DNA+blood

Ethan [redacted]'s report



InsideTracker

Proprietary & Confidential

CONTENTS

Introduction **3**

Unlock your potential 3

DNA and genetics 3

Genes and variants 4

DNA isn't destiny 4

Weight **7**

Sleep **16**

Healthy Aging **21**

Performance **30**

Sensitivities **36**

Appendices **40**

Terms & definitions 40

Genetic data 41

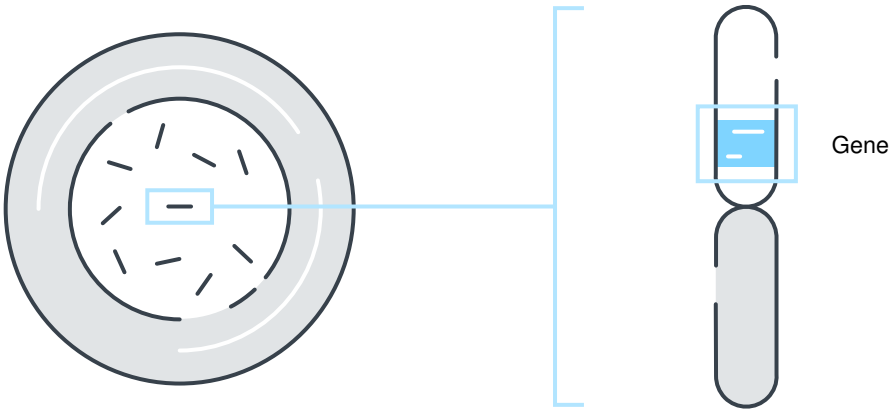
Unlock your potential

Tests that look at your biomarkers — things like sodium, cholesterol, or glucose — are a great way of checking how your body is doing. Levels can change all the time, so a blood test gives a valuable snapshot of your health at a given moment. At InsideTracker, this biomarker data drives our set of science-backed personalized recommendations to help you reach your goals.

Our genetic report adds another level of insight — we look at the potential abilities and risks coded in your DNA, and we combine that information with your biomarkers. This exclusive "DNA + blood" analysis lets us really unlock your potential. When you know more, you can do more!

DNA and genetics

Your DNA or genetic data is like your body's blueprint or master code. Almost every cell of your body has a full set of DNA packaged into 23 pairs of chromosomes. You get one set of chromosomes from your mother and one from your father



Genes and variants

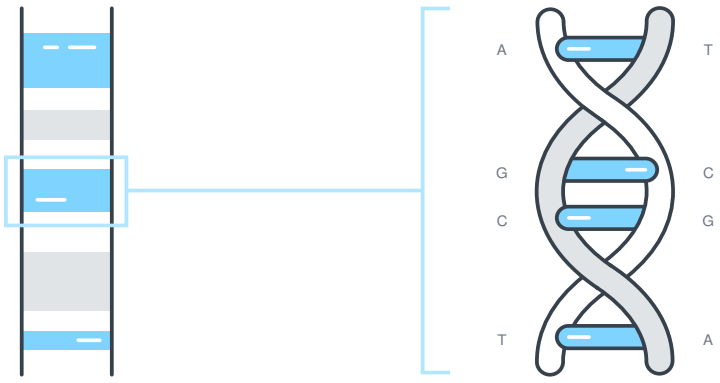
Genes are sections of DNA that code for a particular thing, like eye color or lactose tolerance. Packaged in our 23 pairs of chromosomes there are an estimated 20,000 different genes that code nearly everything your body needs.

Sometimes a copy of a gene is a little different from the usual version — these are gene variants. So while two people might have a gene for blue eyes, they might have a difference in their code (the "spelling" using the DNA letters ATCG).

This variation might:

- have a harmless effect, like turning eyes green instead of blue
- cause potential health problems
- make no difference, or have an unknown effect

Our report focuses on a set of variants made of up to 261 short sequences or "markers" that are known to affect your odds of certain traits



DNA isn't destiny

While your DNA is your master code, things don't always get built exactly according to plan. There are so many factors that affect how you grow and change and react to your surroundings — what you eat and drink, how often you exercise, how much stress you experience, whether you're exposed to pollution, radiation, UV rays... the list goes on.

Your DNA is only a one factor in your health — your body is a dynamic system that changes all the time.

This means that with the right information, you may be able to maximize your potential by changing the environment in your body. Your lifestyle choices can be a powerful way to affect your health. We'll help you figure out what works for you.

Let's get started with your report!

If you're interested in learning more about genetics, or reviewing your genetic data, check out the appendices at the end of the document.

How we do it



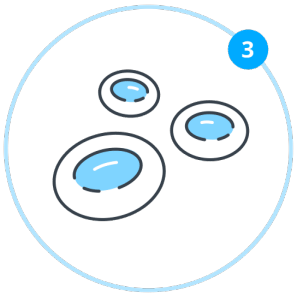
Reference DNA markers

Our team has developed algorithms based on the latest genetics research. We currently focus on up to 261 markers or sequences, and update periodically as we learn new information.



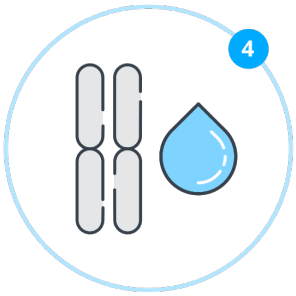
Analyze DNA data

Every DNA test covers a specific set of genetic markers; it is possible that your data set does not include all 261. Our algorithm adjusts for any missing markers to make our analysis of your results as strong as possible.



Review blood test data

We look at your most recent set of biomarker data from blood tests. We focus on the most relevant ones and check whether they're optimized.



Combine DNA and blood results

We compare your genetic results with your biomarker data and offer ways to achieve – or avoid – your body's potential for certain traits. We personalize these by accounting for your preferences and habits.

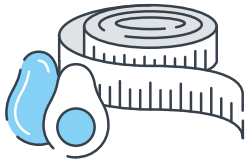
Weight

Weight is a complex mix of genetics, lifestyle factors like what you eat and how much you exercise, and environmental factors like the stress you live with, the particular bacteria in your gut, and so much more.

That's why when it comes to weight loss — or gain — there's no standard strategy that will work for everyone. Some people gain weight more easily when they eat carbs, others gain weight when they have a lot of saturated fat.

There are lots of genetic markers that affect fasting glucose, cholesterol, and other factors in weight gain. But since there are so many parts to the weight equation, your diet and lifestyle choices have a far greater influence than your genes.

Your weight is 115 lbs and height is 5 ft, 3 in, which is a BMI of 20. This is considered normal. You have told us that you are moderately active.



Weight factors in this report

- Body mass index
- Fasting glucose
- Cholesterol (LDL, HDL, total)
- Triglycerides

Weight solutions

- Type of diet (weight loss)
- High saturated fat diet (weight gain)

Body mass index

Body mass index (BMI) is calculated using your weight and height. A BMI between 18.5 and 24.9 is normal; between 24.9 and 30 is overweight; and 30 and over is very overweight or obese.

This report checks a single genetic variant linked to an increased risk of obesity, and compares it with your BMI.

Genetic risk analysis

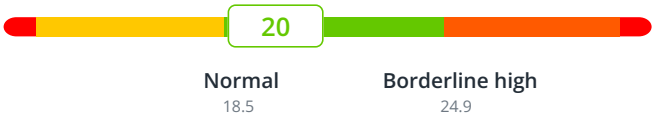
Elevated
risk of gaining extra weight

Analysis based solely on variant rs1421085. See page 47 for details.

Actual BMI analysis

20 BMI
Normal weight

Measurements updated on Dec 28, 2022



Actual BMI

What does this mean?

You have an elevated genetic risk for gaining excess weight. Your BMI is considered normal. BMI is calculated based on your total weight, and does not differentiate between lean body mass and fat mass. Please consult with your physician if you are concerned about your weight.

Fasting glucose

Glucose is the simplest form of sugar. Your body breaks down all carbohydrates and sugars into glucose, and uses it as the main fuel for your brain and muscles. When you have too much glucose in your blood, your body may try to store away the extra as fat. That's why a high "fasting" glucose level (a high level long after you've eaten) can be a risk factor for gaining weight, as well as for other conditions.

This report looks at a panel of up to 36 genetic markers (depending on your individual DNA results) that can affect blood sugar control, and compares your potential level with your actual fasting glucose level.

Genetic risk analysis

Average
risk of higher fasting glucose

Your analysis is based on 32 of 36 markers. See page 42 for details.

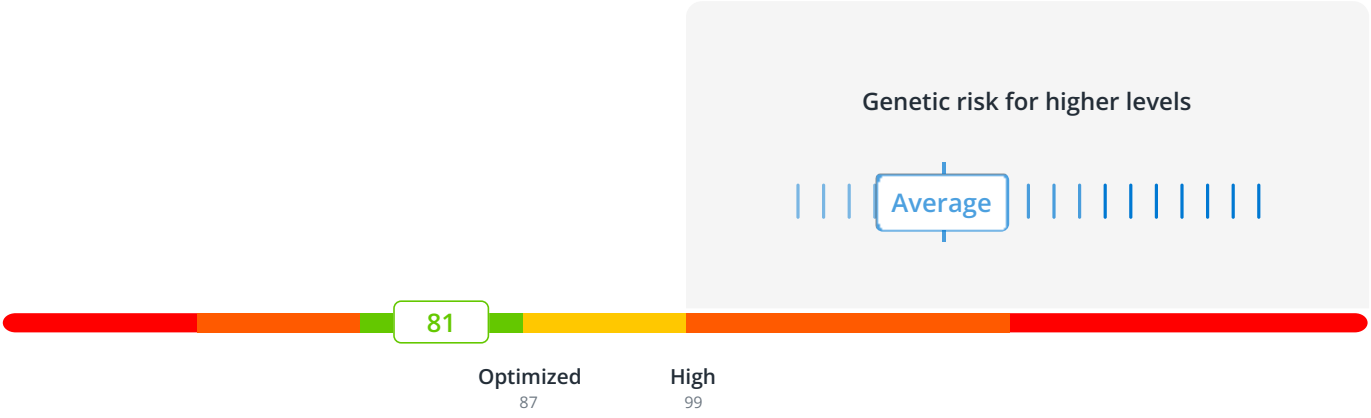
Actual blood analysis

Optimized
Fasting glucose (81 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an average genetic risk for higher blood glucose, but your actual results are in the optimal range. Looks like you beat the odds. You can learn more about fasting glucose in your blood results, including healthy foods to keep it optimized and how you compare to other users.



