

What Happens to Your Body When You Eat Watermelon Regularly?

Analysis by [Dr. Joseph Mercola](#)

August 31, 2024

STORY AT-A-GLANCE

- › Watermelon is a nutrient-dense fruit containing vitamins, minerals and bioactive compounds that offer antimicrobial, antidiabetic, anti-inflammatory, antioxidant and antihypertensive benefits, surpassing other fruits in antioxidant content
- › It may help reduce cardiovascular disease risk by improving heart rate variability and vasodilation through its L-citrulline and L-arginine content, which are precursors to nitric oxide
- › It also aids weight management due to its low calorie content and ability to promote satiety, with studies showing reductions in body weight and fat percentage in children
- › Watermelon supports male fertility by improving semen quality, increasing antioxidant enzyme activities, boosting hormonal levels and enhancing sexual activity, as evidenced by various animal and human studies
- › Watermelon also offers benefits for skin health, muscle recovery, bone health and digestion, thanks to its diverse nutrient profile

Fresh, ripe fruits are some of the ideal sources of carbohydrates you can include in your diet. Some fruits are better than others, though, and among all the options available, watermelon stands out as one of your best choices. I personally consume about 3 to 4 pounds of this fruit (without the rind) per day.

Watermelon is considered the United States' favorite melon,¹ and is especially popular during the summer months, thanks to its high water content (about 91% by weight),² making it a healthy option for quenching your thirst. Beyond helping you stay hydrated and refreshed, watermelon offers an impressive nutrient profile that can contribute to your optimal overall health.

Beneficial Nutrients and Compounds in Watermelon

Watermelon (*Citrullus lanatus*) belongs to the Cucurbitaceae or gourd family. Contrary to the misconception that it's just water and sugar, watermelon is actually a nutrient-dense fruit. A 2023 review³ published in the journal *JBRA Assisted Reproduction* highlighted the fruit's nutritional profile:

"Watermelon is a robust source of vitamins, minerals and other important substances that may contribute to its pharmacologic applications. Vitamins provided through watermelon consumption include thiamine, riboflavin, niacin and folate.

Beyond this, vital electrolytes including potassium, magnesium, calcium, phosphorus and iron are also found in watermelon ... Carotenoids found in watermelons such as lycopene and β -carotene are responsible for the watermelon's red and orange hues, respectively. Cucurbitacin, triterpenes, sterols and alkaloids are bioactive chemicals found in watermelon."

These vitamins, minerals and bioactive compounds contribute to watermelon's wide range of pharmacologic benefits, which include antimicrobial, anthelmintic, antidiabetic, anti-inflammatory, antioxidant and antihypertensive actions.

It's also been found to possess a higher antioxidant content than other fruits such as tomatoes, strawberries and guavas. These properties make watermelon a valuable therapeutic ally for various health conditions.⁴

Watermelon Helps Reduce Your Risk of Heart Disease

Cardiovascular disease (CVD) remains a leading cause of death worldwide,⁵ making prevention through dietary choices increasingly important. Watermelon is one of the fruits that have been studied for its potential to combat this condition.

A 2021 study⁶ published in *Current Atherosclerosis Reports* noted that watermelon's cardiometabolic benefits come from its L-citrulline and L-arginine content, which are precursors of nitric oxide (NO). NO is important to your body, but the caveat is that it needs to come from real food. It plays a role in vasodilation, helping relax and widen your blood vessels, thereby reducing blood pressure levels.

Another study⁷ published in the journal *Nutrients* corroborates these findings, highlighting the role of NO on heart rate variability (HRV), a measure of the variation in time between successive heartbeats. Low HRV is associated with an increased risk of CVD and mortality, as well as the accumulation of visceral fat, hyperglycemia, endothelial dysfunction and increased inflammation.

The study also showed that watermelon juice helped counteract the reduction in NO-mediated vasodilation caused by an oral glucose challenge, a test where a glucose-rich drink is consumed to assess how the body processes sugar. According to the authors:⁸

"Using a rigorous study design, we show the efficacy of a naturally rich source of amino acids, L-citrulline and L-arginine to preserve HRV during a hyperglycemic episode.

These findings build on our previous work that shows WMJ [watermelon juice] supplementation protects vascular function during hyperglycemia. NO bioavailability is potentially a link between these two integrated physiological systems, but more work is required to develop a mechanistic understanding of this relationship."

Further supporting this fruit's cardiovascular benefits, a 2023 study⁹ published in the journal *Diabetes Research and Clinical Practice* showed that consuming watermelon helped reduce the factors of cardiovascular disease, including systolic blood pressure

(SBP) and low-density lipoprotein (LDL). "The current findings provide promising evidence of the antihypertensive effect of watermelon," the researchers concluded.

