



Personal Details

Name: SAMPLE PATIENT
DOB: Jan 1, 19XX
Gender: Female
Ethnicity: Caucasian
Report Date: Nov 12, 2015
Received Date: Nov 2, 2015

Test Performed / Method

Genotyping by array-based evaluation of multiple molecular probes



SCIENTIFIC STRENGTH RATING SYSTEM

The genetic markers and studies selected for this report represent the best and most recent genetic research in diet, nutrition, exercise and weight-related health conditions. Some research can be described as stronger than others based on the size of the population studied and whether the outcome has been replicated. Due to the current state of scientific research on the genetics of diet, exercise and nutrition, most of the studies referenced in your report are based on individuals of Caucasian ethnicity. While we all have the same genes, there are genetic and non-genetic factors in different ethnicities that might yield different outcomes for non-Caucasian populations. Your report includes a star system, described below, to rate the strength of the research evidence for the genetic marker and the associated result.

★★★★	Results derived from a large study of approximately 2,000 or more people, with at least one additional study showing the same results (replication study).
★★★★☆	Results derived from a moderately-sized study of at least 400 people, with or without a replication study.
★★★☆☆	Small study of less than 400 people in some cases, with other small replicated studies. Results in this category are preliminary, but pass our criteria for statistical significance.
★★☆☆☆	Results in this category should be considered extremely preliminary.



DIET

71 Genetic Markers Tested



Eat a diet low in carbohydrates, particularly refined carbohydrates, instead of a low fat, Mediterranean or other diet.



As someone who has enhanced bitter taste perception, you may not like the taste of certain healthy vegetables, such as broccoli or leafy greens. Try recipes that mask the bitter flavors without adding too many calories.



You may tend to feel hungry throughout the day more than other people do. You should keep healthy snacks available to satisfy your hunger, and be sure to eat slowly in order to allow time for your body to sense satisfaction from eating.



You are less likely to be lactose intolerant, which means you may consume dairy products and not have gastrointestinal side effects. Choose dairy products that are lower in calories, fat and added sugar.



You have a higher than average genetic risk for elevated LDL (bad) cholesterol. You should limit your saturated fat intake and avoid foods containing trans or hydrogenated fats to help reduce this risk.



NUTRITIONAL NEEDS

9 Genetic Markers Tested



You have a genetic variant associated with lower levels of folic acid. Good sources of folate include vegetables, fruits, whole grains, legumes, as well as fortified foods and vitamin supplements.



You have a genetic variant associated with lower vitamin B6 levels. Be sure your diet includes foods rich in vitamin B6, such as dark green leafy vegetables, whole grains, legumes, poultry, fish and eggs.



You have a genetic variant associated with lower vitamin B12 levels. Be sure your diet includes foods rich in vitamin B12, such as meat, fish, poultry and milk products. You can also obtain B12 from fortified foods and vitamin supplements.

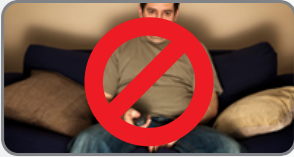


EXERCISE

12 Genetic Markers Tested



Your genetics are associated with enhanced health benefits from endurance exercises, such as mid-long distance walking, jogging and bicycling. Weight resistance exercises may be less beneficial.



You have a genetic variant associated with being overweight. You can lower your chances by leading a physically active lifestyle.



You have a genetic variant associated with elevated blood pressure if you are not physically active. Exercise may help you manage your blood pressure.



You have a genetic variant some call the "sprinter gene" that most elite power athletes also have. Thus, you may have an increased ability for sports or exercise that require fast bursts of muscle power, such as sprinting or weightlifting.

METABOLIC HEALTH

53 Genetic Markers Tested



You have a higher than average genetic likelihood for elevated LDL cholesterol levels. Regular monitoring of your cholesterol by your physician is recommended.



Your genetic profile shows a higher than average likelihood for decreased HDL (good) cholesterol. HDL levels can sometimes be improved through aerobic exercise and a healthy diet.



You have a higher than average genetic likelihood for elevated triglyceride levels. Therefore, regular monitoring by your physician is recommended. You can help manage triglyceride levels by maintaining a healthy weight, reducing saturated fat and sugar intake, and increasing your consumption of omega-3 fatty acids (fish or seafood).