Total cholesterol

Cholesterol is a type of lipid (fatty substance) that is found in every cell in the body. It's essential for producing steroid hormones like estrogen and testosterone and also helps make bile in the liver. Weight gain and high cholesterol can often go hand in hand, but it's possible to have high cholesterol without being overweight.

This report looks at a panel of up to 51 genetic markers (depending on your individual DNA results) that can affect total cholesterol, and compares your potential level to your actual level.

Genetic risk analysis

Reduced
risk of higher total cholesterol

Your analysis is based on 50 of 51 markers. See page 46 for details.

Actual blood analysis

Low
Total cholesterol (110 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your genetic risk for elevated cholesterol is lower than average, and your actual blood test results are low. Learn more about total cholesterol in your blood results.



Actual Total cholesterol
(mg/dL)

LDL cholesterol

Cholesterol is packaged into lipoproteins so your body can transport and deliver it where it's needed. LDL (low-density lipoprotein) is one type, and it's considered "bad" because it contributes to the narrowing of your arteries and increased risk of poor cardiovascular health. Being overweight can raise your LDL level, but you can also have high LDL without being overweight.

This report looks at a panel of up to 36 genetic markers (depending on your individual DNA results) that can affect LDL cholesterol, and compares your potential level to your actual level.

Genetic risk analysis

Reduced
risk of higher LDL cholesterol

Your analysis is based on 35 of 36 markers. See page 45 for details.

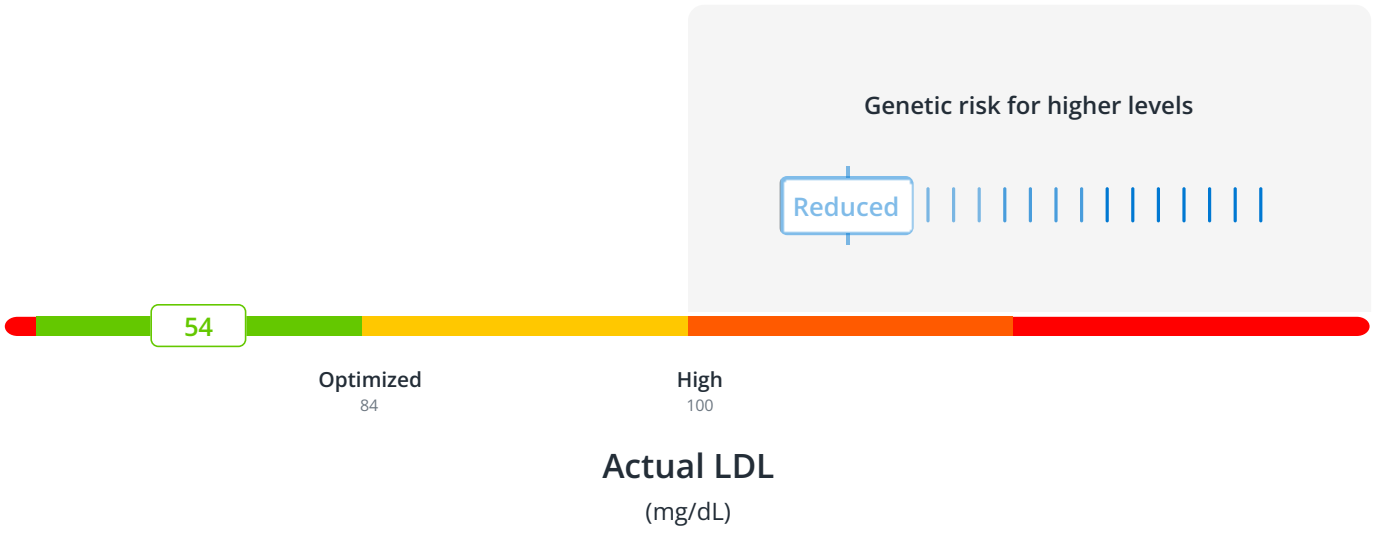
Actual blood analysis

Optimized
LDL (54 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Good news — you have a reduced genetic risk for higher LDL, and your blood LDL is in the optimal range. You're doing well. You can learn more about LDL cholesterol in your blood results.



HDL cholesterol

HDL (high-density lipoprotein) is considered the “good” cholesterol. Some types of HDL can act as scavengers, removing LDL or “bad” cholesterol out of your blood. There are ways to boost HDL — and your overall health — like exercising, losing weight, and quitting smoking.

This report looks at a panel of up to 46 genetic markers (depending on your individual DNA results) that can affect HDL cholesterol, and compares your potential level to your actual level.

Genetic risk analysis

Average
risk of lower HDL cholesterol

Your analysis is based on 42 of 45 markers. See page 44 for details.

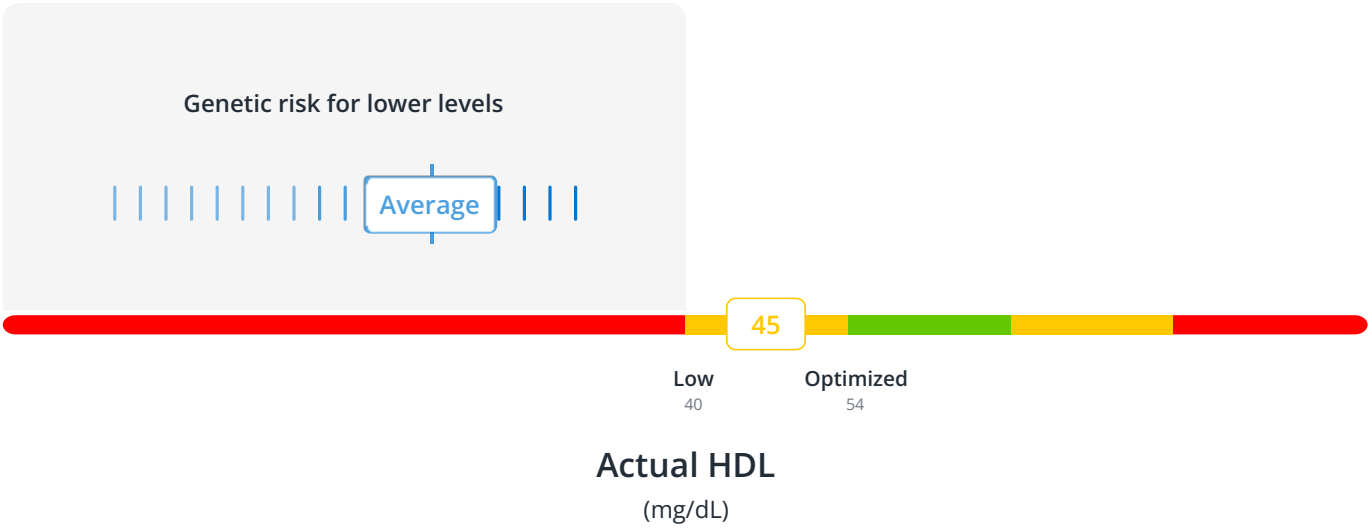
Actual blood analysis

Needs work
HDL (45 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an average risk of lower HDL cholesterol, but your actual blood level is below optimal. Your diet and lifestyle choices are likely to influence your HDL level more than your genes do. Check your personalized recommendations on InsideTracker to find out the best ways for you to optimize your HDL.



Triglycerides

When you eat, your body stores away any extra energy as triglycerides, a type of fat. High levels of triglycerides are not good for your arteries and heart, and can negatively impact cardiovascular health. As with cholesterol, losing weight and exercising can help lower triglycerides.

This report looks at a panel of up to 31 genetic markers (depending on your individual DNA results) that can affect triglycerides, and compares your potential level to your actual level.

Genetic risk analysis

Average
risk of higher triglycerides

Your analysis is based on 31 of 31 markers. See page 46 for details.

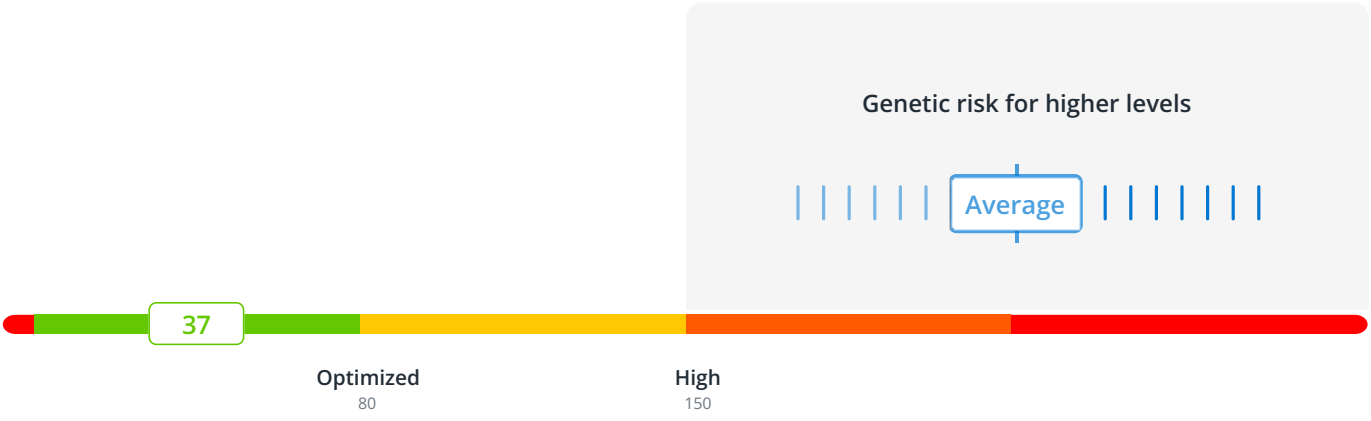
Actual blood analysis

Optimized
Triglycerides (37 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Congrats! Your blood triglycerides are in the optimal range. You have an average genetic risk for higher levels, so you're doing better than you might expect. You can learn more about triglycerides in your blood results.



Actual Triglycerides
(mg/dL)

Type of diet

Ever wonder how some people lose weight easily with exercise, and others need to work much harder? Turns out that different people may need different strategies for losing weight, and some of it really does come down to your genes.