Consuming This Fruit Can Also Help You Lose Weight

With its high water content, watermelon is low in calories, making it a good fruit of choice if you're being mindful of your calorie intake. A study¹⁰ conducted by researchers from the School of Exercise and Nutritional Sciences at San Diego State University evaluated the effects of blenderized watermelon on overweight and obese children aged 10 to 17.

For eight weeks, the participants drank either a cup of blended watermelon or a sugary beverage every day. After a four-week break, they then switched to the other drink. The researchers measured their weight, body fat and several health indicators before and after each period.

Their findings showed that drinking blenderized watermelon led to significant reductions in body weight, body fat percentage and HbA1c, which reflects the average level of blood sugar you have over the past two to three months. In contrast, consuming the sugary drink led to an increase in body fat. "Watermelon is a potential alternative to unhealthy snacks for improving anthropometry and some risk factors related to obesity in children," the researchers noted.¹¹

Another way watermelon can aid weight management is by promoting satiety and curbing the desire to eat unhealthy foods. A 2022 study published in *Nutrients*¹² found that "[i]t's possible the sweetness of watermelon curbed the desire to have other foods with added sugars." Watermelon consumption was also found to improve overall nutrient intake and diet quality in both adults and children.

"Children and adult watermelon consumers had greater than 5% higher intake of dietary fiber, magnesium, potassium and vitamin A as well as more than 5% lower intake of added sugars and total saturated fatty acids, as well as higher intake of lycopene and other carotenoids. This study suggests watermelon can

increase nutrient intake as well as diet quality in both children and adult Americans."

Watermelon May Be Beneficial for Male Fertility

Watermelon may be beneficial for reproductive health as well, particularly in men, as indicated by a 2023 article¹³ published in JBRA Assisted Reproduction. The reviewed studies highlighted several ways this fruit can help enhance male fertility:¹⁴

- **Improved semen quality** – Watermelon contains vitamin C, which has been shown to preserve human sperm by neutralizing harmful radicals and inhibiting sperm agglutination (clumping), thereby improving sperm morphology, motility and viability. Its carotenoid content may also contribute to protecting the sperm cells and the blood-testis barrier.
- **Higher antioxidant enzyme activities** – Watermelon consumption led to increased superoxide dismutase (SOD) concentration, an enzyme that plays a crucial role in neutralizing harmful free radicals. By boosting SOD levels, watermelon helps protect sperm cells from oxidative stress and damage, improving overall sperm health and function.
- **Increased hormonal levels** – Animal studies have shown that watermelon extract can increase levels of testosterone and gonadotropin, which are essential hormones for male fertility.
- **Enhanced sexual activity** – Animal studies have shown that watermelon extract can increase sexual activity, as evidenced by more frequent mating attempts, longer duration before ejaculation and shorter recovery time between mating sessions in rats.

This Fruit Can Also Protect Your Liver

Watermelon is one of the fruits that have been found to exert antifibrotic effects in animal models with nonalcoholic fatty liver disease (NAFLD). According to a 2023

study¹⁵ published in the Heliyon journal, this effect is largely due to watermelon's phytosterol content, which may help reduce liver inflammation and function.

An animal study¹⁶ published in the journal Food Science & Nutrition further demonstrated the hepatoprotective benefits of watermelon, particularly highlighting its L-citrulline content. The researchers found that L-citrulline helps combat NAFLD by enhancing lipid metabolism, reducing fat production and protecting the liver against damage caused by fat accumulation and fibrogenesis.

More Reasons to Eat Watermelon

In addition to the benefits discussed above, watermelon consumption may also have benefits for:

- **Skin and muscles** – Watermelon contains vitamins A and C,¹⁷ which are both important for maintaining healthy skin. Vitamin A supports cell growth and repair,¹⁸ while vitamin C aids in collagen production, which is essential for skin elasticity and healing.¹⁹ Additionally, L-citrulline may help improve blood flow, which in turn reduces muscle soreness and aids in recovery after exercise.
- **Bone and joint health** – The potassium and magnesium content²⁰ of watermelon contributes to your bone health by supporting calcium absorption and maintaining bone density. Potassium helps reduce calcium loss through urine,²¹ while magnesium plays a role in bone formation.²²

Watermelon also contains beta-cryptoxanthin, which has anti-inflammatory properties that may help alleviate joint pain and stiffness, promoting overall joint health.²³

