



Saturated Fat and Weight

Genetic factors help explain why some people weigh more than others when their diets are high in saturated fat.

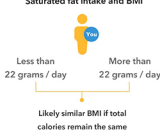
Your Wellness Result

Jamie, your **weight is likely to be similar** on diets high or low in saturated fat with the same number of total calories.

People with your genetic result tend to have a similar BMI on diets with greater or less than 22 grams of saturated fat per day, as long as they consume the same number of total calories.

However, diets high in saturated fat have been associated with increased LDL ("bad") cholesterol, which is a risk factor for heart disease.

Saturated fat intake and BMI



What you can do

Limit your saturated fat intake. It may not have a large effect on your weight, but it's important for reducing your risk of heart disease.

Healthy Weight Management

Dietary Choices

Fats are an important part of a healthy diet: they give you energy, help build your cells, and help you absorb certain vitamins. There are three main types of fats, but not all types are equally healthy.

- Saturated fats:** Found primarily in red meat and dairy products, saturated fat has been linked to increased LDL ("bad") cholesterol and total cholesterol, which are risk factors for heart disease. Researchers are still working to understand the complex relationship between saturated fat and health.
- Trans fats:** Found in processed foods like cookies and frozen pizza, trans fats can increase your risk of heart disease. Experts agree that we should avoid trans fats.
- Unsaturated fats:** Found in nuts, fish, and most vegetable oils, unsaturated fats may improve your cholesterol levels and are commonly thought of as healthy fats.

Examples of foods high in saturated fat

- 19 grams** saturated fat in an 8-ounce steak
- 5 grams** saturated fat per slice of a 14" pizza
- 9 grams** saturated fat per 1 cup of ice cream

Sources of healthy fats



Recommendation

Saturated fat intake is something many of us should keep an eye on; about 70% of Americans eat more than the recommended daily amount of saturated fat. Try to consume less than 10% of your daily calories from saturated fat, which is 22 grams for a 2000 calorie-per-day diet.

Source: 2015-2020 Dietary Guidelines for Americans*

Maintaining a Healthy Weight

Maintaining a healthy body weight can be difficult; more than 70% of Americans are overweight or obese. One way to assess whether you're at a healthy weight is by calculating your BMI, or body mass index, which is based on your height and weight.

Here's what BMI usually means:

Underweight: <18.5
Normal weight: 18.5-24.9
Overweight: 25-29.9
Obese: ≥30

Body mass index (BMI) calculator

Weight lbs

Height ft in

Calculate BMI

Recommendation

It's important to maintain a healthy body weight to reduce the risk of conditions like heart disease and diabetes. One strategy is to make healthy choices a daily habit. To get started, try using a paper or electronic food journal to keep track of what you eat for one week. By learning about your daily eating habits, you can pinpoint specific food choices that you'd like to improve.

Source: U.S. National Library of Medicine*

Genetics

In addition to diet and exercise, genetics plays a role in determining your body weight. People with two copies of the variant in this report tend to weigh more on a high saturated fat diet. This variant is near a gene called APOA2, which contains instructions for making a protein called apolipoprotein A-II (apo A-II). People with two copies of the variant produce less apo A-II protein than people with zero or one variant. Scientists are working to understand how apo A-II affects our body's response to saturated fat.

Genetic result	What it means
GG	Likely to weigh more on a diet high in saturated fat
AG	Likely similar weight on diets high or low in saturated fat
You AA	Likely similar weight on diets high or low in saturated fat

See the percentage of customers with these variants

This report does not diagnose any health conditions or provide medical advice. Consult with a healthcare professional before making any major lifestyle changes or if you have any other concerns about your results.

How To Use This Test

This test does not diagnose any health conditions or provide medical advice. Consult with a healthcare professional before making any major lifestyle changes or if you have any other concerns about your results.

[Review the Wellness tutorial](#)
[See Scientific Details](#)

Intended Uses

- Tests for the rs5082 variant near the APOA2 gene.
- Provides information about how this variant may affect weight in response to dietary saturated fat.