This report checks for a single genetic variant that can influence whether a low-fat diet works better for you or a high-fat (low carb) diet.

Genetic risk analysis

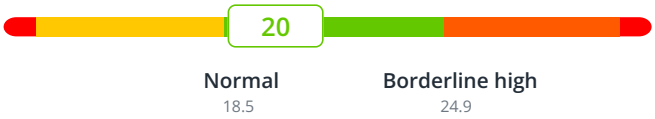
Elevated
potential to lose weight on a low-fat diet

Analysis based solely on variant rs7903146. See page 47 for details.

Actual BMI analysis

20 BMI
Normal weight

Measurements updated on Dec 28, 2022



Normal 18.5 — **Borderline high** 24.9

Actual BMI

What does this mean?

Your BMI is in the healthy range right now but here's something to keep in mind: Based on your genetic variant, you're likely to have more success with a low-fat diet compared with a high-fat one.

High saturated fat diet

All fat isn't the same. Most oils and animal fats are a mix of fatty acids and saturated fats. These are commonly found in foods like coconut oil and butter and are generally not as heart-healthy as the unsaturated fats you find in olive oil and avocado. Some people are more sensitive to the amount of saturated fat in their diet.

This report checks for a single genetic variant that can influence whether eating more than 22 grams of saturated fat a day makes you gain weight easily.

Genetic risk analysis

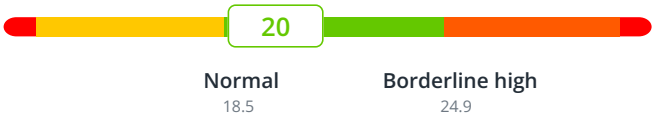
Average
risk to gain weight on a high saturated fat diet

Analysis based solely on variant rs5082. See page 47 for details.

Actual BMI analysis

20 BMI
Normal weight

Measurements updated on Dec 28, 2022



Actual BMI

What does this mean?

Your BMI is normal now, so here's a tip for the future: you have the typical genetic potential to gain weight if you eat a diet high in saturated fats (like meat and dairy).

Sleep

We spend nearly one-third of our lives asleep, so it's no wonder that sleep has a powerful effect on our health.

If you have trouble sleeping, it can be helpful to look at how your spend your evenings — exercising late in the day, drinking caffeine or alcohol at night, and late-night screen time can all make it hard to fall or stay asleep.

Some biomarkers and genetic variants can hold some helpful clues, too. For example, if your magnesium level is low, your sleep may be restless. If you tend to drink more caffeine than average, you may have trouble falling asleep.

We look at several factors that can affect sleep.



Sleep factors in this report

- Caffeine consumption
- Sleep duration
- Magnesium (sleep quality)
- Fasting glucose

Caffeine consumption

Some people drink more caffeine than others, and at least part of the difference can be explained by our DNA — people with a certain genetic variant tend to drink an extra one-third cup of coffee, on average.

If you drink more caffeine, or drink it later in the day, you're more likely to feel caffeine withdrawal symptoms or have trouble sleeping soundly.

This report looks at a single genetic variant that affects your odds of being a higher caffeine drinker.

Genetic risk analysis

Elevated
potential to drink more caffeine

Analysis based solely on variant rs4410790. See page 48 for details.

What does this mean?

Based on a single gene variant, it's likely that you have a tendency to drink more caffeine than average. If you have trouble sleeping, you may want to cut back on caffeine, especially later in the day.

Sleep duration

Some people naturally sleep less than others. Some of those short sleepers wake up refreshed, while others wish they could sleep a little longer.

This report checks a single genetic variant that predicts whether you might sleep a few minutes longer than people without the variant.

Genetic risk analysis

Elevated
potential to sleep longer

Analysis based solely on variant rs62158211. See page 48 for details.

What does this mean?

You have a gene variant that makes you likely to sleep a few minutes longer than average. Genetics have a very subtle influence on sleep patterns, and it's in your power to sleep for a longer or shorter amount of time.

Magnesium

Magnesium helps bring you to a relaxed state so that you're ready to fall asleep. If your magnesium level is low, You may have trouble falling asleep, your sleep may be more restless, or you may wake more often.

This report looks at a group of up to five genetic markers (depending on your individual DNA results) that affects your risk for low magnesium, and compares your potential level to your actual magnesium level.

Genetic risk analysis

Average
risk of lower magnesium

Your analysis is based on 5 of 5 markers. See page 46 for details.

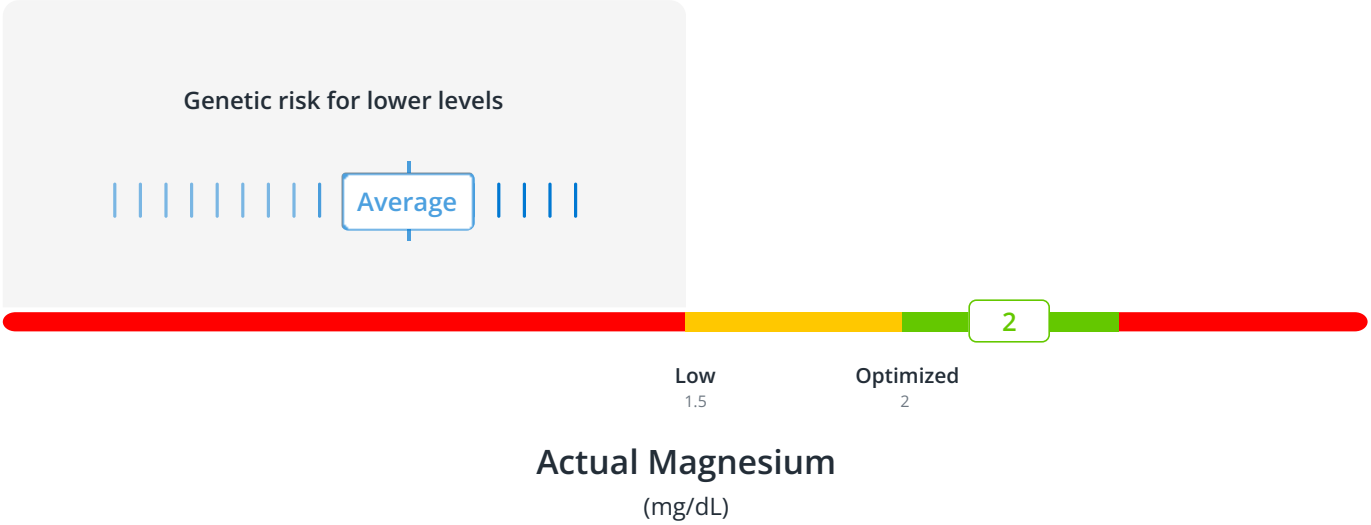
Actual blood analysis

Optimized
Magnesium (2 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an average genetic risk of lower magnesium, but your actual blood level looks good! Congrats! You can learn more about magnesium in your blood results, including how your results are trending and which foods can help you maintain an optimal level.



Fasting glucose

Glucose is the simplest form of sugar. Your body breaks down all carbohydrates and sugars into glucose, and uses it as the main fuel for your brain and muscles. Sleep and glucose have a complicated relationship. If you don't get enough sleep, your glucose regulation is thrown off, you can feel hungrier and tend to overeat, and you often have less energy for exercise. Over time this can lead to generally higher glucose levels, weight gain, and other risks.

This report looks at a panel of up to 36 genetic markers (depending on your individual DNA results) that can affect blood sugar control, and compares your potential level with your actual fasting glucose level.

Genetic risk analysis

Average
risk of higher fasting glucose

Your analysis is based on 32 of 36 markers. See page 42 for details.

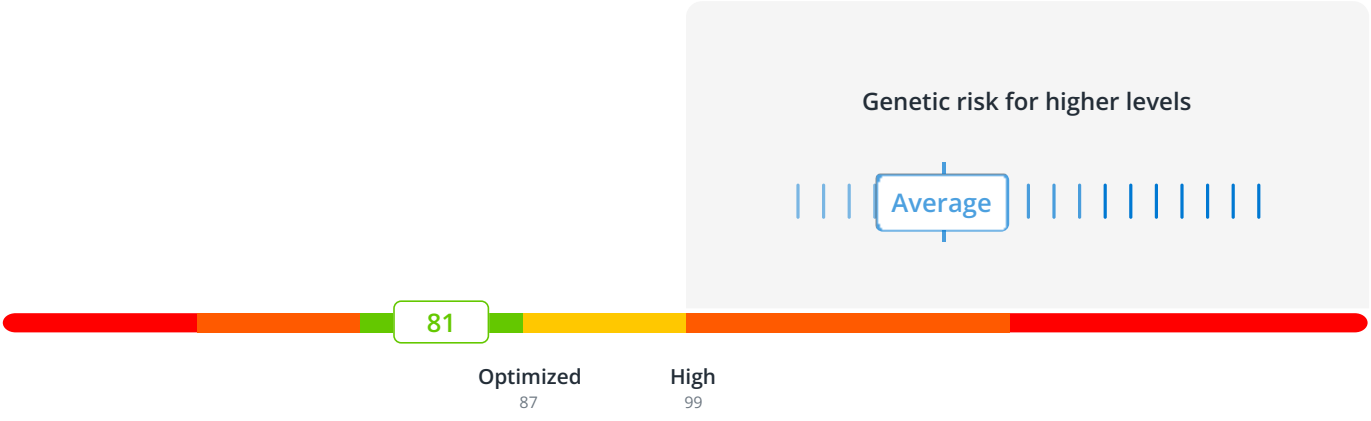
Actual blood analysis

Optimized
Fasting glucose (81 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Even though you have an average genetic risk for higher glucose, your actual blood results are in the optimal range. Congrats! You can learn more about fasting glucose in your blood results, including how your results are trending and how you compare to other users.



Actual Fasting glucose
(mg/dL)

Healthy aging

Healthy aging may mean different things to different people — staying active, having a community of friends, being able to do the things you love. Regardless of what you value as you age, you'll need to keep your body in good shape.

Blood pressure is one factor that can affect the body in many ways. Over time, high blood pressure can damage your arteries, heart, brain, kidneys, eyes, and other organs, so keeping blood pressure in a healthy range is very important as you get older.

While you can't stop the aging process altogether, you do have lots of ways to monitor your heart, liver, immune system, and other organs and systems. Once you know what's working well and what needs help, you can optimize things with InsideTracker. After all, you're planning many more trips around the sun, right?



