SelfDecode™

CD36 (Fat Preference/Weight)

Gene Report

REPORT CATEGORIES

NUTRITION

WEIGHT & BODY FAT

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

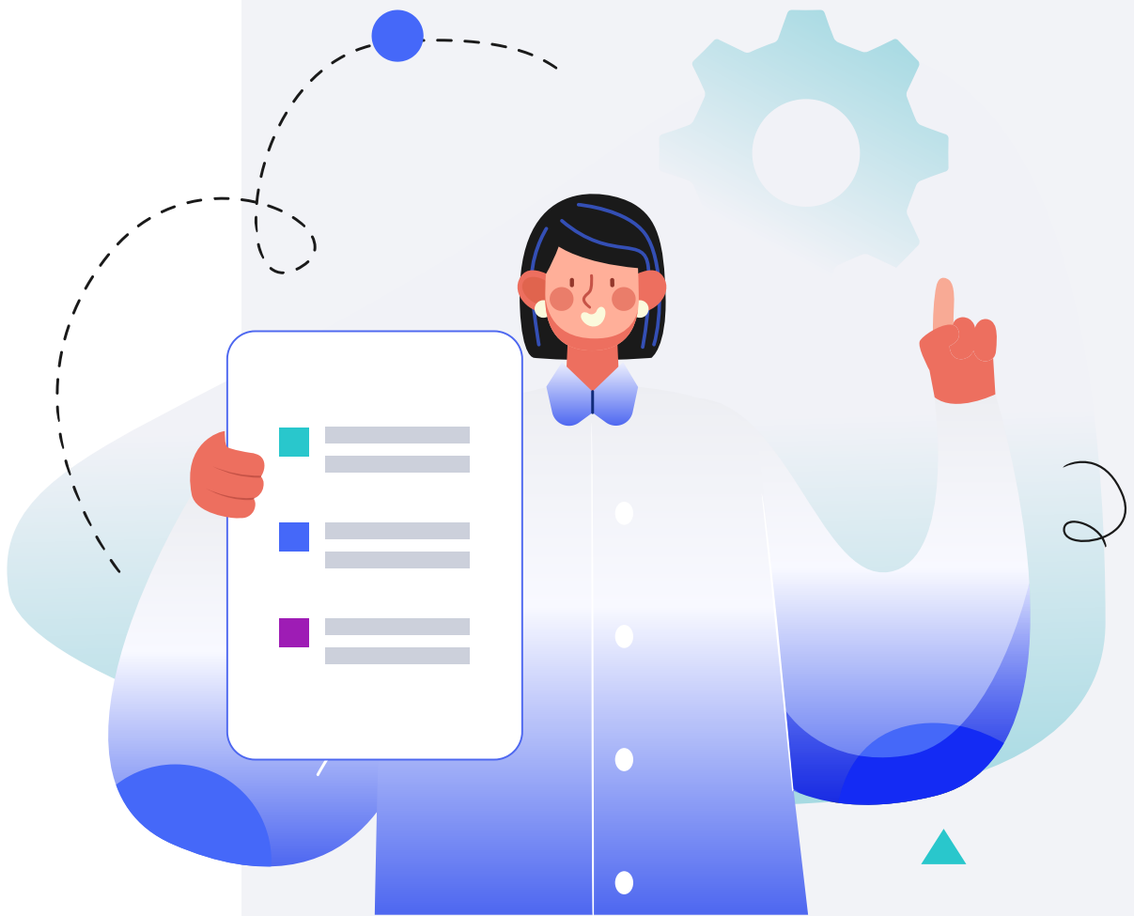