Limitations

- Does **not** test for all possible variants that may affect weight or response to saturated fat.
- Does **not** account for lifestyle or other factors that may affect weight or response to saturated fat.

Relevant Populations

- The variant in this report has been studied the most in people of European or Latino descent who are overweight or obese. It is not yet known how well these results apply to people of other ethnicities or people with weights in the normal range.

Keep exploring your Wellness results.



Learn more about maintaining a healthy weight.



Compare your results to your family and friends.



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Scientific Details

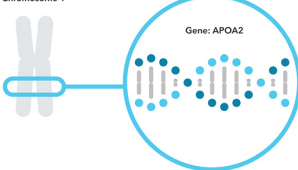
Genetic factors help explain why some people weigh more than others when their diets are high in saturated fat.

The effect of dietary saturated fat on BMI is associated with a variant near the APOA2 gene.

APOA2

The APOA2 gene contains instructions for making a protein called apolipoprotein A-II, which is found in high-density lipoprotein (HDL) cholesterol particles. The role of apolipoprotein A-II in the body's response to saturated fat is not yet well understood.

Chromosome 1



You have zero variants included in this report.

Variants Detected		View All Tested Markers										
Marker Tested	Your Genotype*	Additional Information										
rs5082 Gene: Near APOA2 Marker: rs5082	<p>A</p> <p>Typical copy from one of your parents</p> <p>A</p> <p>Typical copy from your other parent</p>	<p>Biological explanation</p> <p>The variant tested is a change from an A to a G in the DNA sequence near the APOA2 gene. Having two copies of the G version is associated with higher BMI in the context of a high saturated fat diet. Many sources refer to this variant as a change from a T to a C, using the opposite DNA strand.</p> <p>Typical vs. variant DNA sequence(s)</p> <p>Typical Sequence: A → Substitution → G Variant Sequence</p> <p>Percent of 23andMe customers with variant</p> <p>Variant: G</p> <table border="1"> <tr><td>European</td><td>62.61%</td></tr> <tr><td>African American</td><td>43.88%</td></tr> <tr><td>East Asian</td><td>15.48%</td></tr> <tr><td>Hispanic or Latino</td><td>52.72%</td></tr> <tr><td>South Asian</td><td>42.11%</td></tr> </table> <p>References [1, 2]</p>	European	62.61%	African American	43.88%	East Asian	15.48%	Hispanic or Latino	52.72%	South Asian	42.11%
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*This test cannot distinguish which copy you received from which parent. This test also cannot determine whether multiple variants, if detected, were inherited from only one parent or from both parents. This may impact how these variants are passed down.

23andMe always reports genotypes based on the "positive" strand of the human genome reference sequence (build 37). Other sources sometimes report genotypes using the opposite strand.

References

- Corella D et al. (2009). "APOA2, dietary fat, and body mass index: replication of a gene-diet interaction in 3 independent populations." *Arch Intern Med.* 169(20):1897-906.¹
- Corella D et al. (2011). "Association between the APOA2 promoter polymorphism and body weight in Mediterranean and Asian populations: replication of a gene-saturated fat interaction." *Int J Obes (Lond).* 35(5):666-75.¹
- Eckel, RH et al. (2014). "2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines." *J Am Coll Cardiol.* 63(25 Pt B):2960-84.²
- Hooper L et al. (2015). "Reduction in saturated fat intake for cardiovascular disease." *Cochrane Database Syst Rev.* 6:CD011737.²
- U.S. Department of Agriculture, Agricultural Research Service. "USDA Food Composition Database."²
- U.S. Department of Health and Human Services and U.S. Department of Agriculture. "2015-2020 Dietary Guidelines for Americans." 8th Edition, December 2015.²

Change Log

Your report may occasionally be updated based on new information. This Change Log describes updates and revisions to this report.

Date	Change
July 20, 2016	Saturated Fat and Weight created.



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