SelfDecode™

IGF-1

Biohacker Report

REPORT CATEGORY

BLOOD SUGAR CONTROL

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

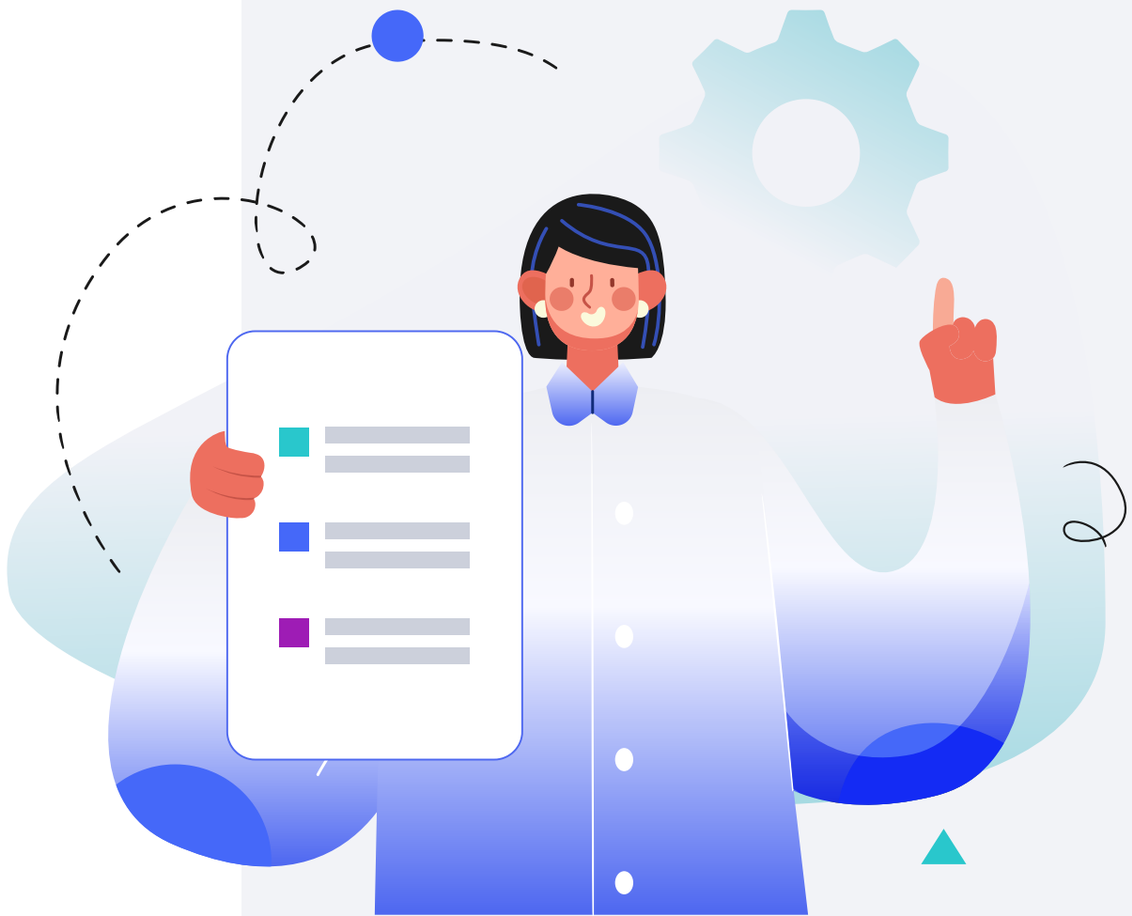
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