NAME/ID: **SAMPLE PATIENT**
 SEX: **FEMALE**
 ACC #: **F7715014**
 DATE: **NOV 12, 2015**



YOUR MATCHING DIET



Matching Diet Type p. 8	LOW CARB DIET
Response To Monounsaturated Fats p. 11	NEUTRAL
Response To Polyunsaturated Fats p. 11	INCREASED BENEFIT
Omega-6 And Omega-3 Levels p. 12	TYPICAL

EATING BEHAVIOR TRAITS



Snacking p. 14	TYPICAL
Hunger p. 14	INCREASED
Satiety - Feeling Full p. 14	TYPICAL
Eating Disinhibition p. 15	LESS LIKELY
Food Desire p. 15	TYPICAL
Sweet Tooth p. 16	TYPICAL

FOOD REACTIONS



Caffeine Metabolism p. 18	FAST METABOLIZER
Bitter Taste p. 18	TASTER
Sweet Taste p. 19	TYPICAL
Lactose Intolerance p. 19	LESS LIKELY
Alcohol Flush p. 20	LESS LIKELY

NUTRITIONAL NEEDS



Vitamin B2 p. 22	STAY BALANCED
Vitamin B6 p. 23	OPTIMIZE INTAKE
Vitamin B12 p. 23	OPTIMIZE INTAKE
Folate - Folic Acid p. 24	OPTIMIZE INTAKE
Vitamin A p. 25	OPTIMIZE INTAKE
Vitamin C p. 26	STAY BALANCED
Vitamin D p. 26	STAY BALANCED
Vitamin E p. 27	STAY BALANCED

EXERCISE



Endurance Training p. 30	ENHANCED BENEFIT
Strength Training p. 31	LESS BENEFICIAL
Aerobic Capacity (VO2max) p. 31	TYPICAL
Muscle Power p. 32	ENHANCED MUSCLE POWER
Achilles Tendinopathy p. 32	TYPICAL
Weight Loss Response To Exercise p. 33	EXERCISE STRONGLY RECOMMENDED
Blood Pressure Response To Exercise p. 33	EXERCISE STRONGLY RECOMMENDED
HDL (Good) Cholesterol Response To Exercise p. 34	NORMAL BENEFIT
Loss Of Body Fat Response To Exercise p. 34	NORMAL BENEFIT
Insulin Sensitivity Response To Exercise p. 34	ENHANCED BENEFIT

YOUR BODY AND WEIGHT



Obesity p. 37	AVERAGE
Weight Loss-regain p. 37	MORE LIKELY TO GAIN WEIGHT BACK
Metabolism p. 38	NORMAL
Adiponectin Levels p. 38	POSSIBLY LOW

METABOLIC HEALTH FACTORS



Elevated LDL Cholesterol p. 40	ABOVE AVERAGE
Decreased HDL Cholesterol p. 41	ABOVE AVERAGE
Elevated Triglycerides p. 42	ABOVE AVERAGE
Elevated Blood Sugar p. 43	AVERAGE



PERSONALIZE YOUR DIET WITH GENETICS

The way we eat, how our bodies process foods, and our overall health are impacted by our genetics. Scientific studies have shown that genetics can also be important for diet effectiveness. Your results have been calculated to determine the best diet likely to help you optimize your metabolism, lose weight and improve your health.

▶ YOUR RESULTS ◀



MATCHING DIET TYPE

page:8

LOW CARB DIET



RESPONSE TO
MONOUNSATURATED FATS

page:11

NEUTRAL



RESPONSE TO
POLYUNSATURATED FATS

page:11

INCREASED BENEFIT



OMEGA-6 AND OMEGA-3 LEVELS

page:12

TYPICAL





DIET
 MATCHING DIET TYPE

Your diet has been selected by looking at many genetic variants associated with how people respond to the different macronutrients (proteins, fats and carbohydrates) in their food^{2,3,4,5,6,7}. Your genetic risk profiles for metabolic health factors were also evaluated to determine your recommended diet^{8,9}. Together, your genetic results suggest which one of the following diets may be best for you: "Low Fat," "Low Carb," "Mediterranean" or a "Balanced Diet." It is highly recommended to discuss any change in your diet plan with your health care provider.

YOUR DIET RECOMMENDATIONS

- ✓ Eat a diet low in carbohydrates, particularly refined carbohydrates, instead of a low fat, Mediterranean or other diet.
- ✓ As someone who has enhanced bitter taste perception, you may not like the taste of certain healthy vegetables, such as broccoli or leafy greens. Try recipes that mask the bitter flavors without adding too many calories.
- ✓ You may tend to feel hungry throughout the day more than other people do. You should keep healthy snacks available to satisfy your hunger, and be sure to eat slowly in order to allow time for your body to sense satisfaction from eating.
- ✓ You are less likely to be lactose intolerant, which means you may consume dairy products and not have gastrointestinal side effects. Choose dairy products that are lower in calories, fat and added sugar.
- ✓ You have a higher than average genetic risk for elevated LDL (bad) cholesterol. You should limit your saturated fat intake and avoid foods containing trans or hydrogenated fats to help reduce this risk.

► YOUR RESULT ◀

LOW CARB DIET

Your genotype is associated with weight loss or other health benefits from a diet lower in carbohydrates.

🧬 YOUR RELATED GENES

Gene Tested	Your Genotype	Scientific Strength
ADIPOQ-rs17300539	G/G	★★★★☆
APOA2-rs5082	T/T	★★★★★
FTO-rs9939609	T/A	★★★★☆
KCTD10-rs10850219	G/G	★★★★☆
LIPC-rs1800588	C/C	★★★★☆
MMAB-rs2241201	C/C	★★★★☆
PPARG-rs1801282	C/C	★★★★☆
AND MORE...		