Male

HEIGHT

5ft 5" 165cm

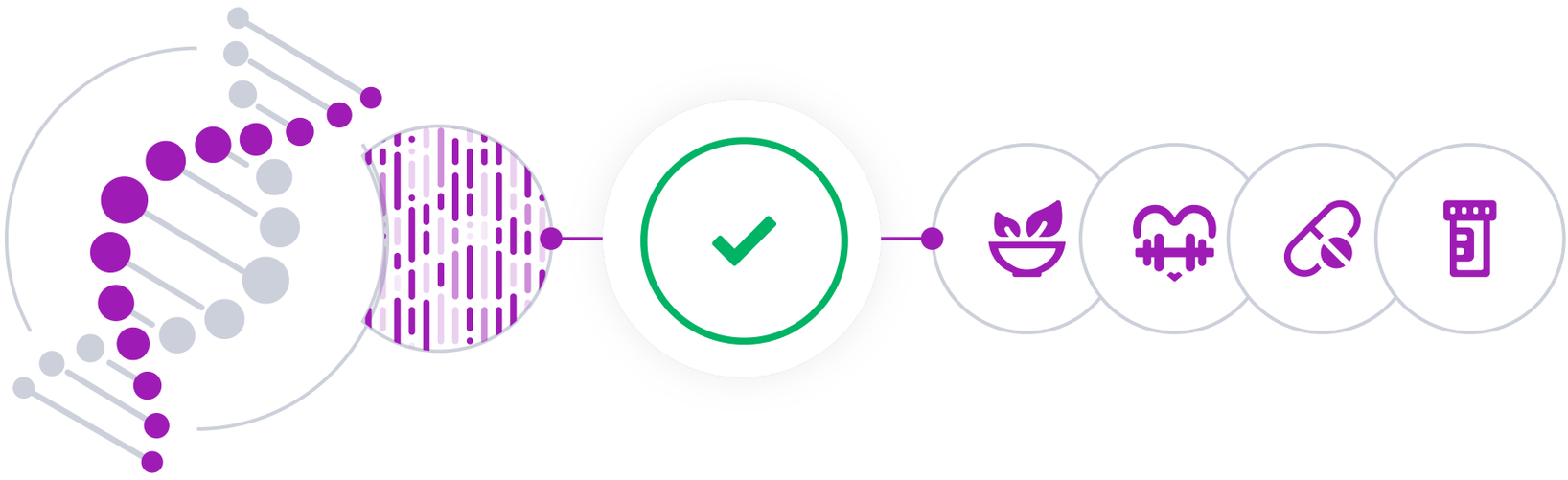
WEIGHT

137lb 62kg



How this works

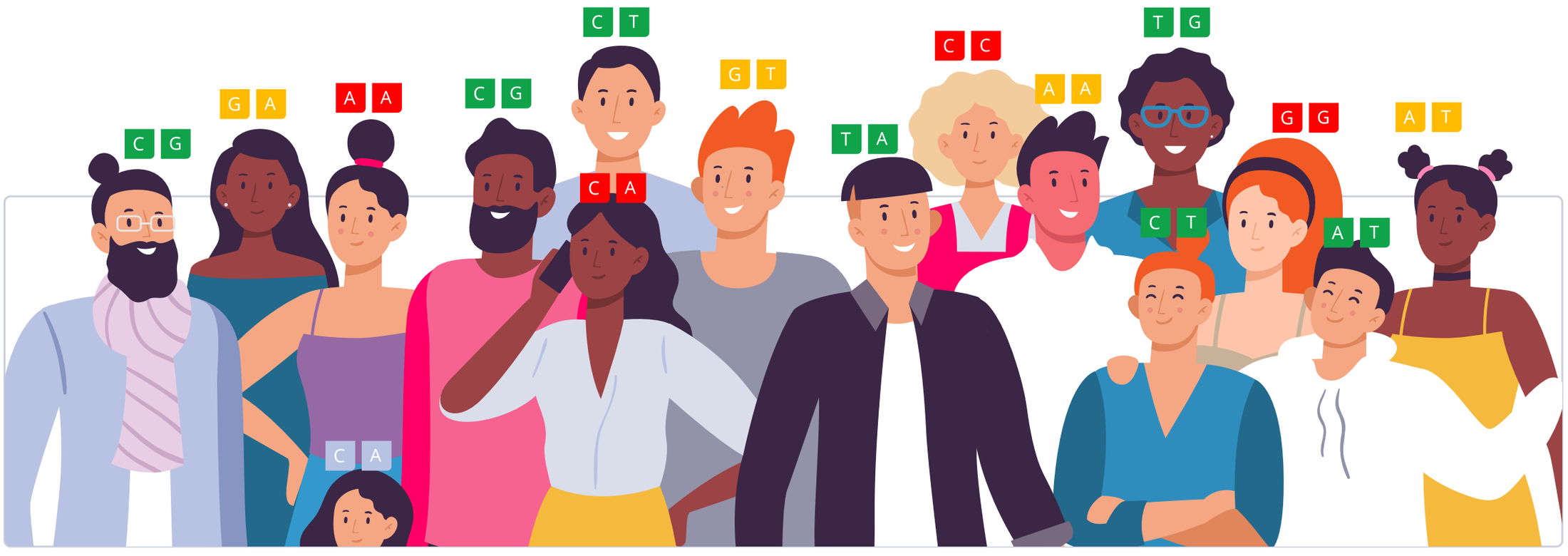
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