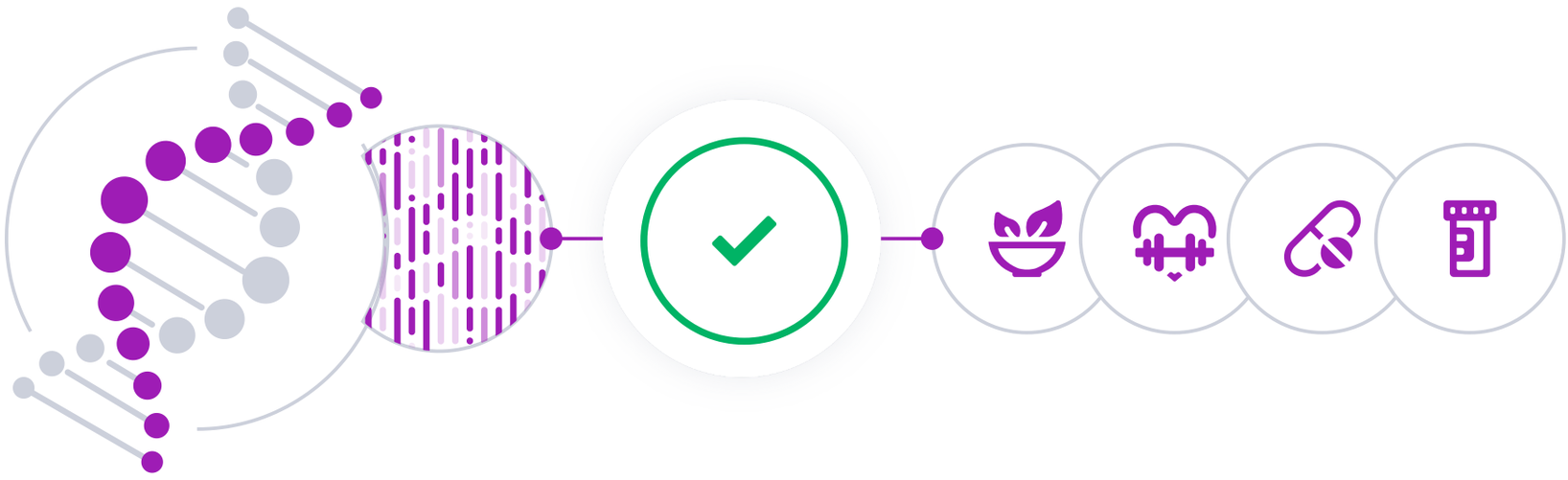


DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

How this works

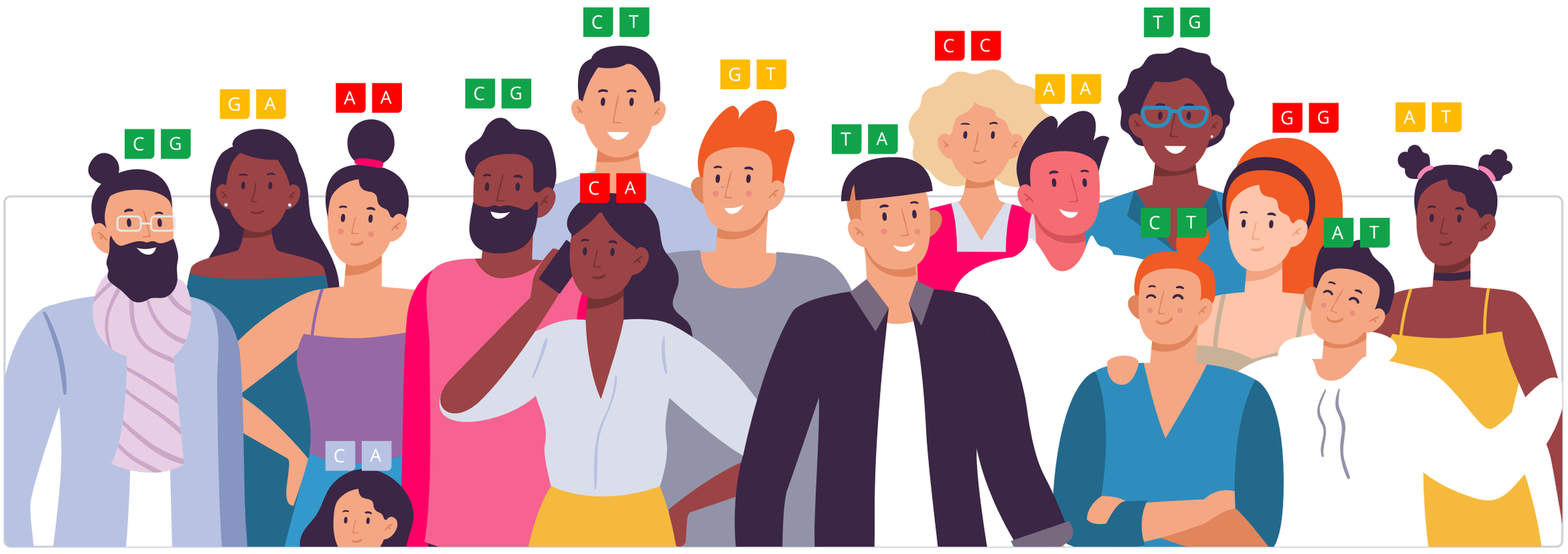
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



Similarly, our Trait Reports look at how your DNA influences your traits.

Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

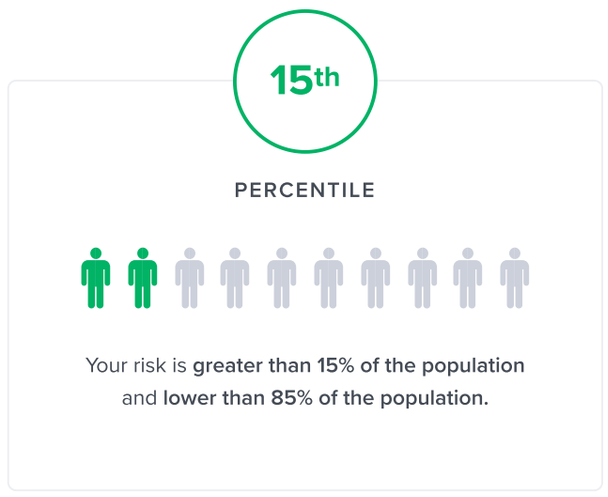
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



We use artificial intelligence and machine learning to analyze all this information. We then summarize your results as a risk score or display it on a gauge.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:

In total, we analyze up to 83 million genetic variants.



Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:

Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):

Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

5 / 5

Recommendations that are considered effective and generally recommended by experts and medical bodies.

4 / 5

Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.

3 / 5

Recommendations that are considered possibly effective and have many studies supporting them

2 / 5

Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.

1 / 5

Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, afew large clinical trials, or a meta-analysis).

Medium-quality

Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).

Low-quality

Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).

Indirect

A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).

In theory

A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

Insulin-Like Growth Factor 1 (IGF-1) is a hormone that looks similar to insulin – that is where its name comes from. However, IGF-1 has a different function. It works with growth hormone to help cells multiply and regenerate.

Growth hormone is made by the pituitary gland. It signals the liver to produce IGF-1. Based on what the body needs, IGF-1 then stimulates the growth of cells throughout the body, leading to [R, R, R, R, R]:

- Growth and development (in the womb and through adolescence)
- Strengthening of bones and muscles
- Wound healing

Doctors use IGF-1 to estimate the amount of growth hormone a person has, because they can't measure growth hormone levels accurately. They use IGF-1 to [R, R]:

- Help diagnose growth hormone deficiency or excess
- Check if the pituitary gland is working normally
- Monitor growth hormone treatment

Abnormally low or elevated IGF-1 levels may signal a health issue.

Factors Affecting IGF-1 Levels

Insulin-Like Growth Factor 1 (IGF-1) is a hormone that looks similar to insulin – that is where its name comes from. However, it has a different function. It works with growth hormone to help cells multiply and regenerate. Growth hormone signals the liver to produce IGF-1. Based on what the body needs, IGF-1 then stimulates the growth of cells throughout the body [R, R, R, R, R].

You may have a genetic predisposition for lower or higher IGF-1 within the normal range. Around 40% of differences in IGF-1 levels are estimated to be due to genetics [R].

Other factors that influence IGF-1 include [R, R, R, R, R, R, R, R]:

- Age
- Calorie intake
- Intake of dietary protein and dairy
- Physical activity

Among other crucial roles in the body, IGF-1 supports hair growth. People with lower IGF-1 levels may be more prone to hair loss [R].

TYPICAL LEVELS

Predisposed to typical IGF-1 levels based on 1,014,257 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ADH1C	rs283413	CC
ADH1B	rs1229984	TC
APOH	rs1801689	CA
SSTR5	rs121917877	CC
GH1	rs5388	CC
PAH	rs118092776	CC
ZNF12	rs199761265	GG
IGFBP3	rs9282734	TT
ABHD14A-ACY1	rs121912698	CC
MAP1A	rs55707100	CC
IGFALS	rs34680334	GG
HNF1A	rs1800574	CC
EIF3J	rs151291132	AA
STARD9	rs202077402	AA
PAPPA2	rs10913200	GG
SSTR5	rs118125269	CC
SPSB3	rs35816944	GG
JAK2	rs41316003	GG
LCMT2	rs2412710	GG
CAMKK2	rs113838402	CC
/	rs34451306	AA
/	rs71545950	CC
/	rs34243925	GG
SYNE2	rs36215895	CC
/	rs111583052	GG
WASHC3	rs79579070	CC
GNPTAB	rs118008365	AA
FAHD1	rs117959643	GG
/	rs17200751	CC
TRPM5	rs117693013	GG
FAHD1	rs118002512	AA