Aging factors in this report

- Blood pressure
- Vitamins (D and B12)
- Calcium (bone health)
- Fasting glucose
- Immunity (white blood cells and C-reactive protein)
- Liver (GGT)

Blood pressure

Blood pressure readings have two numbers: The systolic pressure is the top or first number of a blood pressure reading. It's the pressure when your heart contracts. The diastolic pressure is the bottom or second number. It's the pressure when your heart relaxes between beats.

If either number is high, you may need to take steps to improve your blood pressure.

This report looks at a panel of up to 29 genetic markers (depending on your individual DNA results) that can affect blood pressure, and compares your potential level with your actual level.

Diastolic blood pressure

Elevated
potential for higher diastolic blood pressure

Your analysis is based on 28 of 29 markers. See page 43 for details.

Genetic risk for higher levels



Systolic blood pressure

Elevated
potential for higher systolic blood pressure

Your analysis is based on 28 of 29 markers. See page 43 for details.

Genetic risk for higher levels



What does this mean?

After analyzing dozens of genes, you seem to have an increased risk for higher blood pressure (both systolic and diastolic). You'll want to keep your blood pressure healthy by exercising, eating well, and managing stress.

Vitamin D

Vitamin D helps the body absorb calcium to maintain bones. It's common to become deficient in vitamin D as we get older because our bodies don't produce it as easily.

This report looks at a single genetic variant that can affect your vitamin D level, and compares your potential level with your actual level.

Genetic risk analysis

Average
risk of lower vitamin D

Analysis based solely on variant rs2282679. See page 47 for details.

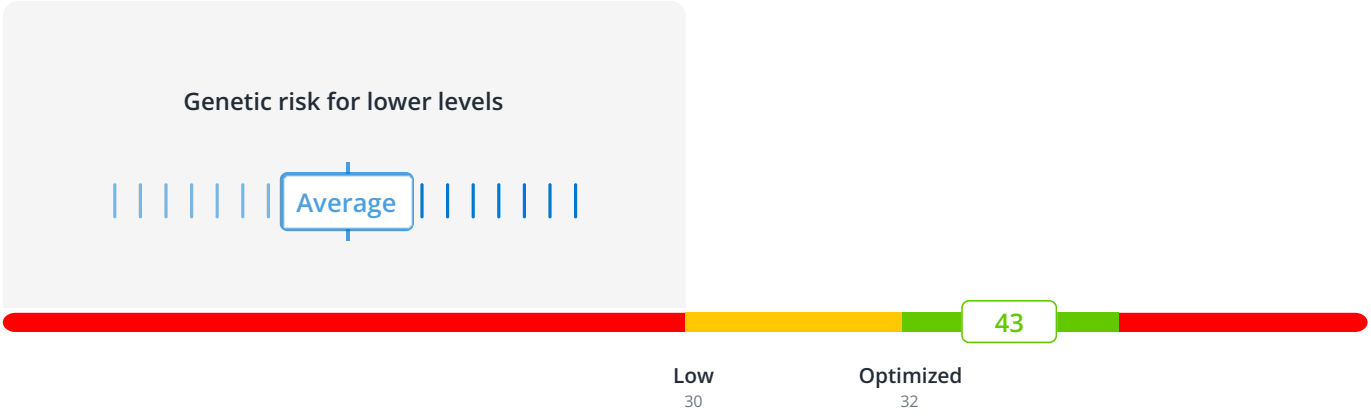
Actual blood analysis

Optimized
Vitamin D (43 ng/mL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an average genetic risk for lower vitamin D, but your actual blood level is optimized! Looks like you beat the odds. You can learn more about vitamin D on in your blood results.



Vitamin B12

Vitamin B12 plays an important role in your metabolism and your brain and nervous system. It also plays a key role in making red blood cells and DNA. It's naturally found in meat, eggs, and dairy products.

This report looks at a single genetic variant that can affect your B12 level, and compares your potential level with your actual level.

Genetic risk analysis

Elevated
potential of higher vitamin B12

Analysis based solely on variant rs602662. See page 47 for details.

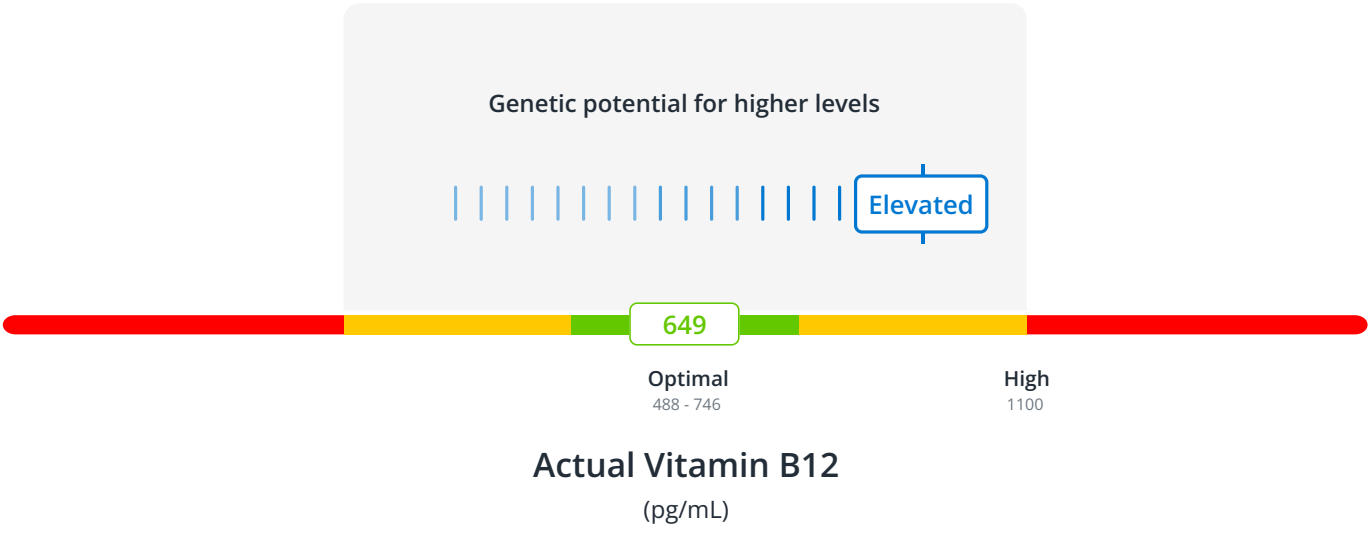
Actual blood analysis

Optimized
Vitamin B12 (649 pg/mL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your genetic variant is usually linked to slightly higher B12 levels than average, but your B12 blood level is in the optimal range. Check your personalized recommendations on InsideTracker to find out the best ways for you to keep your B12 level optimized.



Actual Vitamin B12
(pg/mL)

Calcium

Calcium is an important factor for maintaining muscle mass, bone density. It also plays a role in normal blood clotting and a healthy blood pressure. Having strong bones and muscles is critical as we age, because it lowers the risk of falling and breaking a bone.

In this report, we look at up to seven genetic markers (depending on your individual DNA results) that can affect calcium in your body, and compare your potential level with your actual level.

Genetic risk analysis

Elevated
risk of lower calcium

Your analysis is based on 7 of 7 markers. See page 42 for details.

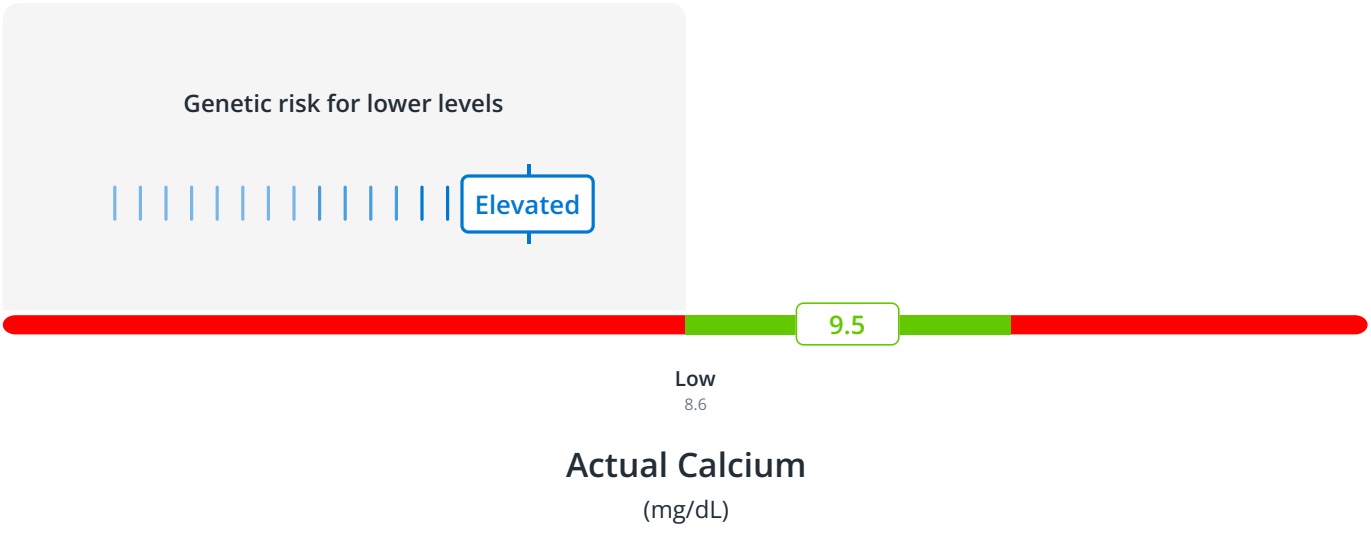
Actual blood analysis

Optimized
Calcium (9.5 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Though you have an elevated genetic risk for lower calcium, your blood calcium result looks good! Congrats! You can learn more about calcium in your blood results, including how your results are trending and which foods can help you maintain an optimal level.



Fasting glucose

Glucose is the simplest form of sugar. Your body breaks down all carbohydrates and sugars into glucose, and uses it as the main fuel for your brain and muscles. It can be harder for our bodies to regulate blood glucose as we get older. In the long term, high blood glucose can affect brain function, as well as impact eye, heart, kidney, nerves, and blood vessel health — all vital for healthy aging.

