

TIBC

Biohacker Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026

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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.

Personal information

NAME

Sample Client

SEX AT BIRTH

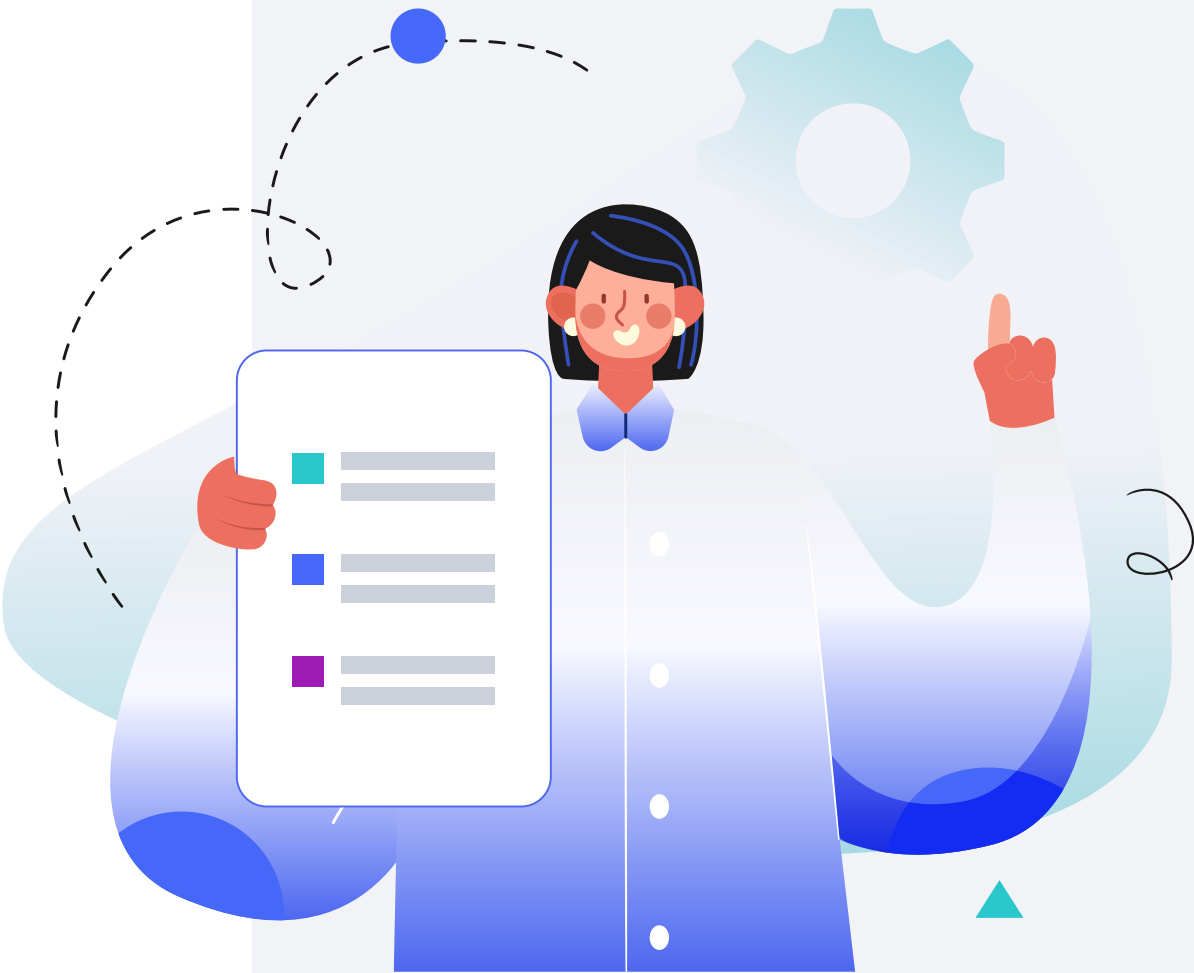
Male

HEIGHT

5ft 5" 165cm

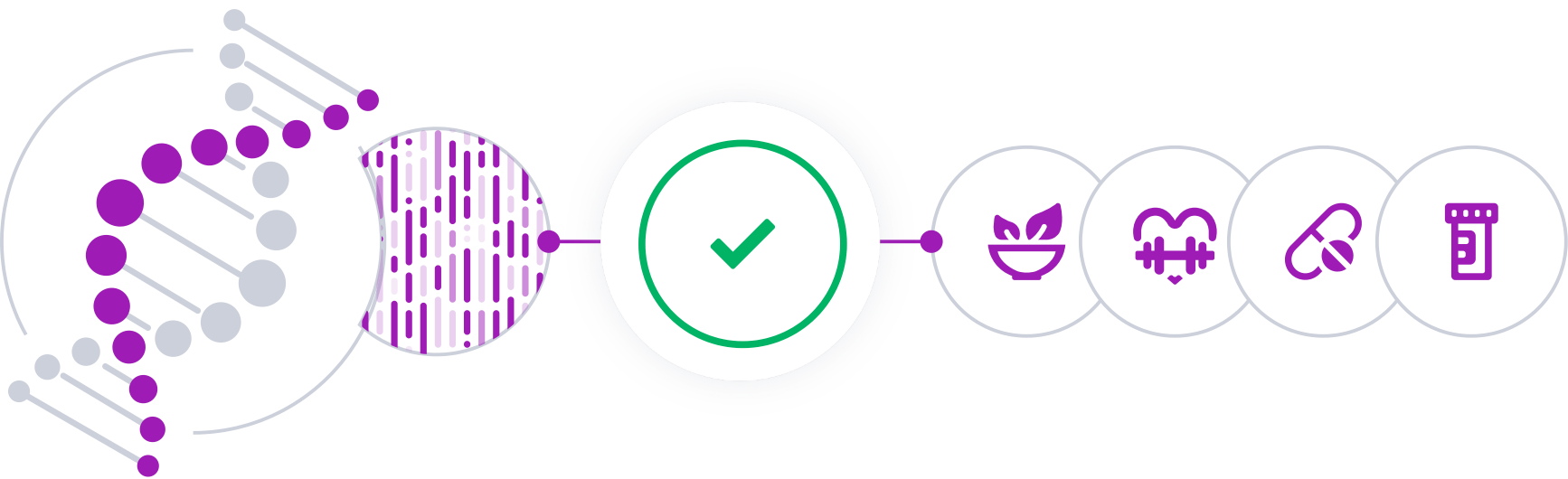
WEIGHT

137lb 62kg



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.

