

# Biological Age

## Biohacker Report

REPORT CATEGORY —



LONGEVITY

Sample Client

Report date: 15 January 2026

Powered by

 omicsedge

# Table of Contents

## 03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

## 07 Introduction

## 08 Your genetics

## 09 Your recommendations

## 18 Next Steps

- 18 Your Lab Results

## 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.



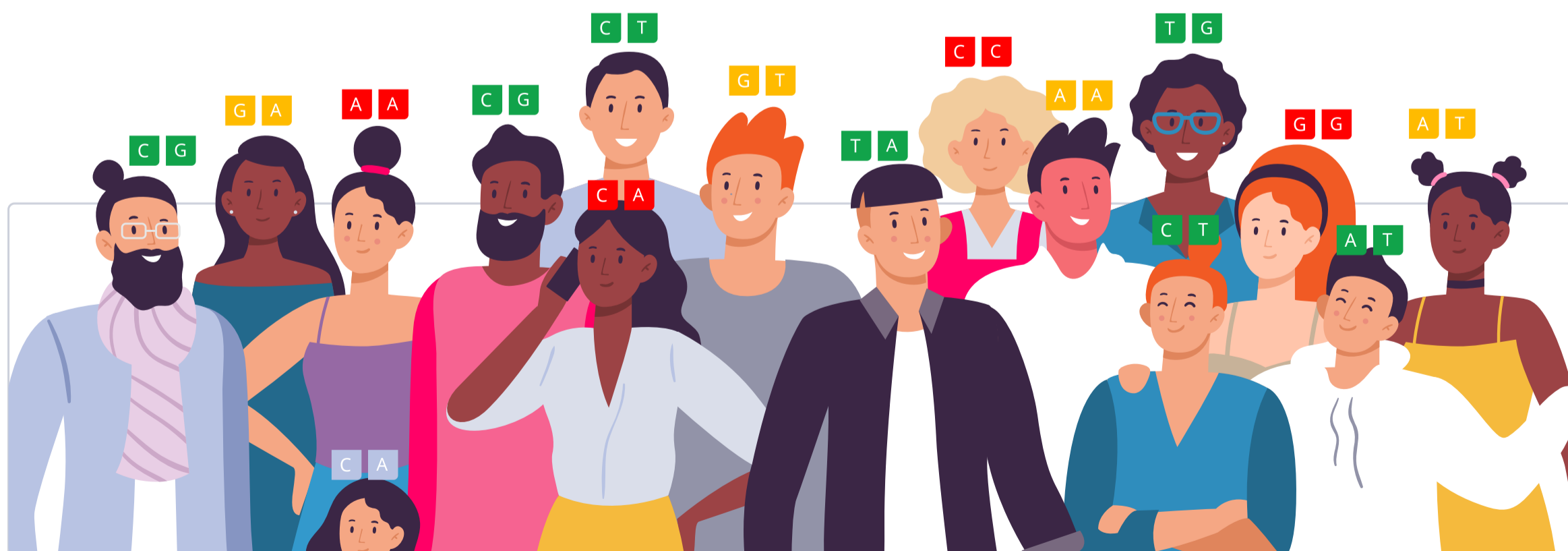
Similarly, our Trait Reports look at how your DNA influences your traits.



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.

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

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



**Genotype color info:**

<b>AA</b> You don't have any risk alleles	<b>AA</b> You have 1 risk allele	<b>AA</b> 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, a few 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

When we talk about age, we normally refer to the *chronological age*. This is defined by the number of years a person has lived. Alternatively, the *biological age* refers to how old a person seems based on various biomarkers.

This concept is rooted in the understanding that aging is not uniform across individuals. Some people may age faster or slower biologically than others, despite having the same chronological age.

The biological age serves as a more comprehensive indicator of a person's overall health status than chronological age and can be a valuable tool in preventive healthcare.

A lower biological age relative to chronological age usually indicates good health and a lower risk for age-related diseases. In contrast, a higher biological age can suggest a higher risk of developing conditions typically associated with aging, like cardiovascular disease, diabetes, and some cancers.

Researchers look at telomere length and DNA methylation to assess the biological age [[R](#), [R](#)].

# Biological Age Determinants

The following factors may determine your biological age:

- Genetic factors: Certain genetic variants can influence the rate of aging.
- Cellular health: Including telomere length, DNA damage, and cellular senescence.
- Metabolic functions: Such as blood sugar levels, cholesterol, and hormone levels.

Some strategies that may help you age healthy and maintain a relatively lower biological age include:

- Eating a healthy diet
- Engaging in regular exercise
- Maintaining a healthy weight
- Optimizing sleep
- Managing stress
- Avoiding harmful substances like tobacco and excessive alcohol



YOUNGER

## Predisposed to lower biological age based on 21 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DNTT	rs941997	AA
ARHGAP22	rs4838595	CC
ZNF248	rs10508861	AA
RIN1	rs12417758	CT
MANBA	rs93059	AG
CYP2J2	rs752223	GG
UBASH3B	rs73028070	GG
EDARADD	rs678553	TT
SETBP1	rs7228835	GC
CYRIA	rs62114564	GG
ASPA	rs3829957	CT
TPMT	rs4294009	TG
ZNF25	rs117932856	TT
MICB	rs3093956	TT
/	rs111731678	AA
NHLRC1	rs75407001	CC
MSI2	rs116853700	GG
ZFHX3	rs34970912	CC
DIP2C	rs11253338	CC
ZMIZ2	rs1990053	GG
NKX2-3	rs11190127	CC

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		DOSAGE		
1	Social Activity	1 hour	2	Aerobic Exercise (Cardio)	1 hour
3	Strength Training	1 hour	4	Intermittent Fasting	
5	Vegetables		6	Mediterranean Diet	
7	Avoid Overeating		8	Sleep for 7+ Hours	
9	Omega-3 (Fish Oil)	2000 mg			

1



## Social Activity

IMPACT

0 / 5

EVIDENCE

0 / 5

### How to implement

Participate in group activities or gatherings with friends, family, or community members at least twice a week. This could include joining clubs, attending local events, or scheduling regular outings with friends. Aim for these social engagements to last at least an hour each time to foster meaningful connections and conversations.