This report looks at a panel of up to 36 genetic markers (depending on your individual DNA results) that can affect blood sugar control, and compares your potential level with your actual fasting glucose level.

Genetic risk analysis

Average
risk of higher fasting glucose

Your analysis is based on 32 of 36 markers. See page 42 for details.

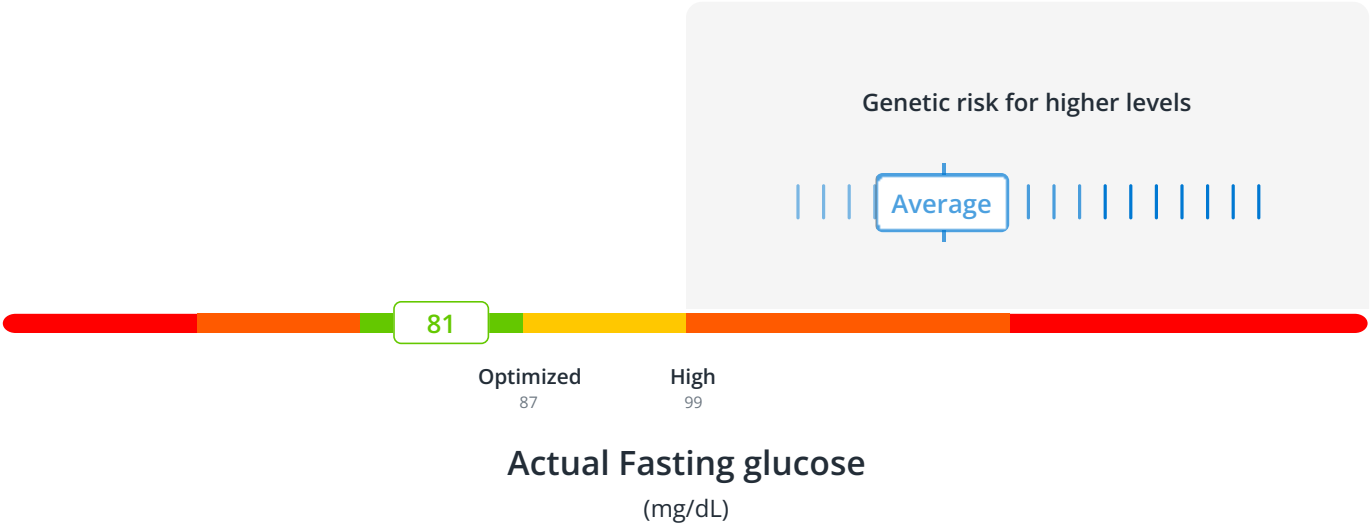
Actual blood analysis

Optimized
Fasting glucose (81 mg/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an average genetic risk for higher glucose, but your actual blood results are in the optimal range. Keep it up! Learn more about glucose in your blood results, including healthy foods to keep it optimized.



White blood cells

White blood cells are the infection fighters of the immune system, and different types of white blood cells have different roles to play. A high white blood cell count be a sign of an allergy, infection, or other immune response or inflammation.

This report looks at a single genetic variant that affects your white blood cells. Your potential level is compared with your actual level.

Genetic risk analysis

Elevated
risk of higher white blood cell count

Analysis based solely on variant rs8078723. See page 47 for details.

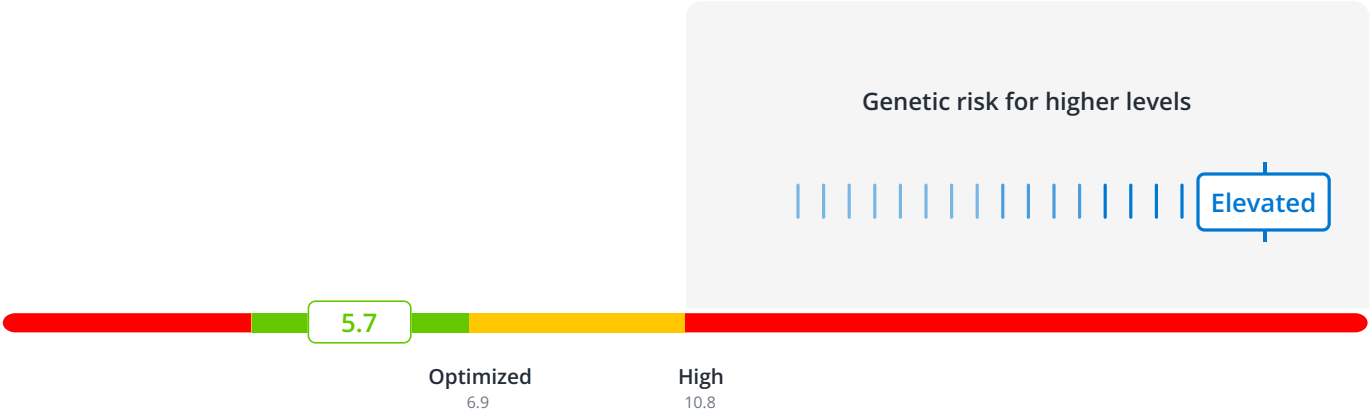
Actual blood analysis

Optimized
White blood cells (5.7 thousands/uL)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an elevated genetic risk for higher white counts, but your blood levels look good. You're doing better than your genetics predict. You can learn more about white blood cells in your blood results, including healthy foods to keep it optimized.



Actual White blood cells
(thousands/uL)

C-reactive protein

C-reactive protein (CRP) is a marker of inflammation throughout the body. The high-sensitivity test is useful for checking low levels of hsCRP. Optimal levels can predict a healthy heart, circulatory system, blood pressure, and blood glucose – all important to longevity.

This report looks at up to 18 genetic markers (depending on your individual DNA results) that affect inflammation and immunity, and compares your potential level of hsCRP with your actual level.

Genetic risk analysis

Elevated
risk of higher hsCRP

Your analysis is based on 18 of 18 markers. See page 45 for details.

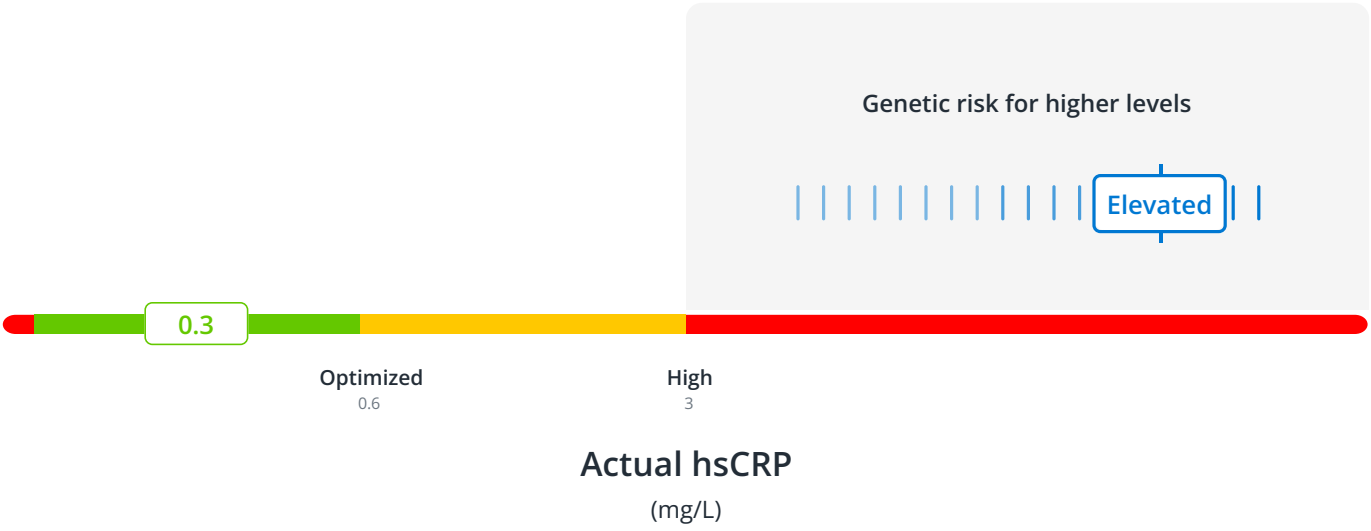
Actual blood analysis

Optimized
hsCRP (0.3 mg/L)

Blood test result from Dec 14, 2022.

How do these results connect?

You have an elevated genetic risk for higher hsCRP, but the good news is that your actual level is optimal. Looks like you beat your genetic odds. You can learn more about hsCRP in your blood results.



GGT

Your liver removes toxins from your body and plays an important role in metabolizing fats, carbohydrates, proteins, and drugs. Liver function tests look at various enzymes. GGT (glutamyl transpeptidase) is an enzyme that plays an important role in metabolizing toxins. Increased levels of GGT can indicate disease or damage to the liver, bile ducts, or pancreas.

This report checks a panel of up to 26 genetic markers (depending on your individual DNA results) that can affect GGT levels, and compares your potential level with your actual level.

Genetic risk analysis

Reduced
risk of higher GGT

Your analysis is based on 25 of 26 markers. See page 44 for details.

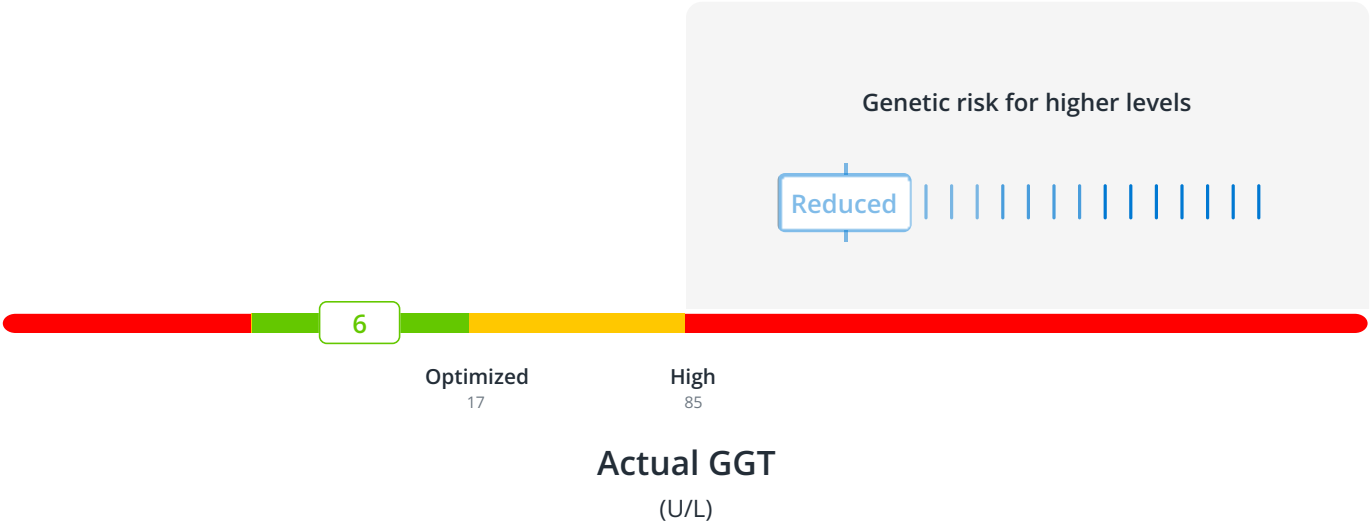
Actual blood analysis

Optimized
GGT (6 U/L)

Blood test result from Dec 14, 2022.