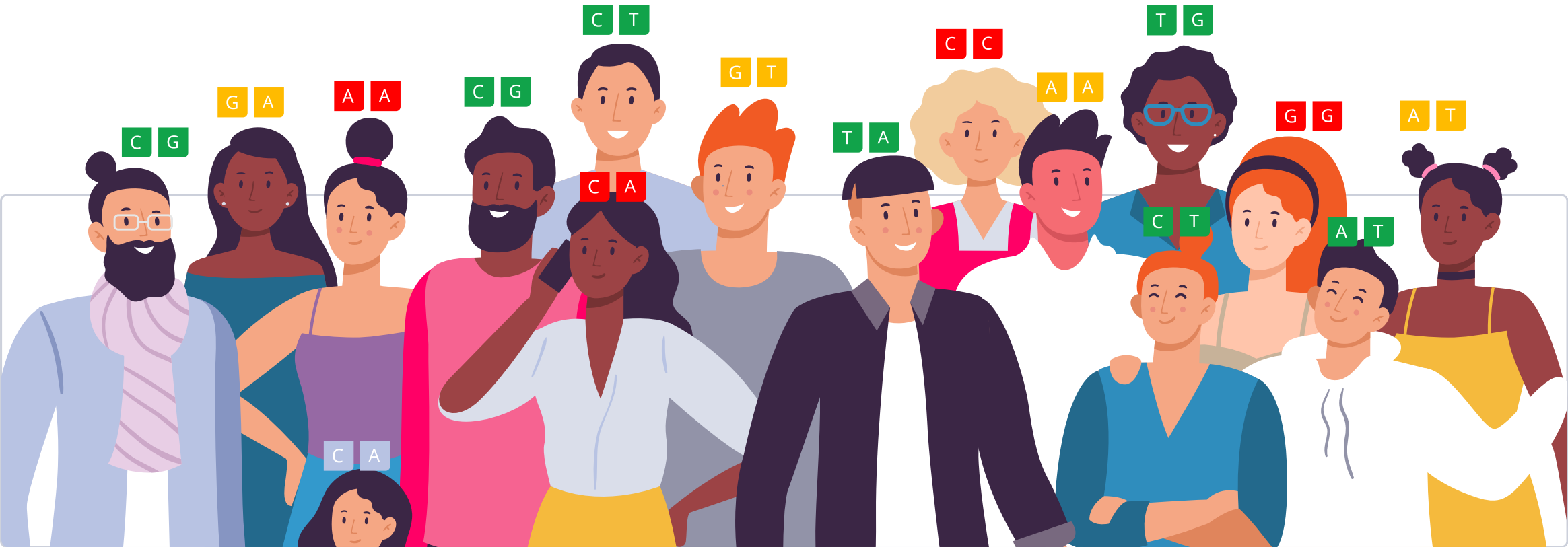


Similarly, our Trait Reports look at how your DNA influences your traits.



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:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

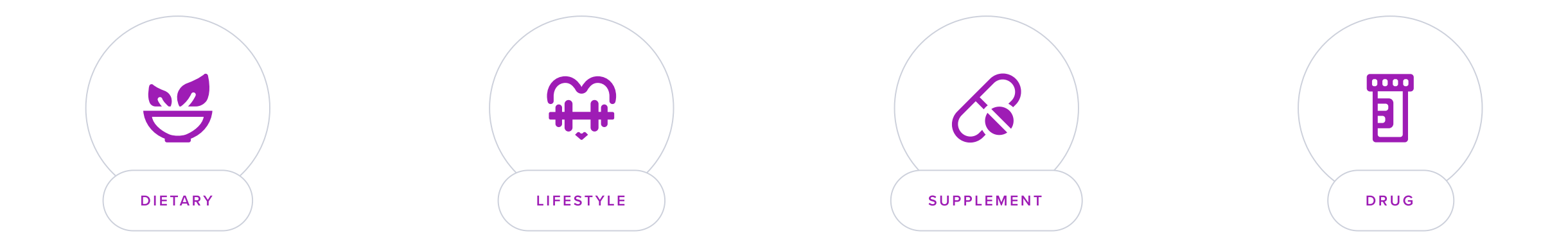
You have 2 risk alleles

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, 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

Total iron-binding capacity, or [TIBC](#), measures the capacity of your blood to bind and transport iron. It helps estimate the amount of iron stored in your body [\[R\]](#).

TIBC is an indirect measure of [transferrin](#), a protein that binds iron molecules and transports them in the bloodstream [\[R\]](#), [\[R\]](#).

A doctor may suggest a TIBC test to check for **iron deficiency** or other changes in your iron status [\[R\]](#).

Factors Affecting TIBC

A **low TIBC** means that iron stores are high. It is typically caused by **excess iron** but may also be a sign of [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Chronic inflammation
- Liver disease
- Kidney disease

Elevated TIBC is typically due to **iron deficiency** [\[R\]](#).

Up to **30%** of the differences in people’s TIBC may be due to **genetics** [\[R\]](#).