TYPICAL STARTING DOSE

**1 hour**

### Description

Engaging in social activities, such as spending time with friends and family or participating in group events, can have numerous mental and emotional health benefits. It helps reduce feelings of loneliness, enhances mood, and promotes a sense of belonging and well-being.

Social activities involve physical and mental activities with others that you enjoy and find meaningful. There are plenty of ways to stay socially active and maintain social well-being as you age.

Research has shown that a socially active lifestyle [\[R\]](#):

- Makes you less likely to develop certain chronic conditions.
- May promote a longer lifespan.
- Can improve mood and mental health.
- Can improve memory and other aspects of cognition.

### How it helps

Engaging in social activities can reduce stress and promote emotional well-being, which are linked to slower biological aging and improved overall health.

2



## Aerobic Exercise (Cardio)

IMPACT

0 / 5

EVIDENCE

0 / 5

### How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

### Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

**Interval training** is a type of cardio that combines periods of high-intensity training with brief rest periods.

### How it helps

Regular aerobic exercise has been shown to improve cardiovascular health, increase longevity, and reduce markers of aging by enhancing mitochondrial function and reducing oxidative stress.

3



## Strength Training

IMPACT

0 / 5

EVIDENCE

0 / 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

Strength training improves muscle mass and bone density, boosts metabolism, and reduces inflammation, all of which are factors that can help reduce biological age.

4



## Intermittent Fasting

IMPACT

0 / 5

EVIDENCE

0 / 5

### How to implement

Limit your daily eating to a specific window of time, typically within an 8-hour period such as from 12 pm to 8 pm, and fast for the remaining 16 hours of the day. Repeat this daily or for at least 3-4 days per week.

### Description

Intermittent fasting is an eating pattern that involves cycling between periods of fasting and eating. It may help with weight management, improve metabolic health, and offer potential benefits for certain health conditions when done under proper guidance.

**Intermittent fasting** (IF) is a pattern of eating that alternates between periods of eating and fasting. The most popular IF method is called the 16/8 method, where you fast for 16 hours and eat during an 8-hour window.


People mainly practice IF to lose weight. Besides benefits related to weight reduction, IF may help lower the risk of [\[R\]](#):

- Alzheimer's disease
- Joint pain
- Asthma
- Multiple sclerosis
- Stroke

Some types of intermittent fasting, such as Ramadan fasting, are also practiced for religious reasons.

### How it helps

Intermittent fasting has been shown to improve metabolic health, promote cellular repair processes, and reduce oxidative stress, all of which can contribute to a lower biological age.

5  **Vegetables**

**IMPACT** 0 / 5

**EVIDENCE** 0 / 5

## How to implement


Incorporate at least 2-3 cups of various vegetables into your daily diet, ensuring a mix of colors like greens, reds, and yellows to maximize nutrient intake. Aim to include vegetables in most meals, either as a side, part of the main dish, or snacks.

## Description

Vegetables are edible parts of plants that offer various health benefits due to their rich nutrient content, including vitamins, minerals, fiber, and antioxidants. They are essential components of a balanced diet and contribute to overall health, supporting various bodily functions.

## How it helps

A diet rich in vegetables provides essential vitamins, minerals, and antioxidants that support cellular health and can reduce markers of biological aging.

6  **Mediterranean Diet**

**IMPACT** 0 / 5

**EVIDENCE** 0 / 5

## How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

## Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It's rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

## How it helps

The Mediterranean diet is rich in antioxidants, healthy fats, and fiber, which can protect against oxidative stress and inflammation, slowing down biological aging.

7



## Avoid Overeating

IMPACT

0 / 5

EVIDENCE

0 / 5

### How to implement

Consume meals slowly, taking time to chew your food thoroughly and pausing between bites to allow your body to signal when it is full. Aim to stop eating when you feel about 80% full rather than waiting until you feel uncomfortably full. Implement this practice at every meal and snack, making it a consistent part of your daily eating habits.

### Description

People who overeat take in more food than their body needs. Overeating may contribute to obesity and diabetes, as well as digestive and sleep problems.


**People who overeat take in more food than their body needs.**

Overeating may contribute to [\[R, R, R, R\]](#):

- Obesity
- Diabetes
- Digestive problems
- Sleep problems

### How it helps

Overeating can lead to metabolic imbalances and increased oxidative stress, which are associated with faster aging. Controlling portion sizes can help maintain a healthier metabolic rate and reduce biological age.

8  **Sleep for 7+ Hours**

**IMPACT** 0 / 5

**EVIDENCE** 0 / 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

Consistently getting 7 or more hours of sleep helps repair and regenerate cells, reduces inflammation, and enhances overall physiological functions, which can slow biological aging.

9  **Omega-3 (Fish Oil)**

**IMPACT** 0 / 5

**EVIDENCE** 0 / 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

Fish oil contains omega-3 fatty acids, which have anti-inflammatory properties. These can help reduce inflammation in the body, potentially slowing down age-related diseases and overall aging.

# 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.