How do these results connect?

Your genetic risk of having higher GGT is reduced, and your blood GGT level looks good! Congrats on living up to your genetic potential. You can learn more about GGT in your blood results, including healthy foods to keep it optimized.

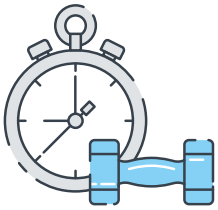


Performance

Like so much else, athletic performance is a combination of genetic potential, training, and environmental factors.

Our genes can affect performance in many ways. Some of us are naturally better at endurance sports, like long-distance running; others are better at power sports that use short bursts of energy, like weight lifting or short-distance sprinting.

Your genes can also affect your body's capacity to carry oxygen, how easily you heal from injury, and how flexible you are. These factors — and more — play a role in how well your body performs when pushed hard.



Performance factors in this report

- Athlete type
- Testosterone (total and free)
- Oxygen capacity (hemoglobin and vitamin B12)

Athlete type

What type of athlete are you? Are you drawn to century rides, marathons, and other endurance sports? Or do you prefer workouts that use quick bursts of speed and power, like tennis, weight lifting and basketball?

This report looks at a group of six genetic variants that influence endurance and six that affect power, and predicts what type of athletic activity you're likely to excel at.

Genetic endurance analysis

Average
potential to excel at endurance activities

Your analysis is based on 5 of 6 markers. See page 42 for details.

Genetic power analysis

Average
potential to excel at power activities

Your analysis is based on 6 of 6 markers. See page 42 for details.

Genetic potential for endurance



Genetic potential for power



How do these results connect?

According to your genetic data, you appear to have a mix of both endurance and power qualities. This would make you a well-rounded athlete, likely to do well at many different types of activities.

Well-rounded athlete
Endurance:Power score ratio: 58.3:50 = 1.2

Total testosterone

Testosterone is important for overall health, sexual function, and fertility. It's also important for athletic performance because testosterone helps build muscle and bone, improve strength, and form red blood cells.

This report looks at up to two genetic markers (depending on your individual DNA results) that can affect the amount of testosterone you produce, and compares your potential level with your actual total testosterone.

Genetic risk analysis

Average
potential for higher testosterone levels

Your analysis is based on 2 of 2 markers. See page 42 for details.

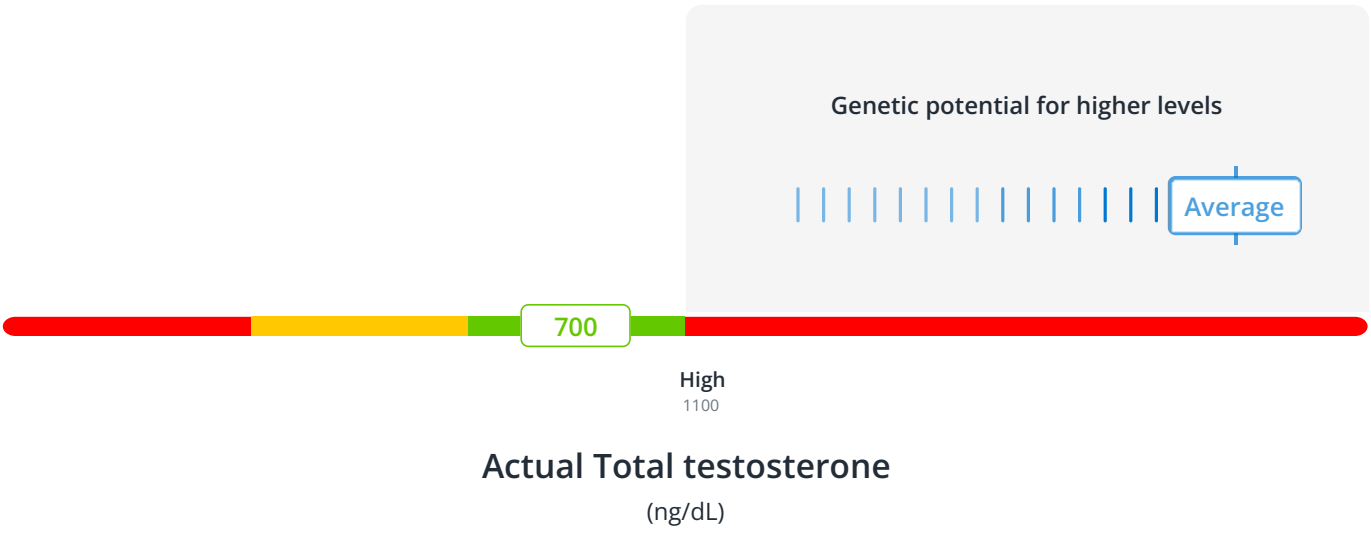
Actual blood analysis

Optimized
Total testosterone (700 ng/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your blood testosterone level is optimized, and you have an average genetic potential for higher testosterone levels. You can learn more about total testosterone in your blood results.



Free testosterone

Much of the testosterone in your body is bound to a protein called SHBG, and only about 1 to 2 percent circulates freely in your blood.

This report looks at a single genetic variant that can affect the amount of free testosterone in your blood, and compares your potential level with your actual free testosterone.

Genetic risk analysis

Average
potential for higher free testosterone levels

Analysis based solely on variant rs5934505. See page 47 for details.

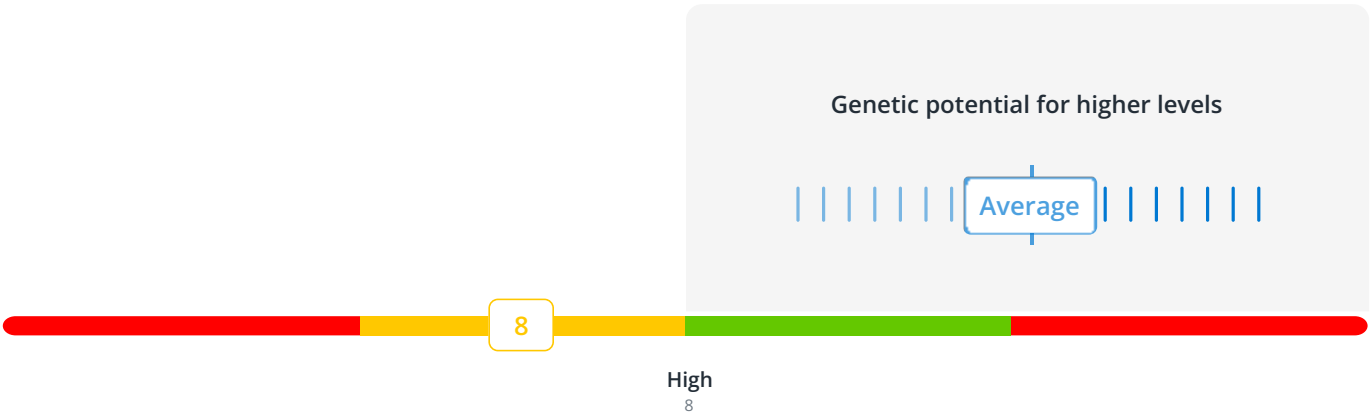
Actual blood analysis

Needs work
Free testosterone (7.596 ng/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your blood free testosterone level is below optimal, but your genetic potential for higher free testosterone is average. Making lifestyle and exercise changes is likely to help improve your free testosterone. Check your blood results for personalized recommendations to optimize your free testosterone.



Hemoglobin

Your red blood cells are packed with hemoglobin, the oxygen transporter in red blood cells. The iron in the hemoglobin protein binds oxygen and carries it from the lungs to the rest of the body, so it's a key factor in athletic performance.

This report looks at a single genetic variant that can affect your hemoglobin level, and compares your potential level with your actual level.

Genetic risk analysis

Average
risk of lower hemoglobin

Analysis based solely on variant rs855791. See page 47 for details.

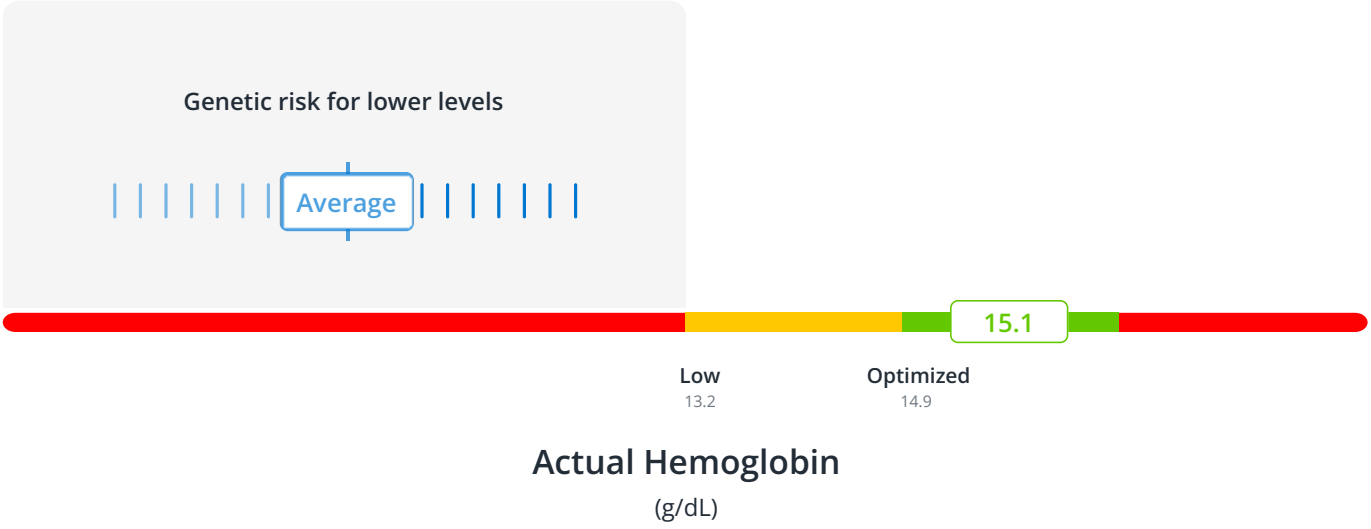
Actual blood analysis

Optimized
Hemoglobin (15.1 g/dL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your risk for lower hemoglobin is average, and your actual blood level is optimal — all good things. You can learn more about hemoglobin in your blood results, including healthy foods to keep it optimized.