GENE	SNP	GENOTYPE
/	rs117865101	CC
NUBP2	rs72761177	GG
IGFBP3	rs117729644	CC
IGF1	rs77991917	GG
CRAMP1	rs61746451	CC
HS3ST6	rs61742747	GG
TH	rs116862756	AA
CBR1	rs73370485	AA
LMF1	rs143076454	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE
1	Dietary Protein	
2	Whey Protein	25 g
3	Dairy Products	
4	Strength Training	1 hour
5	Soy	
6	Sleep for 7+ Hours	
7	Zinc	15 mg
8	Dietary Calcium	
9	DHEA (Dehydroepiandrosterone)	25 mg
10	Soy Protein	20 g
11	Omega-3 (Fish Oil)	2000 mg
12	Maintain Optimal Vitamin D Levels	1000 iu
13	Yoga	30 minutes
14	Mindfulness-Based Stress Reduction (MBSR)	2 hours
15	Dietary Magnesium	
16	Meditation	30 minutes
17	Dietary Vitamin C	
18	Selenium Supplements	50 mcg
19	Lutein And Zeaxanthin	
20	Acetyl-L-Carnitine	500 mg
21	Dietary Lycopene	
22	Dietary Beta-Carotene	

1

Dietary Protein

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Include a variety of protein sources such as meat, fish, eggs, dairy, beans, and nuts in your diet every day, aiming for at least 0.8 grams of protein per kilogram of body weight. For more active individuals or those looking to build muscle, increase intake to 1.2 to 2.0 grams per kilogram of body weight daily, spread out over all meals to maximize absorption.

Description

Protein is essential for building and repairing tissues, supporting muscle growth, and maintaining overall bodily functions. Adequate protein intake is crucial for overall health and well-being.

Foods that are high in protein include:

- Eggs
- Nuts
- Beef
- Chicken
- Fish
- Yogurt
- Tofu
- Pork
- Cottage cheese

How it helps

Higher protein intake from food or supplements may raise IGF-1 levels. Protein may help by increasing IGF-1 production [R].

Soy protein and whey protein may also help increase IGF-1 [R, R, R, R, R].

2

Whey Protein

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Mix one scoop (approximately 25-30 grams) of whey protein powder with 8-12 ounces of water, milk, or your preferred beverage. Consume this drink 1-2 times per day, ideally post-workout or as a meal replacement.

TYPICAL STARTING DOSE

25 g

Description

Whey protein is a complete protein derived from milk during cheese production. It is rich in essential amino acids and is used to support muscle recovery, promote muscle growth, and provide a convenient protein source for athletes and fitness enthusiasts.

Whey is the liquid that separates from milk when cheese is made. Whey protein is full of amino acids (protein building blocks) that the body needs [R, R].

Whey protein usually comes in the form of a powder that can be added to soft foods and drinks. People often use it to help with [R, R]:

- Athletic performance
- Nutritional deficiencies

How it helps

Higher intake of dietary protein may increase IGF-1 levels [R].

A two-year study on older postmenopausal women demonstrated that an additional 30g of whey protein daily significantly increased serum IGF-1 levels by 7.3-8% compared to a placebo group. Whey protein also increased IGF-1 levels in elderly women with recent hip fractures and nursing home residents [R, R, R].

A study on strength-trained males found that supplementation with carbs and whey protein post-exercise significantly elevated IGF-1 levels after 24 hours [R].

3

Dairy Products

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate 2-3 servings of low-fat or fat-free dairy products into your daily diet. One serving could be 8 ounces of milk, 1 cup of yogurt, or 1.5 ounces of cheese. Choose options that are low in added sugars and consume as part of balanced meals or snacks throughout the day.

Description

Dairy products, such as milk, yogurt, and cheese, are rich sources of calcium and protein. They are essential for bone health, providing nutrients that support strong bones and teeth, as well as overall nutritional well-being.

Dairy products are made from milk. They include [R]:

- Cheese
- Yogurt
- Kefir
- Butter
- Cream

Dairy products contain high levels of calcium. Calcium helps build strong bones [R].