TYPICAL LEVELS

Predisposed to typical TIBC levels based on 666 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SRPRB	rs189613548	CC
RAB6B	rs116711620	CC
TF	rs2692666	GG
B3GNT2	rs144403535	AA
B3GNT2	rs186783840	CC
PHF14	rs145285408	GG
/	rs78455250	GG
/	rs74138929	TT
/	rs187281066	AA
/	rs7546608	TT
CSF3R	rs142692454	AA
EPHB1	rs187472012	AA
RAB6B	rs112621868	GG
CDV3	rs4854728	TT
CDV3	rs7430149	CC
/	rs143890475	GG
SRPRB	rs9882812	GA

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	Dietary Iron	2	Avoid Coffee and Tea After Iron-Rich Meals		
3	Lactobacillus Plantarum	10 billion CFU	4	Probiotics	10 billion
5	Maintain Optimal Iron Levels	10 mg	6	Vitamin C	500 mg
7	Dietary Vitamin C		8	Lactoferrin	100 mg
9	Synbiotics				

1



Dietary Iron

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate iron-rich foods into your daily meals, such as red meat, chicken, turkey, fish, beans, lentils, tofu, cooked spinach, and fortified cereals. Aim for at least 18 mg of iron per day for adult women and 8 mg per day for adult men. It's also beneficial to pair these foods with vitamin C-rich foods like oranges, strawberries, or bell peppers to enhance iron absorption.

Description

Iron (Fe) is an essential mineral. It helps make [hemoglobin](#), a protein that carries oxygen to cells. In this way, iron **increases energy** and supports **brain and immune system function** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Foods rich in iron include [\[R\]](#):

- Oysters
- White beans
- Beef
- Chocolate
- Spinach
- Fortified cereals

Women should be getting **8-18 mg** of iron per day, while **men** should be getting **8 mg** [\[R\]](#).

Groups at risk of iron deficiency include [\[R\]](#):

- Menstruating women
- Children
- Vegetarians
- Routine blood donors

How it helps

Please note: *Increased iron intake from meat is linked to higher odds of diabetes and heart disease. Try to find a balance between plant and animal iron sources* [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

2



Avoid Coffee and Tea After Iron-Rich Meals

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Wait at least an hour after consuming an iron-rich meal before drinking coffee to ensure optimal iron absorption from your meal.

Description

Avoiding coffee and tea immediately after consuming iron-rich foods or supplements can enhance the body's absorption of dietary iron. They contain compounds that may inhibit iron absorption, so waiting a while before drinking them can optimize the nutritional benefits of iron-rich meals.

How it helps

Similar to tea, coffee can interfere with iron absorption. Not consuming it close to iron-rich meals may enhance iron uptake.

3



Lactobacillus Plantarum

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a probiotic supplement containing *Lactobacillus plantarum* 299V daily. The typical dosage is 10 billion colony-forming units (CFUs). Continue for at least 4 weeks to assess benefits on digestive health.

TYPICAL STARTING DOSE
10 billion CFU

Description

[Lactobacillus plantarum](#) is a [probiotic](#) bacterium found in many fermented plant products such as sauerkraut, pickles, brined olives, and Korean kimchi [\[R\]](#).

People take *L. plantarum* supplements to improve [\[R, R, R, R\]](#):

- Diarrhea
- Skin appearance
- IBD
- High cholesterol

How it helps

Lactobacillus Plantarum is a probiotic that helps maintain gut health but doesn't directly treat Total Iron Binding Capacity (TIBC). Instead, it supports overall health which may indirectly improve your body's iron metabolism.

4



Probiotics

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a probiotic supplement containing 10 billion or more live cultures once daily, preferably with a meal or as directed by the packaging or a healthcare provider.

TYPICAL STARTING DOSE

10 billion

Description

Probiotics are live beneficial bacteria and yeasts that can support gut health and digestive function when consumed as supplements or found in fermented foods like yogurt and sauerkraut. They may be beneficial to gut health, immune function, blood sugar, and mood.

[Probiotic bacteria](#) are “good” bacteria found mainly in the large intestine. They support your body and mind by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Maintaining gut health
- Supporting a healthy immune system
- Improving your mood
- Helping to maintain healthy blood sugar

Prebiotics are certain types of fiber and other complex carbs that serve as food for gut bacteria. **They support gut health by helping boost the activity and growth of “good” bacteria** [\[R\]](#), [\[R\]](#).

