Gene SNP™
DNA Analysis

cutraMetrix
Custom Health Solutions
Product Name: Gene SNP DNA Analysis

Product Code: 14406NM / 14407NM

Primary Benefits of Gene SNP*

Learn about variations in your unique genetic code

Understand how your current nutrition, exercise and lifestyle choices interact with your unique genetic code

Make informed decisions regarding eating habits, sleeping habits, lifestyle choices and exercise based on your genes

Learn which market-leading nutraMetrix® nutraceuticals to recommend in a personalized Health Action Plan.

What makes Gene SNP unique?

When it comes to our bodies, we want to make choices that have a positive impact on our health. But some of those choices – eating the wrong foods, making certain lifestyle choices, even the way we exercise – could impact our body’s ability to maintain optimum health. Even if we think we’re making the right choices, there are other factors that help determine our overall picture of health.

When it comes to your health, the answers are in your genes. Your DNA tells a story: how you process foods, how you react to exercise, how your environment affects your body, how your family history plays a part in your health.

The Gene SNP DNA Analysis offers insights into 6 major categories of weight and wellness.

General Health:

Some genes show correlations between diet and exercise that can affect certain cardiovascular functions.

Risk of Being Overweight:

Specific genes correlate to the buildup of fat tissue in the body. How much a person weighs and how that fat tissue is distributed in the body depends largely on individual genetic makeup. Knowing this information provides a better assessment of what size and weight is realistic.

Food Choices:

Certain genetic variations relate directly to food processing such as how the body reacts to fat, protein and carbohydrates. These variations, as well as an individual’s eating habits combine to give an overall picture of how an individual will react to certain food groups.
**Exercise & Activity:**

Our bodies are made up of two kinds of muscles: slow and fast twitch. Each individual’s genetics favor one over the other and this information can direct the individual to the type of exercises he or she should employ to more effectively burn fat and help regulate blood pressure and cholesterol levels.

**Behavior & Motivation:**

Some genetic inclinations determine how easy or difficult it is to make good choices concerning foods. When an individual understands his or her genetic tendencies to cravings and food reactions, they can better manage situations where they may overeat.

**Nutrients:**

Some genetic markers show gaps in a patient’s ability to process vitamins in a way that will maximize their ability to use them. Knowing where the deficiency is allows an individual to complement his or her diet with the best nutrients to help fill in the gaps. Many nutrients help directly in weight loss and the metabolism of fat.

The Gene SNP DNA Analysis combines your individual diet, lifestyle and environmental information and scientifically merges it with your genetic background. Then, it examines a wide variety of genes and SNPs to provide a Health Action Plan designed specifically for you based on your genetic profile. The Health Action Plan makes recommendations based on how your body metabolizes food, utilizes nutrients, removes toxins and responds to physical activity.

By understanding how your genetic profile affects your well-being, and then providing practical suggestions that focus on your diet, nutrition, exercise and supplementation, the Gene SNP DNA Analysis will help you take charge of optimizing your wellness.

**Scientific Support for Gene SNP:**

**Genes associated with mental emotional health and eating behavior: FAIM2, MC4R, SEC16B, TMEM18, COMT, NERG1, HTR2A, TAS1R, SLC2A, DRD2, LEPR:**

Genes associated with inflammatory response: ETV5, NCR3, ADIPOQ, GC:


Genes Associated with Behavior: MC4R, FAIM2, SEC16B, TAS2R38, DRD2

- Matsuo, K. et al, 2006, Alcohol dehydrogenase 2 His47Arg polymorphism influences drinking habit independently of aldehyde dehydrogenase 2 Glu487Lys polymorphism Cancer Epidemiology, Biomarkers & Prevention, 15(5). 1009-13
Genes associated with cholesterol metabolism, triglyceride balance, vascular flow and tissue development: FTO, ADIPOQ, ETV5, APOA2, LIPC, MTHFR, EDN1:

- Rankinen, T. et al, 2007, Effect of endothelin 1 genotype on blood pressure is dependent on physical activity or fitness levels. Hypertension, 50(6). 1120-5
Genes associated with antioxidant function, immunity and detoxification: COMT, NCR3, MTHFR, CYP1A2, ALDH2,

Genes associated with glucose balance: DRD2, LEP, PPARg2, PCSK1, LEPR, FTO, ADIPOQ, PPARD, SLCA2, SH2B1:


Genes associated with obesity: ACTN3, FTO, ADIPOQ, PPARD, PPARG, LEP, LEPR

Genes associated with nutrient utilization: MMAB, KCD10, KCD15, MCM6, INTERGENIC, BCM01, GC, NBPF3, FUT2:

Frequently Asked Questions about Gene SNP:

What is the Gene SNP DNA Analysis?
Over the last few decades developments in the science of genetics and technology has transformed our understanding of disease. This advent in medicine has made early intervention and effective management a real possibility for both Health Professional and patient alike. Today we know the degree to which diet influences the balance between healthy and disease states may depend on an individual’s genetic makeup. Services like genetic analysis can help develop a practice and its wellness program by introducing patients to advantages of testing and improved health outcomes.

Some diet-regulated genes (and their normal, common variants) are likely to play a role in:
  - Onset
  - Incidence,
  - Progression and/or severity of chronic diseases

Dietary intervention, based on knowledge of nutritional requirement, nutritional status, and genotype can be used to prevent, mitigate or remedy chronic disease.

The Gene SNP DNA Analysis is a comprehensive kit that provides a laboratory analysis of specific gene variants in your genetic material (DNA) that have been found to influence health. Helpful guide for Health Professional interpretation provides valuable information about various lifestyle habits that relate to the gene variants being tested and product recommendations.

Who should use this product?
Anyone under the care of a physician/health professional concerned about how their genetic makeup plays a role in diet, nutrition and exercise should use this product.

How can understanding your genes promote a long, healthy life?
Your health is a result of interactions between your genes and lifestyle factors such as diet, exercise, stress, smoking and alcohol. It is your genetic makeup that determines which nutrients are utilized, how they are used, the way toxins are removed and how effective these key processes work within the body.

Do I need to take the test a second time to see if my nutritional plan is working?
NO, a second test is not necessary. Results remain accurate throughout your life since your gene makeup does not change. While your genes don’t change, you do have the ability to optimize the functioning of your genes through diet, exercise and nutritional supplementation.
  You can’t change your genes, you can change your lifestyle and how your genes behave.

Can Insurance hold findings from the analysis against me?
Most states have laws prohibiting genetic discrimination, and the Genetic Information Nondiscrimination Act of 2008 (or “GINA”), is a federal law that protects Americans from discrimination by health insurance companies and employers on the basis of DNA information. This law does not cover life insurance, disability insurance, or long-term care insurance. For more information, please visit http://www.genome.gov/10002328

Is Gene SNP Analysis a diagnostic test?
No, we can only determine what types of genetic variations people have and explain how they may interact with an individual’s habits and lifestyle choices.
What is included in the Gene SNP DNA Analysis?

Your Gene SNP DNA Analysis kit includes:

- Sample Tube suitable for mailing
- Two swabs
- Consent form, Genetic Assessment Request Form & instructions
- Gene SNP Health Professional Guide (Health Professional use only)
- Gene SNP DNA Analysis Product Compendium (Health Professional use only)
- Health Professional Gene SNP DNA Analysis Report “Cheat Sheet”

Will the Health Professional Guide offer more information about clinical impact of genotypes that are not found in the Laboratory and patient report?

Yes, this genetic profile contains information about the specific impact for various genetic polymorphisms. Remember that even though genetic material influences how the body responds to the world, it is only part of the response; there is no substitute for a healthy approach to diet, sleep and exercise.

Restriction

The distribution of this reference guide and the clinical applications herein are restricted to licensed healthcare professionals only.

Acknowledgement

Product indications and protocols reflect the collective wisdom of both conventional and complimentary practitioners, representing a broad and diverse approach based on long-term experience and expertise in Applied Clinical Nutrition.

Disclaimer

The U.S. Food & Drug Administration (FDA) has not reviewed this reference guide in terms of its statements, products or protocols. Products are “dietary supplements” which by definition are a supplement to diet and are intended to support human metabolism.

Neither nutraMetrix products, nor protocols in this reference guide are presented in a way to substitute for appropriate medical intervention or counsel. This reference guide should be used as a clinical guide for use by licensed healthcare professionals only. This reference guide is NOT a medical manual. These products are not intended for the cure or treatment of any condition.

Furthermore, the publisher shall not be held responsible for the manuals information, accuracy and applicability or for any omissions from its content or for any claims which may arise from the application of its content.