How it helps

People who consume dairy, especially milk, may have higher levels of IGF-1 [R, R, R, R].

Supplements with whey or casein, two proteins from milk, may also help rise IGF-1 levels [R, R, R, R].

4

Strength Training

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

Description

Strength training, also called resistance or *anaerobic* training, contracts the muscles against an external resistance for short periods of time. This helps gain muscle strength, tone, and mass. This can include activities like weight lifting, pushups, and crunches.

Strength training, also known as resistance training, is a type of physical exercise that uses resistance to build strength, anaerobic endurance, and size [R]. Some of the most common strength training methods include [R]:

- Weight lifting
- Bodyweight exercises like push-ups, pull-ups, squats, and lunges.
- Resistance bands
- Plyometrics or explosive force exercises

The benefits of strength training are numerous, and include [R]:

- Increased muscle strength
- Improved bone health
- Reduced risk of injury
- Improved balance and coordination
- Enhanced mood
- Boost metabolism

Consult with a doctor before starting any new exercise program, especially if you have any health conditions.

How it helps

Resistance training significantly increased IGF-1 levels in several meta-analyses. The effects are more pronounced in people **older than 60 years and in women** [R, R, R, R].

Interestingly, some studies observed the opposite effect in people under 60 years of age [R, R].

Exercise may also **reduce** IGF-1 in women with breast cancer [R].

5

Soy

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Incorporate soy-based products such as tofu, soy milk, and edamame into your daily diet. Aim for at least one serving per day, equivalent to about a cup of soy milk, a half-cup of cooked soybeans, or a 3-ounce piece of tofu.

Description

Soy is a legume native to East Asia, and its health benefits include being a source of plant-based protein, fiber, and various vitamins and minerals. It is known for its potential to support heart health, reduce cholesterol levels, and provide essential nutrients in vegetarian and vegan diets.

Soy is a common food in many cuisines around the world, especially Asian cuisines [R].

It's a great source of [R, R]:

- Plant-based protein
- Fiber
- Omega-3 fats
- Antioxidants (isoflavones)

Soy-based foods include [R]:

- Soy beverages
- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Soy is a source of high-quality protein, which helps increase IGF-1 levels.

In two meta-analyses, soy intake significantly increased plasma IGF-1 levels [R, R].

Interestingly, combining it with seaweed may reduce this effect of soy by up to 40% [R].

Soy protein (40 g/day for 12 weeks) may help increase IGF-1 better than casein, according to one study [R].

However, some studies didn't find this effect of soy or its protein [R, R].

6

Sleep for 7+ Hours

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Ensure you allocate enough time in your schedule to achieve a minimum of 7 hours of sleep each night. This might involve going to bed earlier or adjusting your evening routine to promote relaxation and make it easier to fall asleep.

Description

Optimizing sleep involves adopting healthy sleep habits and creating a sleep-conducive environment to ensure restorative and sufficient sleep duration. It supports cognitive function, mood stability, and overall physical health. Most experts recommend getting **at least 7 hours of good-quality sleep each night**.

Sleep supports your body and mind [R, R]. More precisely, sleep helps:

- Support brain health [R, R]
- Maintain a healthy weight and appetite [R, R, R]
- Regulate blood pressure [R, R]
- Balance blood sugar [R, R]

Ways to sleep better include [R]:

- Reducing your bright light exposure (screen time) in the evenings
- Sticking to a regular sleep schedule
- Avoiding hunger or large meals before bed
- Avoiding nicotine, caffeine, and alcohol before bed
- Maintaining a sleep area that's cool, dark, and quiet

How it helps

Higher IGF-1 levels are associated with increased delta sleep (deep sleep) in healthy older men, indicating that better sleep quality correlates with higher IGF-1 levels [R].

Sleep deprivation leads to a decrease in IGF-1 levels, which is linked to cognitive deficits and increased neuroinflammation. Sleep extension (longer sleep duration) increases IGF-1 concentrations before or after sleep deprivation in healthy young men [R, R, R].

7

Zinc

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

15 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

Zinc is an essential mineral. Your body needs it to [R, R]:

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [R].

Adults should get **8-11 mg of zinc** per day [R].

How it helps

In a meta-analysis, zinc supplementation significantly increased IGF-1 levels, especially at doses of ≤10 mg/day and durations of ≥8 weeks. However, most included studies involved children [R].