Prebiotics are also added to foods and supplements. Common prebiotic ingredients are [\[R\]](#), [\[R\]](#):

- Oligo-fructose
- Oligo-galactose
- [Inulin](#)

Mixtures of probiotics and prebiotics are known as **synbiotics** [\[R\]](#).

How it helps

Probiotics support the growth and activity of beneficial gut bacteria, which play a crucial role in iron absorption. By promoting a healthy gut environment, probiotics can contribute to increased TIBC levels and improved iron utilization throughout the body.

5



Maintain Optimal Iron Levels

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Check your iron levels. If they are below optimal, take a 10 mg iron supplement daily, preferably with a meal to enhance absorption and reduce stomach upset.

TYPICAL STARTING DOSE

10 mg

Description

Iron (Fe) is an essential mineral. It helps make [hemoglobin](#), a protein that carries oxygen to cells. In this way, iron **increases energy** and supports **brain and immune system function** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Foods rich in iron include [\[R\]](#):

- Oysters
- White beans
- Beef
- Chocolate
- Spinach
- Fortified cereals

Women should be getting **8-18 mg** of iron per day, while **men** should be getting **8 mg** [\[R\]](#).

Groups at risk of iron deficiency include [\[R\]](#):

- Women
- Children
- Vegetarians
- Routine blood donors

Iron supplements are available for people who can't meet their needs through a balanced diet, but they should not be taken without consulting a doctor.

How it helps

Iron supplements can increase the level of iron in your body when you have Total Iron Binding Capacity (TIBC), a condition where there's too much transferrin that can hold iron in the blood. By providing more iron, the excess transferrin can bind with it, balancing your body's iron levels and potentially alleviating symptoms of iron deficiency.

6



Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500-2000 mg of vitamin C supplement daily. It can be taken at any time of the day, with or without food, according to personal preference or tolerance.

TYPICAL STARTING DOSE

500 mg

Description

[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 [\[R\]](#).

Foods rich in Vitamin C include: [\[R\]](#)

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

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

Vitamin C increases iron absorption which may improve Total Iron Binding Capacity (TIBC). However, it doesn't directly treat TIBC, but rather aids in managing the iron levels, an integral part of this condition.

7



Dietary Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 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

Vitamin C helps your body absorb iron, a mineral required for producing red blood cells. A heightened Total Iron Binding Capacity (TIBC) could indicate a shortage of iron, so more vitamin C could help manage this condition.

8



Lactoferrin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 100-200 mg of lactoferrin supplement per day, preferably on an empty stomach to enhance its absorption. Continue this regimen daily for 8 to 12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

100 mg

Description

Lactoferrin is a protein found in milk and other bodily fluids that has been studied for its potential health benefits, including immune system support and antimicrobial properties. It plays a role in promoting gut health.

Lactoferrin is a protein found in milk. It can bind to iron and travel all around the body [\[R\]](#).

Lactoferrin may help support [\[R\]](#), [\[R\]](#):

- Immunity
- Iron status

How it helps

Lactoferrin may increase the levels of iron in your body, thereby potentially raising Total Iron Binding Capacity (TIBC). However, more scientific evidence is needed to confirm this link between Lactoferrin and TIBC.

9



Synbiotics

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a synbiotic supplement that combines both prebiotics and probiotics daily, ideally with a meal. The specific dosage depends on the product, but generally ranges from 1 to 10 billion CFUs for probiotics. Consult the product's label for exact dosing instructions and continue use for at least 4 weeks to assess effectiveness.

Description

Synbiotics are dietary supplements that combine probiotics (beneficial bacteria) and prebiotics (fiber) to support gut health. They help maintain a balanced gut microbiome and digestive well-being.

How it helps

Synbiotics, combining prebiotics and probiotics, may increase TIBC, which is a measure of the body's ability to bind and transport iron. Prebiotics nourish beneficial gut bacteria, which play a role in iron absorption, while probiotics directly contribute to a healthy gut environment conducive to optimal iron utilization.

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

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.