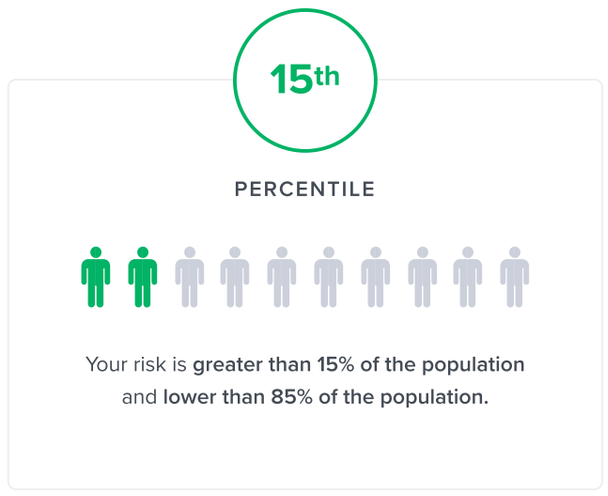
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

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.



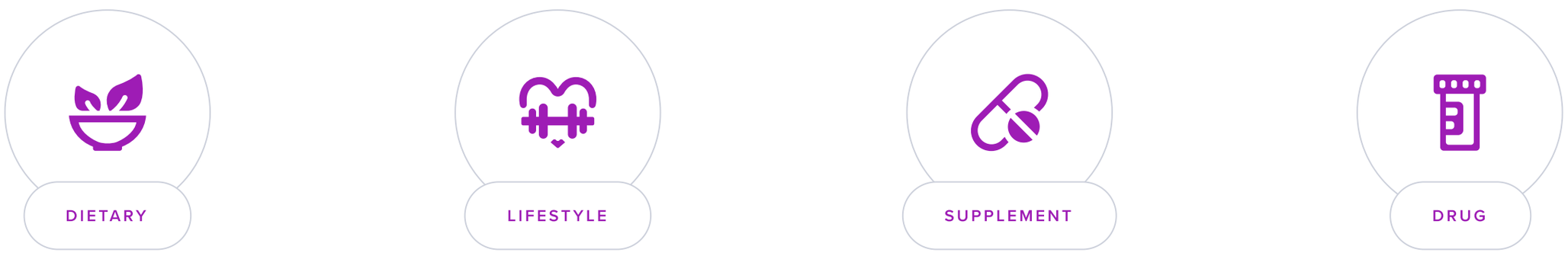
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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

The *CD36* (cluster of differentiation 36) gene encodes a receptor (CD36) that transports fatty acids into cells. As a result of this function, fats are transported into new fat cells, taken up into muscle cells for use in energy production, and absorbed from food in the gut [R].

The CD36 receptor is activated by a wide variety of compounds—including collagen, LDL cholesterol, and bacterial proteins—that can trigger an increase in CD36 receptor activity (and, thus, uptake of fats) [R].