Consent

This guide may be used only by the practitioner and will not be shared in ANY format with a non-clinician acting as the provider for their patient. nutraMetrix is not responsible in any way for the use of the information associated with the reference guide and an individual’s clinical practice. Each patient’s case and care plan is the sole responsibility of their healthcare provider.
What do I do with the Consent and the Genetic Assessment Forms?
Both forms have to be filled out and signed before the laboratory can accept your swabs for processing and DNA analysis. Send the completed forms with your swabs in the mailing tube along with billing information for the laboratory. (S&H are not part of the kit)

How does the Gene SNP DNA Analysis testing process work?
In the convenience of your health professional’s office, a sample is collected from your cheek cells, which contain your DNA. The swabs are put into the provided, specialized collection container after drying. Send the swabs with the Genetic Assessment Request Form and the Consent Form in the included mailing tube provided in the kit to the processing laboratory. (S&H not included)
Once at the certified laboratory, DNA is extracted from your swabs and then prepared for analysis. The DNA is analyzed using the latest genotyping technology to give the most accurate results. Once all of this data is compiled, it is entered into a sophisticated, algorithm-based computer software program that generates a confidential, easy-to-follow Gene SNP Health Action Plan to be reviewed by the health professional or a qualified staff provider and the patient.

How long does it take to get my Gene SNP DNA Analysis results?
Typically, it takes four to six weeks for you to receive your Gene SNP analysis results.

How accurate are the results of my Gene SNP analysis?
The analysis of your DNA is in compliance with the Quality Assurance and Accuracy Verification Standards of the CLIA certified laboratory. The accuracy of the genetic analysis is greater than 95 percent.

How can my sample fail the Gene SNP DNA Analysis?
Sometimes the sample provided does not contain enough DNA because you just brushed your teeth, or if you did not let the swabs dry long enough before putting the swabs in the envelope, or if it took too long (longer than 7 days) to reach the laboratory for analysis. It is important to follow the swab instructions in your kit.

Does my Gene SNP DNA Analysis Kit have an expiration date?
The lab must receive cheek swabs with an adequate sample, consent forms and payment information within 7 days of the sample being taken. Swabs have an expiration date with > 1 year of purchase. All sales of the Gene SNP DNA Analysis kit are final. Refund due to failure to use it within 1 year or sending in an inadequate sample will not be permissible.

How is my privacy protected?
Protecting your privacy is at the core of Gene SNP DNA Analysis. We recognize your need for strong privacy protection and the careful management of your personal information. Any information you share is kept strictly confidential and is secured electronically using sophisticated encryption technology. The laboratory personnel and others who are required in the processing of your genetic results have been trained and tested to meet the requirements of Health Insurance Portability and Accountability Act (HIPAA). Your results are handled as Protected Health Information (PHI), as defined in HIPAA and regulations promulgated by the U.S. Department of Health and Human Services in accordance to that defined in 45 CFR, §160 and Subparts A and E of §164.
Should I worry about privacy issues?
Your genetic information will be encrypted and will not be directly associated with your personal information collected from your consent form, but will be stored in a database maintained in accordance to CLIA and HIPAA standards. While this information may be used by the laboratory research affiliates to conduct further analyses for commercial purposes, under no conditions will this information be released to third parties in a way that discloses personal information, except with your written permission, unless required by law. The laboratory is vigilant against breaches of security and improves security and privacy safeguards on a regular basis.

What is the difference between the Nutri-Physical® and the Gene SNP DNA Analysis?
The Nutri-Physical is an analytical tool that recommends a customized nutritional supplementation program based on your answers to a series of lifestyle and behavioral questions. These questions center on your current health and various lifestyle factors, including diet, exercise, medical history, current supplementation and related contributing factors.

The Gene SNP DNA Analysis is a specialized program which analyzes your DNA and lifestyle and customizes a program to your individual genes. It will help you identify the changes needed to promote your health and wellness. According to variations in your DNA and your lifestyle choices, the Gene SNP DNA Analysis will make recommendations based on how your body metabolizes food, utilizes nutrients, removes toxins and responds to physical activity. The Gene SNP DNA Analysis helps you understand how your genetic profile affects your well-being by a simple swab of your cheek.

* These statements have not been evaluated by the Food and Drug Administration. This product(s) is not intended to diagnose, treat, cure or prevent any disease.