8

Dietary Calcium

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Consume 1,000-1,200 mg of calcium daily through dietary sources such as dairy products (milk, yogurt, cheese), green leafy vegetables (kale, broccoli), and fortified foods (orange juice, plant-based milks). Adults under 50 need 1,000 mg per day, while those over 50 should aim for 1,200 mg per day.

Description

Dietary calcium is a mineral found in dairy products, leafy greens, and fortified foods. It is essential for bone health, muscle function, and nerve transmission.

Calcium is the most abundant mineral in the human body. It is vital for the bones, heart, muscles, and nervous system [R].

Your body gets calcium from food and needs vitamin D to help absorb it. Calcium can be found in a variety of foods, including [R]:

- Dairy products
- Green, leafy vegetables
- Fish with edible soft bones (e.g., sardines)
- Calcium-fortified foods and beverages

How it helps

Increases in dietary calcium and protein intake, especially from dairy, could increase IGF-1 levels [R, R].

Several studies have found a positive link between calcium levels and IGF-1 levels [R, R].

9

DHEA (Dehydroepiandrosterone)

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take 25-50 mg of DHEA orally with water daily, preferably in the morning to mimic the body's natural rhythm of DHEA production. It is advisable to start at the lower dose to assess tolerance and adjust as needed. Consult a healthcare provider for personalized advice and before starting a new supplement regimen.

TYPICAL STARTING DOSE

25 mg

Description

DHEA is a hormone produced by the adrenal glands and has been used as a dietary supplement for various purposes, including supporting hormonal balance and energy levels. It may have potential benefits for specific individuals, but its use should be supervised by a healthcare professional due to its hormonal nature.

DHEA is a steroid hormone produced primarily by the adrenal glands. It is also produced to a much lesser extent by the testes and ovaries and, possibly, the brain [R, R].

DHEA helps make the sex hormones testosterone and estrogen. DHEA is important for [R, R, R, R]:

- Mood
- Immunity
- Muscle strength
- Bone health
- Skin health

DHEA is released in response to stress. In fact, one of DHEA's important roles is to protect against the adverse effects of prolonged and excessive exposure to cortisol, the stress hormone [R, R, R].

How it helps

In a meta-analysis, DHEA supplementation (50 mg/day) significantly increased serum IGF-1 levels in women, older adults, and healthy people [R].

10

Soy Protein

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Include 20 grams of soy protein in your daily diet. This can be achieved by consuming soy-based products such as tofu, soy milk, or soy nuts throughout the day.

TYPICAL STARTING DOSE

20 g

Description

Soy protein is a high-quality plant-based protein derived from soybeans. It is commonly used in vegetarian and vegan diets and may support muscle growth, weight management, and overall nutritional needs.

Soy is a common food in many cuisines around the world, especially Asian cuisines [R].
It's a great source of [R, R]:

- Plant-based protein
- Fiber
- Omega-3 fats
- Antioxidants (isoflavones)

Soy-based foods include [R]:

- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Soy is a source of high-quality protein, which helps increase IGF-1 levels.

Soy protein (40 g/day for 12 weeks) may help increase IGF-1 better than casein, according to one study [R].

However, some studies didn't find this effect of soy or its protein [R, R].

11

Omega-3 (Fish Oil)

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

2000 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

Omega-3 fatty acids are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [R, R, R].

There are three major types of omega-3s: ALA, EPA, and DHA [R, R].

Fatty fish are rich in EPA and DHA. They include [R]:

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, try to get at least **two servings of fatty fish per week.** Fish oil supplements are available for those who don’t eat fish regularly [R].

How it helps

Omega-3 supplementation increased serum IGF-1 levels in men with cardiovascular disease [R].

A low-fat diet with high omega-3 fatty acids may increase IGF-1 concentrations without adversely affecting insulin sensitivity in healthy postmenopausal women. However, one study didn’t find the same effect in men [R, R].

12

Maintain Optimal Vitamin D Levels

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE

1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs vitamin D for strong bones. Vitamin D also plays a role in [R]:

- Mood
- Immunity
- Heart health
- Blood sugar control

Sunlight is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [R, R].

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [R].

How it helps

Vitamin D supplementation didn’t significantly increase IGF-1 levels in two meta-analyses. However, it was effective at doses of ≥1000 IU/day and durations of ≥12 weeks in one of them [R, R].