In the taste buds, CD36 appears to specifically affect our sensitivity to the taste of fatty foods; the greater the production of CD36, the greater the sensitivity [R, R].

Based on the results of rat studies, researchers suspect that low amounts of CD36 can lead to increased intake of fatty foods, to compensate for a reduced ability to taste fat. People with high amounts of CD36 may have increased levels of endocannabinoids, which in turn increase appetite. Thus, while low amounts of CD36 may lead to an increased preference for fatty foods, high amounts of CD36 may lead to increased overall food intake [R, R, R].

CD36 Genetics, Food Preferences, and Weight

The CD36 receptor has a complicated relationship with diet and may affect everything from taste preferences to fat metabolism [R].

The ‘G’ allele at **rs1761667** is associated with a number of metabolic changes compared to the ‘AA’ genotype. For example, people with at least one copy have increased appetite and food intake. However, the ‘G’ allele is also associated with lower BMI [R, R, R].

The ‘A’ allele, meanwhile, is associated with reduced production of the CD36 receptor, increased preference for fatty foods, and increased BMI [R, R].

TYPICAL ACTIVITY

Likely typical CD36 activity based on the genetic variants we looked at

48%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as **48% of our users.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CD36	rs1761667	AG

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	Exercise At Least One Hour a Day	1 hour
2	Keto Diet	
3	Low-Carbohydrate Diet	
4	Eat More Protein and Less Carbs	
5	Capsaicin and Capsinoids	450 mg

1

Exercise At Least One Hour a Day

IMPACT 5 / 5

EVIDENCE 5 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

Description

Exercise can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [R].

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal**.

How it helps

Most experts agree that getting 150-300 minutes of exercise per week can help you control your weight. For best results, try to push yourself a bit with **moderate or intense exercise** [R, R].

Exercise helps by burning calories and boosting your metabolism. It may also lower your appetite [R, R].

However, it might take a while to see the results of your hard work. **The benefits of moderate or intense exercise may only show after 12 weeks** [R, R, R, R, R].

Note that exercise may be less effective at helping you lose weight than limiting your calorie intake. However, **it will likely help you maintain a lower weight in the long run** [R, R, R].

PERSONALIZED TO YOUR GENES

People with your *CD36* gene variant may have higher appetite and waist-to-hip ratio. Physical exercise may further help you lose weight by reducing appetite [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
CD36	**rs1761667**	AG	

2

Keto Diet

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Adopt a diet that consists of about 70-80% fat, 10-20% protein, and 5-10% carbohydrates. Eliminate or significantly reduce the intake of sugar and starches like bread, pasta, rice, and potatoes, focusing instead on high-fat foods like meats, fatty fish, eggs, butter, and healthy oils, as well as low-carb vegetables like leafy greens. This dietary pattern should be maintained consistently for a period of at least 3-4 weeks to achieve ketosis, after which it can be adjusted based on individual goals and responses.

Description

The keto diet is a high-fat, low-carbohydrate eating plan designed to induce a state of ketosis in the body, where it primarily burns fat for energy. It is often used for weight loss and managing certain medical conditions.

The ketogenic diet, or the ‘keto’ diet, is rich in fat and restricts carb intake [R, R].

On the ketogenic diet, 50 g of carbs or less are consumed per day. Around 55-80% of the calories come from fat [R].

The ketogenic diet depletes the body of sugars like glucose. When people fast or eat very little carbs, the body makes less insulin. In response, the body starts using fat for energy.

When the body only uses fat for energy, molecules called ketones are formed. This state is called *ketosis*.

The ketogenic diet may help with:

- Seizures [R]
- Excess weight [R]
- Diabetes [R, R]

How it helps

The Keto diet works by reducing your intake of carbs and increasing healthy fats, leading your body to a metabolic state called ketosis which uses fat as a primary fuel source. This, along with the fact that fats are more satisfying and reduce hunger, often leads to weight loss.