► YOUR RESULT ◀

LOW CARB

Non-starchy vegetables, high-quality proteins and healthy fats

LOW FAT

Lean proteins, fiber-rich vegetables, grains and fruits, and healthy fats

BALANCED

Balance of healthy fats, carbohydrates and proteins

MEDITERRANEAN

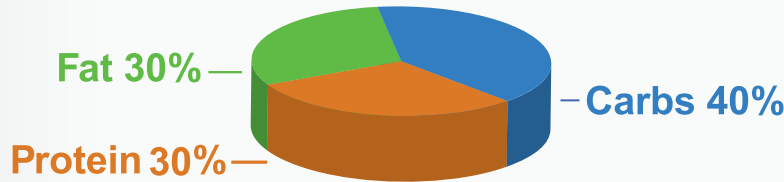
Fish, monounsaturated fats, and low glycemic, high fiber vegetables, fruits, grains and legumes



DIET

LOW CARB DIET

A carbohydrate-controlled diet limits the amount of carbohydrates you consume. Foods rich in carbohydrates include breads, cereals, grains, rice, starchy vegetables, fruit, as well as milk and yogurt. More importantly, a carbohydrate-controlled diet plan focuses on non-starchy vegetables, healthy fats, as well as high-quality protein foods. Although this diet plan limits carbohydrates, it does not completely exclude them. Refined and processed foods should be avoided in order for healthier, nutrient-dense carbohydrates to fit into your daily intake. Concentrate on strongly colored fruits and vegetables with bold flavors. For your protein intake, incorporate legumes, fish (and other seafood), lean chicken, and limit your red meat consumption to about 3 ounces or less, 2 to 3 times per week. Regarding fats and oils, it's best to choose vegetable fats and to minimize your intake of animal fats. Processed and highly refined foods, trans fats, as well as added sugars, should be avoided. Most popular low-carbohydrate diets consist of a weight loss phase, which is very low in carbohydrates and is followed by a maintenance phase that manages carbohydrates.



Low Carb Diet: Key Aspects

Fruits and Vegetables

- Bright colors, bold flavor.
- Consume a variety of colors.
- Try to eat 9 servings of fruits and vegetables per day.
- Leafy green veggies are optimal.
- Limit store-bought fruit juice to 1/2 cup per day (no sugar or sweetener).
- Limit starchy vegetables.

Grains and Starchy Vegetables

- Avoid all refined grains.
- Use satisfying alternatives to grain, such as sweet potato, squash, mushrooms, and eggplant in moderation.
- Try quinoa.

Protein Foods

- Eat at least a 1/4 to 1/2 cup of legumes per day.
- Limit red meats.
- Eat fish or other seafood at least 2 to 3 times per week.
- Remove all visible fat and skin from meat, fish and poultry.
- Prepare meat by baking, broiling, steaming or poaching.
- Avoid frying meat.

Milk Products

- Plain Greek-style yogurt is optimal.
- Avoid milk products with added sugar.
- Limit cheese.

Fats and Oils

- Avoid hydrogenated and trans fats.
- Limit saturated fats.

General

- Minimize or avoid added sugars and foods with added sugar. This is especially important if you are trying to lose weight or control your blood sugar levels, or if your triglyceride levels are elevated.



DIET

TYPES OF FAT IN YOUR DIET

Acting as an important part of any diet and a source of energy, fat provides flavor to your diet, but more importantly, it is a vital element in the absorption of fat-soluble vitamins such as vitamins A, D, E and K. The two major types of fat include saturated and unsaturated (polyunsaturated and monounsaturated) fats. In order for your body to function normally, you need to maintain a consistent and balanced supply of saturated and unsaturated fats. A third type of fats consists of hydrogenated fats, which are processed fats that are not found naturally, such as in margarine and fried fast foods. Hydrogenated fats may also contain trans fatty acids and are generally unhealthy and should be avoided.

SATURATED FAT

- Beef
- Lamb
- Lard
- Milk
- Cream
- Poultry (dark meat)
- Veal
- Pork
- Butter
- Cheeses
- Coconut oil

UNSATURATED FAT

- | Polyunsaturated | Monounsaturated |
|--|--------------------------|
| ➤ Cold water fish (e.g., salmon, herring, halibut, sardines, mackerel) | ➤ Avocados |
| ➤ Walnuts | ➤ Nuts |
| ➤ Almonds | ➤ Olives |
| ➤ Flaxseed | ➤ Extra virgin olive oil |
| ➤ Chia seed | |
| ➤ Pumpkin Seed | |
| ➤ Evening primrose oil | |
| ➤ Borage seed oil | |
| ➤ Nuts and seeds | |
| ➤ Poultry and eggs | |

HYDROGENATED FAT

- Margarine (stick)
- Most fast foods
- Fried foods
- Highly processed foods
- Shortening
- Foods containing trans fats