Vitamin B12

Vitamin B12 plays an important role in red blood cell production. Since red blood cells carry oxygen to your muscles, your B12 level can be a factor in performance.

This report looks at a single genetic variant that can affect your B12 level, and compares your potential level with your actual level.

Genetic risk analysis

Elevated
potential of higher vitamin B12

Analysis based solely on variant rs602662. See page 47 for details.

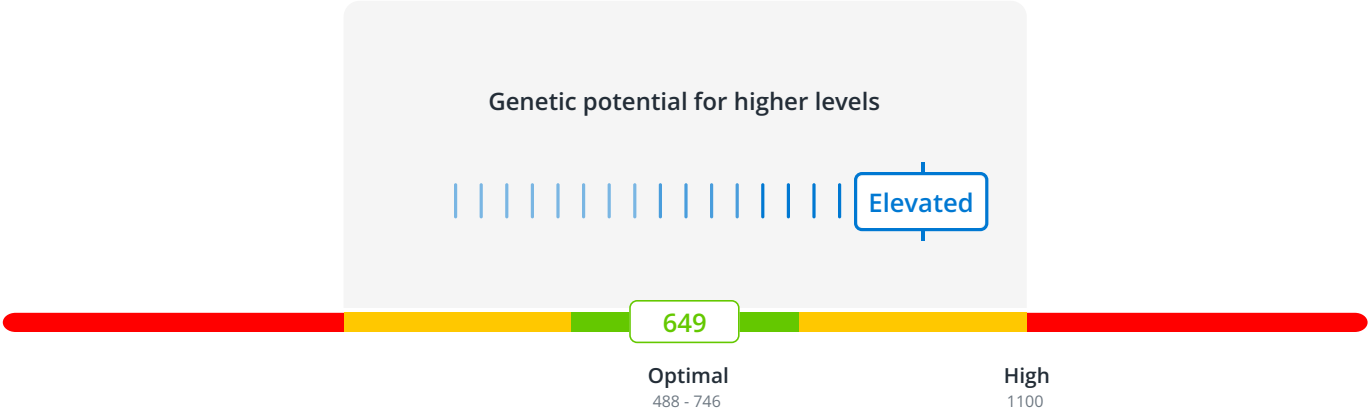
Actual blood analysis

Optimized
Vitamin B12 (649 pg/mL)

Blood test result from Dec 14, 2022.

How do these results connect?

Your genetic variant is usually linked to slightly higher B12 levels than average, and your actual level is in the optimal range. Great job! You can learn more about Vitamin B12 in your blood results.



Actual Vitamin B12
(pg/mL)

Sensitivities

Many people have food sensitivities, or trouble digesting certain foods. People with lactose intolerance have trouble digesting lactose, a type of sugar found in milk and dairy products. Those with gluten intolerance, aren't able to digest gluten, a family of proteins found in certain grains including wheat.

Allergies are immune reactions to certain foods, drugs, pollens, or other allergens (anything that can cause an allergy). Peanut and tree nut allergies can be very serious, and the risk of developing a peanut allergy may be partly genetic.



Sensitivity factors in this report

- Gluten intolerance
- Lactose intolerance
- Peanut allergy

Gluten intolerance

We think of grains as sources of carbohydrates, but they also have proteins — and sometimes those proteins can cause trouble.

Many grains have gluten, a family of proteins in wheat, rye, and barley. A genetic variation plays a role in your chances of developing an intolerance.

This report looks at a single genetic variant that can affect your odds of a gluten intolerance.

Genetic risk analysis

Elevated
risk of gluten intolerance

Analysis based solely on variant rs2187668. See page 48 for details.

What does this mean?

You have a gene variant that increases your risk of gluten sensitivity. Not everyone with this variant will develop a gluten intolerance or allergy. If you have any food sensitivities, you'll want to get tested to determine whether or not you should avoid gluten.

Lactose intolerance

In order to digest lactose, a type of milk sugar, we need to make an enzyme called lactase.

Worldwide, most people stop producing lactase after early childhood, but the rates vary widely in different populations — from 90 percent in some Asian and Native American people to less than 10 percent in many northern Europeans. In the United States, about 25 percent of people are lactose intolerant.

This report looks at a single genetic variant that can affect your odds of lactose intolerance.

Genetic risk analysis

Average
risk of lactose intolerance

Analysis based solely on variant rs4988235. See page 48 for details.

What does this mean?

Good news — based on a single gene variant, you're not likely to develop lactose intolerance. There are no guarantees, of course, so if you develop any food sensitivities make sure to rule out dairy.

Peanut allergy

Your genes can contribute to your chance of developing a peanut allergy. As with so many things, your environment plays a big role in whether or not you develop an allergy.

While early childhood is a critical time for your immune system, it's also possible to develop new allergies as an adult, including peanut allergy.

This report looks at a single genetic variant that can affect your odds of a peanut allergy.

Genetic risk analysis

Elevated
risk of a peanut allergy

Analysis based solely on variant rs7192. See page 48 for details.

What does this mean?

You have a gene variant that makes you more likely to have a peanut allergy, but your chances of actually having a peanut allergy are still very low. The average risk of a peanut allergy is 1.5%; your potential risk is only 3%. If you have any food sensitivities, you'll want to get tested to determine whether or not you should avoid peanuts.

Terms & definitions

Allele - Any of the forms in which a gene for a specific trait can occur. In humans, 2 alleles for each gene are inherited; one allele from the mother and one allele from the father. These paired alleles are represented by a combination of the DNA nucleotide letters (A, C, G, T).

Biomarkers - Substances in the blood that indicate your body's condition.

Chromosome – DNA is organized into pieces called chromosomes. Humans have 23 pairs of chromosomes, with a copy from each parent. A person's genes are stored along their chromosomes at specific positions.

DNA – Deoxyribonucleic acid (DNA) is present in nearly all living organisms and contains the instruction manual for how a body works. It carries a cell's genetic information and hereditary traits within its two nucleotide strands – the twisted, ladderlike "double helix" that is commonly seen in visual representation.

Gene - Genes contain the step-by-step instructions that tell the body's cells how to function and what traits to express. Each genetic trait generally has 2 alleles, one allele inherited from each parent. Humans have roughly 20,000 genes. While all humans share the same set of genes, our biological differences arise from the variations in the inherited alleles.

Genotype - In this document, genotype refers to a particular gene or set of genes as characterized by a person's unique allele combination, or genetic variant.

Normal zone - The level of a biomarker generally considered healthy, also called the reference range.

Nucleotide - A group of molecules, also known as bases, that form the building blocks of DNA when linked together. DNA is comprised of 4 nucleotides: adenine (A), cytosine (C), guanine (G), and thymine (T).

Optimal zone – InsideTracker calculates your personalized optimal zone based on your age, gender, ethnicity, exercise, and daily habits. The optimal zone is the best range of a specific biomarker for achieving overall health and performance.

rsID – An rsID is a unique identifying number used by researchers and databases to refer to specific SNPs.

SNP – Single nucleotide polymorphism (SNP) is the most common type of genetic variation among humans. Each SNP represents a difference in a single nucleotide (A, C, G, T). When a SNP occurs, it can lead to differences in appearance, health or other traits. Some SNPs have no observable outcome.

Variant – Any alteration in the DNA sequence. Genetic variants are what make humans unique from one another. SNPs are common genetic variants.

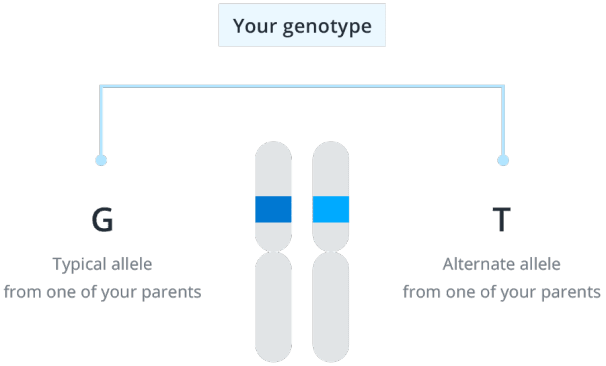
Genetic data

Single genetic markers

Single genetic markers represent your genotype for a particular genetic trait. For each genetic trait, you inherit one version, or allele, from each of your parents.

Typical allele

Alternate allele



Genetic data

Your genetic data table shows your genotype for each gene, which is identified by its rsID number. Your genotype is characterized by an allele combination. The alternate allele is the allele that has an effect on your genetic risk analysis.

