; MOOD</b>                                  |
| <b>12  </b>    | <b>OXIDATIVE STRESS &amp; INFLAMMATION</b>                      |
| <b>13  </b>    | <b>VITAMINS &amp; YOUR GENETICS</b>                             |
| <b>14-17  </b> | <b>YOUR GENETIC SUMMARY</b>                                     |
| <b>18  </b>    | <b>SUPPLEMENT RECOMMENDATIONS</b>                               |

## HOW TO READ THIS REPORT

**Congratulations**, your Methylgenetic Nutrition results have arrived. You're one step closer to taking control of your health through customized recommendations based on your unique genetic signature.

This report was designed to help you understand the roles that your genes, nutrition, and lifestyle play as they work together to shape your overall health.

### COLOR-CODING SYSTEM \_\_\_\_\_

The color-coding system in your results tells you whether a specific genetic variation you carry warrants further action such as dietary, nutritional, or lifestyle interventions as well as the level of need from Green (no action required) to Yellow (may require action) to Red (action required).

NO ACTION

MAY REQUIRE ACTION

ACTION REQUIRED



Before you review your results, let's go over some key words and their definitions and take a look at how the body's systems react to common genetic variations.



## WHAT IS GENETICS AND NUTRIGENOMICS

### Nutrigenomics

Nutrigenomics is the study of how nutrition interacts with an individual's genetic makeup to affect health and disease. Nutrigenomics tests are laboratory tests that analyze specific genetic variations, called single nucleotide polymorphisms (SNPs), to provide personalized nutrition and lifestyle recommendations based on an individual's genetic profile.

### GENE

A gene is a segment of DNA that contains the instructions for making specific proteins, which are essential for the structure, function and regulation of the body's cells, tissues and organs. They perform a vast array of functions, such as catalyzing metabolic reactions, replicating DNA, responding to stimuli, and transporting molecules from one location to another. Every gene has a chemical base pair, adenine (A), thymine (T), cytosine (C), guanine (G). The order of sequence determines the information needed to maintain life.

### ENZYME

An enzyme is a protein that acts as a catalyst in chemical reactions in the body. Enzymes are involved in many different metabolic pathways and are essential for life.

The relationship between genes and enzymes is that genes provide the blueprint for the synthesis of enzymes, which then perform their roles in various biochemical reactions throughout the body.

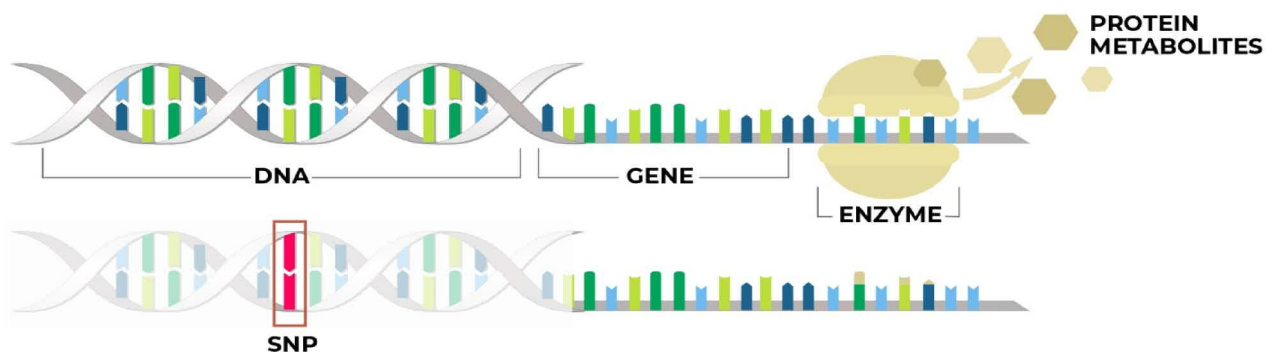
### SINGLE NUCLEOTIDE POLYMORPHISM (SNP)

A single nucleotide polymorphism (SNP) is a type of genetic variation that occurs when a single base pair in the DNA sequence is different in different individuals. Some SNPs are associated with increased risk of certain diseases, while others may affect how a person responds to certain medications. They can also play a key role in an individual's susceptibility to environmental factors such as diet and lifestyle.

Wild Type - most commonly found pairing in nature; no variation.

Heterozygous - one variant copy from a parent; one non variant copy from a parent.

Homozygous - two variant copies, one from each parent.



## ALLERGY & SENSITIVITY (HISTAMINE AND YOUR GENETICS)

**Histamine** is a chemical that is involved in many functions in the body, including immune response, digestion, and the regulation of blood flow. It is also a neurotransmitter, meaning it is used by the nervous system to communicate between cells.

