



GB HealthWatch Launches Nutritional Genomics Analysis within Digital Health Platform to Combat Coronary Heart Disease, Obesity and Type 2 Diabetes.

GB HealthWatch announces the launch of [GBinsight](#) nutritional genomics genetic testing and analysis at the core of their digital health platform which has been designed to combat common cardiometabolic diseases. Adding nutritional genomics to the company's extensive next-generation sequencing (NGS)-based genetic test catalog was a strategic step for GB HealthWatch to expand into the arena of genetics-based, precision preventive healthcare.

San Diego, CA- GB HealthWatch, a pioneer in translational genomics, announces the launch of their comprehensive [GBinsight Nutritional Genomics](#) genetic testing and analysis panel as a core component of their preventive healthcare platform. Adding nutritional genomics to the company's extensive next-generation sequencing (NGS)-based [genetic test catalog](#) was a strategic step for GB HealthWatch to expand into the arena of genetics-based, precision preventive healthcare.

Common cardiometabolic diseases such as dyslipidemia, coronary heart disease, obesity and type 2 diabetes are largely preventable; with genetic insights, molecular nutrition principles can be applied in order to precisely address the root causes of these diseases and deploy targeted and personalized diet and lifestyle interventions. By integrating genetic data with the [HealthWatch 360 app](#), a secure and HIPAA-compliant nutrition therapy mobile application also developed by GB HealthWatch, the company aims to deliver precision nutrition recommendations and precision preventive health products and services to clinicians, patients and the general public using digital technology.

As we enter the era of precision health, we will increasingly use genetic information to identify health risks and develop preventive strategies to avoid or delay the onset of disease. A strategic objective of nutritional genomics is to tailor preventive and therapeutic diet and nutritional recommendations to an individual's genetic makeup. "Diet and lifestyle modification has been shown to be especially effective to prevent and reduce the severity of many cardiometabolic diseases," said Christina Troutner, MS, RDN, a registered dietitian nutritionist and research nutrition scientist at GB HealthWatch.

“Nutritional genomics allows us to identify precision nutrition mechanisms for combatting disease that can then be translated into personalized dietary recommendations; in this way, food becomes medicine.”

“The pathophysiological processes that underlie cardiometabolic diseases start decades before the onset of symptoms,” said Dr. Mendel Roth, PhD, a senior scientist at GB HealthWatch. “Knowing your genetics can help identify the specific root cause of a condition and provide the opportunity to match you with the most effective prevention and treatment regimens.”

GBinsight’s Nutritional Genomics genetic testing focuses on the detection of diet-modifiable genetic risk factors often associated with hypercholesterolemia, hypertriglyceridemia, non-alcoholic fatty liver disease, type 2 diabetes, and obesity. Analysis of some traits that affect individual nutritional requirements and dietary preferences as well as food intolerances and sensitivities is also included. Each GBinsight Nutritional Genomics report provides the clinician and patient with personalized diet and nutrition recommendations that follow the guidelines of professional organizations such as the National Lipid Association (NLA), American Heart Association/American College of Cardiology (AHA/ACC) and American Diabetes Associations (ADA). Furthermore, connecting personal genetic data with the HealthWatch 360 app encourages patient engagement by allowing patients to view digital versions of their genetic test reports, navigate relevant gene-nutrition-disease educational information, and self-monitor diet quality and lifestyle changes.