Multiple meta-analyses (the largest one with 18 studies) concluded that eating a very low-carbohydrate ketogenic diet lowers body weight (by 2.87-15.6 kg), BMI (by 1.44-5.3 kg/m2), waist circumference (by 3.23-12.6 cm), fat mass (by 1.40 kg), fat-free mass (by 0.81 kg), lean body mass (by 0.63 kg), and body fat percentage (by 2.81%). This diet may be more effective than other weight-loss interventions [R, R, R, R].

The combination of exercise and low-carbohydrate ketogenic diets decreases waist circumference according to a meta-analysis of 7 trials and 278 overweight and obese participants. Similarly, a meta-analysis of 13 trials and 244 participants found that combining strength training with a ketogenic diet decreases body mass (by 3.67 kg), fat mass (by 2.21 kg), fat-free mass (by 1.26 kg), BMI (by 1.37 kg/m2), and body fat percentage (by 2.27%) [R, R].

A meta-analysis of 14 studies concluded that eating a ketogenic diet lowers fasting glucose weight (by 8.66 kg), waist circumference (by 9.17 cm), and BMI (by 3.13 kg/m2) in patients with type 2 diabetes. Another meta-analysis (8 studies and 648 patients) found that very low-carbohydrate ketogenic diets decrease weight at 3 months (by 2.91 kg) and 6 months (by 2.84 kg) in people with this condition. In overweight patients with type 2 diabetes, ketogenic diets significantly decrease body weight and waist circumference according to a meta-analysis of 8 studies. A meta-analysis of 14 studies found that ketogenic diets lower weight in diabetic patients regardless of diabetic status [R, R, R, R].

Ketogenic diets also lower body fat percentage in athletes according to a meta-analysis of 8 studies [R].

In cancer patients, ketogenic diets reduce body weight (by 2.99-3.992 kg), fat mass (by 1.48 kg), and BMI (by 1.08 kg/m2) according to 3 meta-analyses (the largest one with 10 trials) [R, R, R].

3

Low-Carbohydrate Diet

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Limit your daily intake of carbohydrates to less than 26% of your total daily calories. For a standard 2000-calorie diet, this means consuming no more than 130 grams of carbohydrates per day. Focus on including non-starchy vegetables, lean proteins, and healthy fats in your meals while minimizing the intake of sugars, bread, pasta, and other high-carb foods.

Description

Low-carbohydrate diets can promote weight loss, improve blood sugar control, and support heart health. They may also be beneficial for individuals with certain medical conditions, such as epilepsy or metabolic syndrome.

How it helps

Four meta-analyses (the largest one with 17 trials concluded that low-carb diets decrease body weight, fat mass, BMI, and waist circumference. Very low-carbohydrate diets may be the most effective [R, R, R, R].

A meta-analysis of 32 studies found that the short-term effects of low-carb diets on weight parameters persist in the long term, but to a small degree. Another meta-analysis (25 trials) found significant effects of low-carb diets on body weight at 3-8 months, but not at 10-30 months, and on BMI at 3-4 months but not at other time points [R, R].

Low-carb diets help in part with weight loss by **increasing energy expenditure** according to a meta-analysis of 29 trials [R].

The combination of low-carb diets with exercise further decreases waist circumference, body weight, and BMI according to 2 meta-analyses. However, a meta-analysis of 8 studies found no added benefits in trained individuals [R, R, R].

Six meta-analyses (the largest one with 38 trials found low-carb diets more effective than low-fat diets for reducing weight. In line with this, a meta-analysis of 48 trials comparing different diets found the low-carb diet had the largest effect on weight loss. However, 3 meta-analyses found both diets similarly effective at reducing body weight and waist circumference [R, R, R, R, R, R, R, R, R, R]

In patients with type 2 diabetes, the low-carb dietary pattern is the most effective one at lowering body weight according to 2 meta-analyses [R, R].