In adults with growth hormone deficiency (GHD), vitamin D supplementation significantly increased IGF-1 levels, suggesting a potential benefit in this specific group [R].

On the other hand, it didn’t show significant effects in women with PCOS and vitamin D deficiency [R].

Mendelian randomization studies suggest a bidirectional causal relationship between vitamin D and IGF-1 levels, indicating that each can influence the other [R].

13

Yoga

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

Yoga combines breathing, stretching, and relaxation techniques. Practicing yoga may help [R, R, R]:

- Reduce stress
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Acute stress may reduce IGF-1 levels [R, R].

Sitting meditation and yoga, as part of mindfulness-based stress reduction, were positively associated with IGF-1 levels in older adults [R].

14

Mindfulness-Based Stress Reduction (MBSR)

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Enroll in an 8-week MBSR course, which includes a weekly 2.5-hour class, one all-day class after the sixth week, and 45 minutes of daily home practice guided by assignments and instructional recordings.

TYPICAL STARTING DOSE

2 hours

Description

Mindfulness-Based Stress Reduction (MBSR) is a structured program that teaches mindfulness techniques to reduce stress and improve overall mental and emotional health. MBSR has been shown to help individuals cope with chronic pain, anxiety, and other stress-related conditions.

How it helps

Acute stress may reduce IGF-1 levels [R, R].

Sitting meditation and yoga, as part of mindfulness-based stress reduction, were positively associated with IGF-1 levels in older adults [R].

15

Dietary Magnesium

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Increase your intake of magnesium-rich foods such as leafy green vegetables, nuts, seeds, and whole grains. Aim to include these foods in your diet daily, following the recommended dietary allowance of 320 mg per day for women and 420 mg per day for men.

Description

Magnesium is a vital mineral involved in over 300 biochemical reactions in the body. It supports various functions, including muscle and nerve function, bone health, and blood sugar regulation.

Magnesium is an essential mineral. Your body needs it for [R, R, R]:

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [R].

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [R].

How it helps

Magnesium levels and dietary intake may be associated with higher IGF-1 levels in men [R, R].

16

Meditation

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Set aside 10-20 minutes each day in a quiet space without distractions to practice meditation. Focus on your breath or perform guided meditation using an app or audio track.

TYPICAL STARTING DOSE

30 minutes

Description

Meditation is a mindfulness practice that can reduce stress, improve mental clarity, and promote relaxation. Regular meditation is associated with numerous mental and emotional health benefits, including reduced anxiety and enhanced emotional well-being.

Meditation is a relaxation technique that trains your mind to focus and redirect your thoughts. Some of the main types of meditation are [R]:

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

People use meditation to improve [R, R]:

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

How it helps

Acute stress may reduce IGF-1 levels [R, R].

Sitting meditation and yoga, as part of mindfulness-based stress reduction, were positively associated with IGF-1 levels in older adults [R].

17

Dietary Vitamin C

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Incorporate foods rich in Vitamin C into your daily diet, such as oranges, strawberries, red peppers, kale, and broccoli. Aim to consume 5 servings of fruits and vegetables per day to meet the recommended dietary allowance of Vitamin C, which is 90 mg for adult men and 75 mg for adult women.

Description

Vitamin C is an antioxidant that supports the immune system, collagen production, and wound healing. It also enhances iron absorption from plant-based foods and contributes to overall health.

Vitamin C is an essential nutrient. This means that our bodies can't produce it on their own, so we have to get it from food or supplements [R].

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [R, R].

Vitamin C deficiency is called *scurvy.* In the past, many sailors suffered from it [R].

How it helps

Higher intake of citrus fruit and dietary vitamin C was associated with higher plasma concentrations of IGF-1 [R].

18

Selenium Supplements

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 50 mcg of selenium supplements once daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

50 mcg

Description

Selenium is a trace mineral found in Brazil nuts and many other foods as well as supplements. It is an essential nutrient that plays a crucial role in maintaining the body's antioxidant defenses and supporting thyroid function.

Selenium supports [R]:

- Reproduction
- Thyroid function
- DNA production
- Immune response

Adults should be getting **55 micrograms** of selenium per day. Selenium supplements are available for people who can't meet their needs with a balanced diet [R].

How it helps

Supplementation with selenium and coenzyme Q10 significantly increased IGF-1 levels in elderly individuals over a four-year period [R].