The [GBinsight Nutritional Genomics Comprehensive Panel](#) analyzes the following conditions and provides genetics-based dietary recommendations:

- Hypercholesterolemia
- Hypertriglyceridemia
- Hypertension
- Non-alcoholic fatty liver disease (NAFLD)
- Obesity
- Type 2 diabetes

Analysis for nutritional deficiencies as well as food intolerances and sensitivities are also included:

- Gluten intolerance
- Fat intolerance
- Lactose intolerance
- Iron overload
- Folate deficiency
- Vitamin B12 deficiency
- Omega-3 fatty acid deficiency
- Caffeine sensitivity

The power of using molecular nutrition principles for combatting the diseases of modern day cannot be understated. Beneficial diet and lifestyle interventions have been shown to be significantly effective as a conjunctive treatment for high cholesterol and triglycerides, hypertension, heart disease, type 2 diabetes, and weight gain. If genetic testing can pinpoint and target the exact genetic culprit, personalized intervention regimens could be the most effective and impactful way to redirect the course of metabolic diseases and improve patient outcomes. For example, genetic loss-of-function of lipoprotein lipase (LPL) or related proteins compromises one's ability to clear dietary fat from the bloodstream, which can manifest as severe hypertriglyceridemia when consuming a high fat or high simple carbohydrate (sugar-rich) diet. By restricting dietary fat intake, limiting sugary foods and supplementing fat-soluble vitamins, the level of triglycerides in the blood may be reduced along with the associated risks of heart disease and type 2 diabetes. Even more, it has been shown that genetic analysis and genetics-based risk assessment empowers and motivates patients to stick to healthy lifestyle changes.

Unlike other direct-to-consumer (DTC) genetic testing companies who rely on outdated microarray technologies, GBinsight employs NGS which allows for the detection of novel and rare variants, insertion/deletions, multi-nucleotide variants (MNV) and copy number variations. [Recent studies](#) confirm that microarray technologies are not suitable for detecting rare and actionable genetic variants and can only analyze a fixed number of single nucleotide polymorphisms (SNPs). By contrast, GBinsight's platform can detect genetic variants that microarray technology simply cannot and, in doing so, can provide more precise and relevant diet and nutrition recommendations to combat disease. In fact, [research](#) has shown that about 40% of variants in the variety of genes reported in DTC raw data were false positives and therefore can mislead the consumer in regard to actual disease risks.

GBinsight is a comprehensive and targeted NGS assay designed to analyze the genetic architecture of complex diseases. Combined with a novel, state-of-the-art bioinformatics analysis algorithm, GBinsight genetic testing and analysis promises to help scientists and clinicians gain genetic insights of common metabolic diseases and facilitate research on personalized prevention and medical intervention strategies. GBinsight is a simple and cost-effective solution for investigating the genetic underpinnings of a disease and developing focused therapies based on knowledge of the underlying biology. GBinsight NGS services are performed at a CLIA-certified and medically licensed genetic testing laboratory using Illumina's HiSeq platform.

GBinsight's test catalog includes the following:

- Dyslipidemia Comprehensive Panel
- Familial Hypercholesterolemia Panel
- Familial Hypertriglyceridemia Panel
- Coronary Heart Disease Comprehensive Panel
- Type 2 Diabetes Comprehensive Panel
- Diabetes MODY Panel
- Obesity Comprehensive Panel
- Non-Syndromic Monogenic Obesity Panel
- Nutritional Genomics Comprehensive Panel

About GB HealthWatch

GB HealthWatch is a nutritional genomics company. We develop state-of-the-art technologies to facilitate research on the molecular mechanisms, clinical efficacy and cost-effectiveness of translating genetic insights into personalized prevention and treatment strategies for complex diseases. GB HealthWatch offers the following products and services:

GBinsight Genetic Testing and Analysis.

bit.ly/gbinsight

HealthWatch 360 mobile app and online tool.

healthwatch360.gbhealthwatch.com

HealthWatch 360 Research Portal for academics, clinicians and research institutes to study diet and health interactions.

bit.ly/h360-research

Visit the GB HealthWatch website to learn more:

www.gbhealthwatch.com

About Otogenetics Corporation

Otogenetics Corporation is a CLIA-certified and licensed medical genetic testing company specializing in next generation sequencing services. Otogenetics offers high quality services for genome, exome, and RNA-seq for government and academic institutions, biotechnology and pharmaceutical companies, as well as medical doctors and clinics. Additional services and products provided by Otogenetics Corporation can be found at: www.otogenetics.com