4

Eat More Protein and Less Carbs

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Include a source of lean protein such as chicken, fish, beans, or tofu in each meal, aiming for 20-30 grams per serving, while reducing carbohydrate-rich foods like bread, pasta, and sweets, aiming to make proteins about 30-40% of your daily caloric intake. Replace at least one carbohydrate-heavy meal or snack with a high-protein option daily.

Description

A diet that includes more protein and fewer carbohydrates can promote weight management and satiety, potentially aiding in weight loss efforts. Protein-rich foods can help control hunger and support muscle maintenance.

Proteins, fats, and carbs are macronutrients. You need these nutrients in large (‘macro’) amounts. They provide your body with the energy it needs to function properly [R].

For a healthier diet, experts recommend eating foods that are higher in protein but lower in fat and carbs [R, R].

This is because simple carbs can spike your blood sugar levels. Likewise, too much saturated fat can increase “bad” (LDL) cholesterol [R, R, R, R, R, R].

Eating a lot of high-carb or high-fat foods may lead to conditions like diabetes, obesity, and heart disease [R, R, R, R].

Meanwhile, protein boosts muscle mass and helps control your weight [R].

How it helps

Most weight loss experts recommend following a diet that’s high in protein but lower in carbs or fat [R, R].

This is because protein [R, R]:

- Boosts your metabolism
- Makes you feel more full
- Helps control your appetite

In contrast, carbs and fats make you crave junk food by activating the reward areas of your brain [R, R].

Simple carbs can also spike your insulin, which is linked to a higher risk of obesity [R].

Some low-carb diets that may help you lose weight include:

- **Keto diet**: low-carb and high-fat diet [R, R, R]
- **Atkins diet**: low-carb diet [R, R, R, R, R]
- **Paleo diet**: hunter-gatherer diet (limited carbs, dairy products, and legumes) [R, R, R]
- **Zone diet**: meals consist of 40% complex carbs, 30% protein, and 30% fat [R]

Sticking to a low-fat diet for 2-12 months may also support weight loss [R, R, R, R, R]. However, a **low-carb diet may be more effective** [R, R, R, R, R].

Note: *In the long run, high-protein diets may contribute to heart disease, calcium loss, constipation, and other health problems. If you have problems with kidneys or bones, consult your doctor or dietitian before adopting a high-protein diet* [R, R].

PERSONALIZED TO YOUR GENES

People with your *CD36* gene variant may have higher appetite and waist-to-hip ratio. High-protein diets may help you reduce appetite and food cravings [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
CD36	**rs1761667**	AG	

5

Capsaicin and Capsinoids

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Take a supplement containing 450 mg of capsaicin or capsinoids, once daily with a meal. Continue this routine daily as part of your supplement regimen.

TYPICAL STARTING DOSE

450 mg

Description

Capsaicin, found in chili peppers, is known for its potential to boost metabolism and promote weight loss. It can also provide pain relief when used topically in certain creams and ointments. Capsinoids are compounds similar to capsaicin, found in chili peppers, and may have similar metabolic and weight management benefits without the intense heat.

Capsaicin is the compound that makes chili peppers spicy [R].

People use **topical capsaicin** to relieve pain and **oral capsaicin** to aid weight loss [R, R].

Capsinoids are compounds similar to capsaicin. Unlike capsaicin, they are present in both sweet and chili peppers [R].

How it helps

Capsaicin (1-3 mg) may help you lose weight by [R, R, R, R]:

- Reducing your appetite
- Speeding up your metabolism

This amount of capsaicin is available in [R]:

- **50-150 mg** of a cayenne pepper extract
- **200-600 mg** of ground cayenne pepper

Combining capsaicin with ingredients like green tea and ginger may have similar effects [R, R, R].

Supplementing with **capsinoids (6-10 mg for 1-3 months)** may also support weight loss [R, R].

PERSONALIZED TO YOUR GENES

People with your *CD36* gene variant may have higher appetite and waist-to-hip ratio. Capsaicin may speed up metabolism, increase energy expenditure, and reduce appetite [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
CD36	**rs1761667**	AG	