When histamine is present in excess, however, it can cause a wide range of symptoms, including itching, flushing, hives, GI upset, and even anaphylaxis (a severe allergic reaction). This condition is known as histamine intolerance, and it can be caused by a number of factors, including genetics, diet, environmental exposure, and certain medical conditions.

Two key enzymes play a role in the metabolism of histamine: diamine oxidase (DAO) and histamine N-methyltransferase (HNMT).

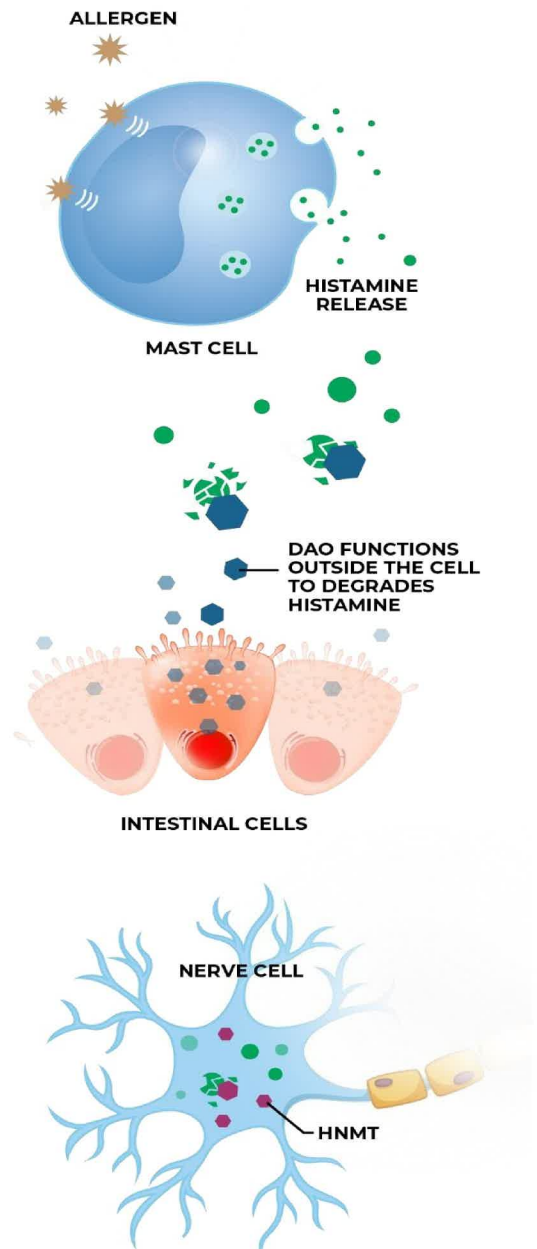
When someone consumes histamine-rich foods, DAO helps degrade histamine to prevent excessive accumulation. In people with histamine intolerance, DAO levels can be reduced, either due to genetic factors, gastrointestinal disorders, or medication side effects. Low DAO levels can lead to an impaired ability to break down histamine, resulting in increased histamine levels and the onset of intolerance symptoms.

Genetic variations or mutations in the HNMT gene can result in reduced enzyme activity, contributing to histamine intolerance. Moreover, some medications can interfere with HNMT function, exacerbating the problem.

One of the most effective ways to manage histamine intolerance is to identify and avoid foods that are high in histamine, as well as foods that can trigger the release of histamine in the body. This includes fermented foods, aged meats, and certain types of seafood. It is also important to limit the intake of alcohol and to avoid certain medications that can inhibit the action of DAO and HNMT. In addition, some people may find relief from histamine intolerance by taking supplements that are known to support the action of DAO and HNMT.

### High Histamine Foods

|                  |           |                |
|------------------|-----------|----------------|
| Alcohol/Ferments | Walnuts   | Bananas        |
| Citrus Fruits    | Cashews   | Wheat          |
| Dried Fruits     | Peanuts   | Strawberries   |
| Soured Foods     | Spinach   | Beans          |
| Smoked Meats     | Eggplant  | Chocolate      |
| Aged Cheese      | Shellfish | Food Dyes      |
| Tomatoes         |           | Food Additives |



**HNMT ENZYME FUNCTIONS INSIDE CELLS  
IN THE CENTRAL NERVOUS SYSTEM  
TO DEGRADE HISTAMINE**

Client Name:  
Client DOB:  
Sample ID:  
Account:

## ALLERGY & SENSITIVITY

| Gene                    | RS# | Result      | Signs & Symptoms                                                                                                                                                                                                             | Labs                                                                           | Product/Support                                 |
|-------------------------|-----|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------|
| Extracellular Histamine |     |             | Migraines, hypotension/hypertension, menstrual cycle irregularities, arrhythmia, urticaria, atopic skin, psoriasis, nasal congestion, asthma, ibs, constipation, satiety issues, vomiting, fibromyalgia, muscle & bone pain. | Low DAO, High Plasma Histamine, Tryptase, Chromogranin-A, LPS- Binding Protein | ABP1 Assist (Hista-Gut), MC Balancer            |
| DAO (AOC1)              |     | GC - Hetero |                                                                                                                                                                                                                              |                                                                                |                                                 |
| DAO (AOC1)              |     | CC - Wild   |                                                                                                                                                                                                                              |                                                                                |                                                 |
| DAO (AOC1)              |     | CC - Wild   |                                                                                                                                                                                                                              |                                                                                |                                                 |
| Intracellular Histamine |     |             |                                                                                                                                                                                                                              | High Histamine, Tryptase, Chromogranin- A, LPS- Binding Protein                | Histamine Balancer (Homeo), Histamine Scavenger |
| HNMT                    |     | CC - Wild   |                                                                                                                                                                                                                              |                                                                                |                                                 |
| Gluten Sensitivity      |     |             | Diarrhea, fatigue, weight loss, bloating, gas, abdominal pain, nausea and vomiting, constipation                                                                                                                             | Food Sensitivity Testing, Celiac panel                                         | Consider Gluten Free Diet                       |
| HLA-DQ8                 |     | TT - Wild   |                                                                                                                                                                                                                              |                                                                                |                                                 |
| HLA-DQ2.5               |     | CC - Wild   |                                                                                                                                                                                                                              |                                                                                |                                                 |

## BLOOD SUGAR & CARDIOVASCULAR

|                       |  |             |                                                                                                         |                                                                                   |                                                      |
|-----------------------|--|-------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Blood Sugar</b>    |  |             | Frequent urination, increased thirst, fatigue, slow healing wounds, blurred vision, dizziness           | HGB-A1C, Insulin, Glucose                                                         | Gluco Beta Stim Plus, NRF2                           |
| ADRA2A                |  | AA - Homo   |                                                                                                         |                                                                                   |                                                      |
| TCF7L2                |  | CC - Wild   |                                                                                                         |                                                                                   | Gluco Beta Stim Plus, Assist                         |
| FTO                   |  | AA - Homo   |                                                                                                         |                                                                                   |                                                      |
| <b>Cardiovascular</b> |  |             | Inflammation, low mood, cardiovascular issues, chronic disease, high toxin-burden                       | low B12, high MMA(urinary), high homocysteine, low methionine, low SAME, high CRP | MTHFR & BHMT Assist, or MTHFR/MTR/MTRR & BHMT Assist |
| MTHFR A1298C          |  | AA - Wild   |                                                                                                         |                                                                                   |                                                      |
| MTHFR C677T           |  | TC - Hetero |                                                                                                         |                                                                                   |                                                      |
| Factor 5              |  | CC - Wild   | Family history of clotting disorders, cold/numbness/pain of extremities, other cardiovascular symptoms. | Prothrombin Time, Fibrinogen, Cardio IQ or Boston Heart.                          | Circulation Accelerator, Circulation (homeo).        |
| Prothrombin           |  | GG - Wild   |                                                                                                         |                                                                                   |                                                      |
| PAI-1                 |  | AG - Hetero |                                                                                                         |                                                                                   |                                                      |
| ACE                   |  | GG - Homo   | Hypertension                                                                                            | Sodium / Metabolic Panel                                                          | Oligo-Potassium, Kidney Liquesence, Renal Sarcode    |