Selenium levels may be positively associated with IGF-1 serum levels in older adults, even after adjusting for various factors. This suggests an independent and significant relationship between selenium and IGF-1, highlighting selenium's potential role in influencing IGF-1 levels in older individuals [R].

However, selenium supplementation did not show a significant reduction in systemic IGF metabolic status in one study [R].

19

Lutein And Zeaxanthin

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a supplement containing 10mg of lutein and 2mg of zeaxanthin daily, preferably with a meal that contains fat for better absorption.

Description

Lutein and zeaxanthin are carotenoids found in green leafy vegetables and certain supplements. They are known for their role in promoting eye health and reducing the risk of age-related macular degeneration and cataracts when consumed regularly as part of a balanced diet.

Lutein and zeaxanthin are two antioxidant pigments found in the eye [R, R].

Many plants contain lutein and zeaxanthin, including [R, R]:

- Leafy greens (kale, spinach, leeks, lettuce)
- Cantaloupe
- Corn
- Peas
- Peppers
- Herbs (basil, parsley)

Egg yolks are the main animal source of these carotenoids [R].

Lutein and zeaxanthin may help support eye health [R, R].

How it helps

According to one review, IGF-1 concentrations are significantly positively associated with serum concentrations of lycopene, β-carotene, β -cryptoxanthin, and lutein/zeaxanthin in men and women [R].

20

Acetyl-L-Carnitine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 500-1,000 mg of Acetyl-L-Carnitine per day, split into 2 or 3 doses, with or without food. Joe prefers taking 500 mg in the morning. It can be taken indefinitely for chronic conditions or for a period of several months for acute concerns.

TYPICAL STARTING DOSE

500 mg

Description

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine. Acetyl-L-carnitine may help with nerve damage and mood problems.

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine [R, R, R].

Acetyl-L-carnitine may help with [R, R, R]:

- Nerve damage
- Mood problems
- Cognitive decline

Doctors are also studying its potential effect on drug addiction [R].

How it helps

Acetyl-L-carnitine administration (3 g daily for 5 months) significantly increased serum IGF-1 levels in asymptomatic HIV-1-infected subjects [R].

21

Dietary Lycopene

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Incorporate foods rich in lycopene into your daily diet. This includes consuming at least one serving per day of tomatoes, watermelon, grapefruit, or papaya. Considering lycopene is better absorbed when cooked and with a small amount of healthy fats, include dishes like cooked tomato sauce with olive oil in your meals several times a week.

Description

Lycopene is a powerful antioxidant found in tomatoes and other red or pink fruits and vegetables. Consuming lycopene-rich foods may help reduce the risk of chronic diseases and support heart and prostate health.

Lycopene is a bright red substance that gives color to a number of fruits such as [R, R]:

- Tomato
- Watermelon
- Papaya
- Apricot

Lycopene has antioxidant properties. It may help support [R, R, R]:

- Heart health
- Prostate health
- Cognition

How it helps

According to one review, IGF-1 concentrations are significantly positively associated with serum concentrations of lycopene, β-carotene, β -cryptoxanthin, and lutein/zeaxanthin in men and women [R].

22

Dietary Beta-Carotene

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Incorporate foods rich in beta-carotene into your diet daily. These include carrots, sweet potatoes, spinach, kale, and cantaloupe. Aim for at least one serving of these vegetables or fruits at each meal to ensure an adequate intake of beta-carotene.

Description

Beta-carotene is a type of dietary antioxidant and a precursor to vitamin A. It supports healthy vision, skin, and immune function, and may reduce the risk of certain diseases.

Beta-carotene is a plant-derived golden-yellow carotenoid pigment. In addition to its antioxidant activity, **beta-carotene is converted to vitamin A in the body**. Beta-carotene **contributes about 30-35% of the dietary intake of this vitamin** in western countries. In developing countries, it represents the most abundant, and sometimes the sole source of vitamin A [R, R, R]

Good sources of beta-carotene include [R, R, R]:

- Fruits (apricots, peaches, persimmons, melons, citrus, tomatoes, etc.)
- Green vegetables (spinach, broccoli, parsley, collard greens)
- Orange tuber vegetables (carrots, sweet potatoes)

How it helps

According to one review, IGF-1 concentrations are significantly positively associated with serum concentrations of lycopene, β-carotene, β -cryptoxanthin, and lutein/zeaxanthin in men and women [R].

Next Steps

Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.