* Indicates a missing SNP from your DNA data. DNA sampling and analysis is complex and subject to occasional technical errors. Missing some data is not unusual, and it won't affect the accuracy of your genetic analysis.

rsID number	Your genotype	Alternate allele
rs6834314	*	A
rs2954021	*	A
rs10883437	AA	T
rs738409	CG	G

Calcium

rsID number	Your genotype	Alternate allele
rs1801725	GG	G
rs1550532	CG	G
rs780094	CC	C
rs10491003	CC	C
rs7481584	AA	A
rs7336933	AG	A
rs1570669	AG	A

Athlete type: endurance

rsID number	Your genotype	Alternate allele
rs4343	AG	A
rs1815739	TC	T
rs11549465	CC	C
rs4253778	CG	G
rs660339	AG	A
rs2010963	*	C

Athlete type: power

rsID number	Your genotype	Alternate allele
rs4343	AG	G
rs1815739	TC	C
rs699	AG	G
rs17602729	GG	G
rs1801131	TT	G
rs4880	AG	G

Total testosterone

rsID number	Your genotype	Alternate allele
rs12150660	TG	T
rs6258	CC	T

Fasting glucose

rsID number	Your genotype	Alternate allele
rs7708285	AA	G
rs11715915	CC	C
rs17762454	TC	T
rs2657879	AA	G
rs340874	CC	C
rs10747083	*	A
rs7651090	AG	G
rs2302593	*	C
rs9368222	AC	A
rs6943153	CC	T
rs10814916	AC	C
rs6072275	GG	A
rs3829109	*	G
rs3783347	TG	G
rs576674	AA	G
rs4869272	CC	T
rs11603334	*	G
rs174576	AC	C
rs11619319	AA	G
rs11607883	AG	G
rs7903146	TT	T
rs4502156	CC	T
rs11708067	GG	A
rs11039182	TT	T
rs10811661	TT	T
rs1280	TT	T
rs983309	GG	T
rs780094	CC	C
rs10885122	GG	G
rs2191349	TG	T
rs11558471	AA	A
rs6113722	GG	G
rs16913693	TT	T
rs2908289	GG	A
rs560887	TC	C
rs10830963	CG	G

Diastolic blood pressure

rsID number	Your genotype	Alternate allele
rs2932538	GG	G
rs13082711	TT	C
rs419076	TC	T
rs13107325	CC	C
rs13139571	AC	C
rs1173771	AG	G
rs11953630	AC	C
rs1799945	GG	G
rs805303	AG	G
rs4373814	GG	C
rs932764	AA	G
rs7129220	AG	A
rs633185	CG	C
rs2521501	*	T
rs17608766	TT	C
rs1327235	AG	G
rs6015450	AG	G
rs17367504	AA	A
rs3774372	TT	C
rs1458038	TT	T
rs1813353	TC	T
rs4590817	GG	G
rs11191548	TT	T
rs381815	CC	T
rs17249754	GG	G
rs3184504	TT	T
rs10850411	TC	T
rs1378942	CC	C
rs12940887	TC	T

Systolic blood pressure

rsID number	Your genotype	Alternate allele
rs2932538	GG	G
rs13082711	TT	C
rs419076	TC	T
rs13107325	CC	C
rs13139571	AC	C
rs1173771	AG	G
rs11953630	AC	C
rs1799945	GG	G
rs805303	AG	G
rs4373814	GG	C
rs932764	AA	G
rs7129220	AG	A
rs633185	CG	C
rs2521501	*	T
rs17608766	TT	C
rs1327235	AG	G
rs6015450	AG	G
rs17367504	AA	A
rs3774372	TT	C
rs1458038	TT	T
rs1813353	TC	T
rs4590817	GG	G
rs11191548	TT	T
rs381815	CC	T
rs17249754	GG	G
rs3184504	TT	T
rs10850411	TC	T
rs1378942	CC	C
rs12940887	TC	T

GGT

rsID number	Your genotype	Alternate allele
rs1497406	AA	G
rs12145922	AC	A
rs1335645	AA	A
rs10908458	CC	T
rs1260326	CC	T
rs13030978	TC	T
rs2140773	AC	A
rs10513686	GG	A
rs4547811	TT	C
rs6888304	AA	A
rs4074793	AA	G
rs9296736	CC	T
rs17145750	TC	C
rs754466	*	T
rs7310409	GG	G
rs944002	AA	G
rs339969	AA	A
rs8038465	TC	T
rs4581712	CC	A
rs9913711	CC	C
rs12968116	CC	C
rs4503880	CC	T
rs516246	TC	T
rs1076540	CC	C
rs2739330	TC	T
rs2073398	CC	G

HDL cholesterol

rsID number	Your genotype	Alternate allele
rs4660293	AG	G
rs1689800	AA	G
rs4846914	AG	G
rs1042034	TT	T
rs12328675	TC	T
rs2972146	TT	T
rs13107325	CC	T
rs6450176	GG	A
rs2814944	GG	A
rs605066	TC	C
rs1084651	AG	A
rs17145738	TC	C
rs4731702	TC	C
rs9987289	GG	A
rs12678919	AA	A
rs2293889	*	T
rs2954029	AA	A
rs581080	CC	G
rs1883025	TT	T
rs2923084	AA	G
rs3136441	TT	T
rs174546	TC	T
rs964184	CC	G
rs7134375	CC	C
rs11613352	TC	C
rs7134594	TT	C
rs4759375	CC	C
rs4765127	TG	G
rs838880	TC	T
rs1532085	GG	G
rs2652834	GG	A
rs3764261	AC	C
rs16942887	GG	G
rs2925979	TC	T
rs881844	CG	C
rs4148008	CC	G
rs4129767	GG	G
rs7241918	TT	G
rs12967135	GG	A
rs7255436	AC	C
rs737337	*	C
rs386000	*	G
rs1800961	TC	T
rs6065906	TT	C
rs181362	CC	T

LDL cholesterol

rsID number	Your genotype	Alternate allele
rs12027135	AA	T
rs2479409	AA	G
rs2131925	TT	T
rs629301	TG	T
rs2642442	TT	T
rs514230	TT	T
rs1367117	AG	A
rs4299376	TG	G
rs12916	TT	C
rs6882076	TC	C
rs3757354	TC	C
rs1800562	GG	G
rs3177928	GG	A
rs9488822	AT	A
rs1564348	TC	C
rs12670798	TC	C
rs2072183	GG	C
rs9987289	GG	G
rs2081687	TC	T
rs2954029	AA	A
rs11136341	AG	G
rs9411489	*	T
rs2255141	GG	A
rs174546	TC	C
rs964184	CC	G
rs11220462	AG	A
rs11065987	AG	A
rs1169288	AA	C
rs8017377	GG	A
rs3764261	AC	C
rs2000999	GG	A
rs7206971	AG	A
rs6511720	TG	G
rs10401969	TT	T
rs2902940	AA	A
rs6029526	TT	A

CRP

rsID number	Your genotype	Alternate allele
rs4420638	AA	A
rs2794520	CC	C
rs1183910	GG	G
rs10521222	CC	C
rs4420065	TC	C
rs1800961	TC	C
rs4129267	TC	C
rs1260326	CC	T
rs9987289	GG	G
rs13233571	TC	C
rs6734238	GG	G
rs12239046	TC	C
rs12037222	AG	A
rs13962	GG	G
rs10745954	AG	A
rs2836878	GG	G
rs4903031	AG	G
rs340029	TT	T

Magnesium

rsID number	Your genotype	Alternate allele
rs4072037	TT	C
rs13146355	GG	G
rs11144134	TT	T
rs3925584	CC	C
rs448378	AG	G

Triglycerides

rsID number	Your genotype	Alternate allele
rs2131925	TT	T
rs4846914	AG	G
rs1042034	TT	T
rs1260326	CC	T
rs10195252	TC	T
rs2972146	TT	T
rs645040	TT	T
rs442177	TT	T
rs9686661	CC	T
rs6882076	TC	C
rs2247056	TC	C
rs13238203	CC	C
rs17145738	TC	C
rs11776767	CC	C
rs1495741	AG	G
rs12678919	AA	A
rs2954029	AA	A
rs10761731	AT	A
rs2068888	GG	G
rs174546	TC	T
rs964184	CC	G
rs11613352	TC	C
rs4765127	TG	G
rs2412710	GG	A
rs2929282	AA	T
rs1532085	GG	A
rs11649653	CC	C
rs3764261	AC	C
rs10401969	TT	T
rs6065906	TT	C
rs5756931	TT	T

Total cholesterol

rsID number	Your genotype	Alternate allele
rs12027135	AA	T
rs2479409	AA	G
rs2131925	TT	T
rs7515577	AA	A
rs629301	TG	T
rs2642442	TT	T
rs514230	TT	T
rs1367117	AG	A
rs1260326	CC	T
rs4299376	TG	G
rs7570971	CC	A
rs2290159	GG	G
rs12916	TT	C
rs6882076	TC	C
rs3757354	TC	C
rs1800562	GG	G
rs3177928	GG	A
rs2814982	CC	C
rs9488822	AT	A
rs1564348	TC	C
rs12670798	TC	C
rs2072183	GG	C
rs9987289	GG	G
rs1495741	AG	G
rs2081687	TC	T
rs2737229	AC	A
rs2954029	AA	A
rs11136341	AG	G
rs581080	CC	C
rs1883025	TT	C
rs9411489	*	T
rs2255141	GG	A
rs10128711	CC	C
rs174546	TC	C
rs964184	CC	G
rs7941030	TC	C
rs11220462	AG	A
rs11065987	AG	A
rs1169288	AA	C
rs1532085	GG	A
rs3764261	AC	A
rs2000999	GG	A
rs7206971	AG	A
rs7241918	TT	T
rs6511720	TG	G
rs10401969	TT	T
rs492602	AG	G
rs2277862	CC	C
rs2902940	AA	A
rs6029526	TT	A
rs1800961	TC	C

Free testosterone

rsID number	Your genotype	Alternate allele
rs5934505	T	C

Lactose intolerance

rsID number	Your genotype	Alternate allele
rs4988235	AA	G

Hemoglobin

rsID number	Your genotype	Alternate allele
rs855791	GG	A

Gluten intolerance

rsID number	Your genotype	Alternate allele
rs2187668	TC	T

Body mass index

rsID number	Your genotype	Alternate allele
rs1421085	TC	C

Peanut allergy

rsID number	Your genotype	Alternate allele
rs7192	TG	T

High saturated fat diet

rsID number	Your genotype	Alternate allele
rs5082	AG	G

Vitamin B12

rsID number	Your genotype	Alternate allele
rs602662	AG	A

Type of diet (weight loss)

rsID number	Your genotype	Alternate allele
rs7903146	TT	T

Vitamin D

rsID number	Your genotype	Alternate allele
rs2282679	TT	G

White blood cells (WBC)

rsID number	Your genotype	Alternate allele
rs8078723	TC	C

Sleep duration

rsID number	Your genotype	Alternate allele
rs62158211	TG	T

Caffeine consumption

rsID number	Your genotype	Alternate allele
rs4410790	CC	C