## ELIMINATION

|                    |  |             |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
|--------------------|--|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Estrogen</b>    |  |             | Inflammation, fatigue, brain fog, headaches, weight issues                                                                                                                                                                                    | Dutch testing/ 4-OH-E1                                                                                     | Addex (Homeo), Phase 2.5, Phase 3                                                |
| EPHX1              |  | AG - Hetero |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| CYP1A1             |  | CC - Homo   |                                                                                                                                                                                                                                               |                                                                                                            | ExcEss                                                                           |
| CYP19A1            |  | CC - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| CYP1B1             |  | CG - Hetero |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| COMT               |  | AA - Homo   | RESULT: (Slow Activity)                                                                                                                                                                                                                       |                                                                                                            |                                                                                  |
| <b>Glutathione</b> |  |             | Inflammation, fatigue, brain fog, kidney pain, headaches, weight issues, cellulite, acne, eczema, yellow sclera, red palms, low back pain, hair loss, indigestion, achy joints, right upper quadrant abdominal pain, loose stools, itchy skin | Low RBC GSH, low bilirubin, elevated LFTs, high GGT, high homocysteine, low methionine, low SAME, high CRP | CBS/BHMT Assist                                                                  |
| CBS                |  | GG - Wild   |                                                                                                                                                                                                                                               |                                                                                                            | Glutathione Accelerator, GSH Assist                                              |
| CTH                |  | GT - Hetero |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| GPX1               |  | GG - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| GSTP1              |  | AA - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| GSTP1              |  | CC - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| <b>Other</b>       |  |             | Inflammation, fatigue, brain fog, kidney pain, headaches, weight issues, cellulite, acne, eczema, yellow sclera, red palms, hair loss, indigestion, achy joints, right upper quadrant                                                         | High CRP, elevated LFTs, cholesterol abnormalities                                                         | Phase 2.5, Eco Liver, HLG (Liver & Gallbladder)(Homeo), HGB (Gallbladder)(Homeo) |
| ABCC2              |  | CC - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| ABCC2              |  | GG - Wild   |                                                                                                                                                                                                                                               |                                                                                                            |                                                                                  |
| ALDH2              |  | GG - Wild   | Alcohol Flushing                                                                                                                                                                                                                              |                                                                                                            | Phase 1&2 DTX, DTX Accelerator                                                   |
| CYP2E1 *6          |  | AT - Hetero | Increased NAPQI from Tylenol use                                                                                                                                                                                                              | Avoid Tylenol                                                                                              |                                                                                  |
| SRD5A1             |  | TT - Wild   | Family History of Prostate Cancer                                                                                                                                                                                                             | Testosterone & DHT                                                                                         |                                                                                  |
| PON1               |  | CT - Hetero | Pesticide Sensitivity                                                                                                                                                                                                                         | Environmental Toxins                                                                                       | PON 1 Assist, Addex (Homeo)                                                      |

Client Name:  
 Client DOB:  
 Sample ID:  
 Account:

## SYSTEM BASED NUTRITIONAL RECOMENDATIONS

### Allergy & Sensitivity

|                         |                        |  |
|-------------------------|------------------------|--|
| Extracellular Histamine | <div><div></div></div> |  |
| Intracellular Histamine | <div><div></div></div> |  |
| Gluten Intolerance      | <div><div></div></div> |  |

### Blood Sugar & Cardiovascular

|                |                        |                                                  |
|----------------|------------------------|--------------------------------------------------|
| Blood Sugar    | <div><div></div></div> | Gluto Beta Stim Plus, Assist                     |
| Cardiovascular | <div><div></div></div> | Oligo-Potassium, Kidney Liquesence, Renal Sarcod |

### Elimination

|             |                        |        |
|-------------|------------------------|--------|
| Estrogen    | <div><div></div></div> | ExcEss |
| Glutathione | <div><div></div></div> |        |
| Methylation | <div><div></div></div> |        |
| Other       | <div><div></div></div> |        |

### Energy & Metabolism

|                     |                        |                                                     |
|---------------------|------------------------|-----------------------------------------------------|
| Energy & Metabolism | <div><div></div></div> | Assist, Carb Assist, Metabolic Enhancer, Weight Off |
|---------------------|------------------------|-----------------------------------------------------|

### GI & Digestion

|                |                        |                          |
|----------------|------------------------|--------------------------|
| GI & Digestion | <div><div></div></div> | GI Assist, ImmuNootropic |
|----------------|------------------------|--------------------------|

### Neurological & Mood

|                     |                        |                                                               |
|---------------------|------------------------|---------------------------------------------------------------|
| Neurological & Mood | <div><div></div></div> | Glutamate Scavenger, SER-GAB Accelerator, *Caution W/ Methyls |
|---------------------|------------------------|---------------------------------------------------------------|

### Oxidative Stress & Inflammation

|                  |                        |                           |
|------------------|------------------------|---------------------------|
| Oxidative Stress | <div><div></div></div> |                           |
| Inflammation     | <div><div></div></div> | STOP, CEASE, MC Balancer  |
| Fatty Acids      | <div><div></div></div> |                           |
| Autophagy        | <div><div></div></div> |                           |
| Nitric Oxide     | <div><div></div></div> | NOS Assist (Nit-Ox Boost) |

### Additional Nutrients

|                     |                        |                         |
|---------------------|------------------------|-------------------------|
| Vitamin A           | <div><div></div></div> |                         |
| Vitamin D           | <div><div></div></div> | Vitamin D3 5000 with K2 |
| Vitamin C           | <div><div></div></div> |                         |
| B12                 | <div><div></div></div> |                         |
| Iron (Excess)       | <div><div></div></div> |                         |
| Zinc                | <div><div></div></div> |                         |
| CoQ10               | <div><div></div></div> | CoQ10 Chewable          |
| Phosphatidylcholine | <div><div></div></div> |                         |