- **Cancer prevention** – Watermelon's high levels of antioxidants, particularly lycopene and beta-carotene, are associated with lower risks of cancer. Lycopene has been linked to a reduced risk of prostate, breast and lung cancer due to its ability to combat free radicals,^{24,25} whereas beta-carotene may lower your risk of gastric and other cancers by neutralizing oxidative stress that can damage cells and DNA.²⁶

- **Digestion** — Watermelon's high water content helps support regular bowel movements, while its fiber content adds bulk to your stool and reduces your risk of constipation.²⁷

Tips for Choosing and Preparing Watermelon

When buying watermelon, there are several key signs to look for to ensure you're getting a ripe and tasty fruit. Start by checking the color — a ripe watermelon will have a deep green color with a noticeable contrast in shade between the stripes.

Look for a creamy, yellow spot on the rind — this is where the melon rested on the ground and ripened in the sun. If it's very pale or white, the watermelon may have been picked too early and might not be as ripe.

Next, give it a tap or a knock. A ripe watermelon will produce a deep, hollow sound, while an underripe or overripe one might sound dull. Weight is another good indicator; pick up the watermelon to feel how heavy it is. It should be heavy for its size, suggesting it's full of juice.

Make sure to also check the shape and condition of its rind. You want one that's symmetrical, smooth and waxy without any cuts, bruises, irregular bumps or dents. Cracks and soft spots could be signs of overripeness or spoilage.^{28,29,30}

Once you've picked out the perfect watermelon, follow this simple step-by-step guide from The Spruce Eats to slice it properly:³¹

1. Start by placing the watermelon on a firm cutting board or work surface.
2. Using a heavy, sharp knife, slice off both ends of the watermelon just enough to expose the flesh inside and provide a stable base for the next steps.
3. Stand the watermelon upright on one of the cut ends. Carefully slice it down the middle lengthwise, creating two halves.
4. Place each half of the watermelon cut-side down on the cutting board. Slice each half into quarters. You can then cut these quarters into thick or thin slices

depending on your preference.

5. Serve the watermelon slices immediately for the best flavor or cover them and refrigerate until you're ready to eat.

Optimize Your Mitochondrial Function to Make the Most of Watermelon

While I believe that ripe fruits like watermelon (as well as starches like white rice) are ideal carbs, it's important to note that they're complex carbohydrates. Complex carbs can nourish your gut microbiome, but they can also feed pathogenic bacteria when you're exposed to metabolic poisons like [linoleic acid](#)³² and xenoestrogens.³³

These can impair your mitochondrial energy production and increase oxygen levels in the intestine, creating an environment conducive to pathogenic bacteria growth. When these harmful bacteria consume complex carbs, they proliferate and eventually die, releasing high levels of lipopolysaccharide, an endotoxin that further compromises cellular energy production.

The solution is to improve your mitochondrial function, so that your mitochondria are able to produce enough cellular energy to maintain an appropriate oxygen gradient in your intestine. Once you achieve that, you can benefit from complex carbs again. Until then, it's best to carefully introduce complex carbs into your diet.

If complex carbs result in bowel issues, then consider temporarily restricting your carb intake to very simple carbohydrates such as pulp-free fruit juice, which is easier to digest. Once your gut health improves and you can tolerate whole fruits, you can add more forms of complex carbs into your diet.

Sources and References

- ¹ [Economic Research Service, August 3, 2023](#)
- ^{2, 17} [Nutrients. 2022 Nov; 14\(22\): 4883](#)
- ^{3, 4, 13, 14} [JBRA Assist Reprod. 2023 Oct-Dec; 27\(4\): 702–708](#)
- ⁵ [Glob Heart. 2024; 19\(1\): 11](#)

- ⁶ [Curr Atheroscler Rep. 2021;23\(81\)](#)
- ^{7, 8} [Nutrients 2023, 15\(4\), 810](#)
- ⁹ [Diabetes Res Clin Pract. 2023 Aug;202:110801](#)
- ^{10, 11} [Pediatr Obes. 2023 Aug;18\(8\):e13038](#)
- ¹² [Nutrients 2022, 14\(22\), 4883](#)
- ¹⁵ [Heliyon. 2023 Apr; 9\(4\): e15347](#)
- ¹⁶ [Food Sci Nutr. 2021 Sep; 9\(9\): 4893–4904](#)
- ¹⁸ [NIH ODS, Vitamin A and Carotenoids](#)
- ¹⁹ [Oregon State University, Vitamin C and Skin Health](#)
- ²⁰ [USDA FoodData Central, Watermelon, raw](#)
- ²¹ [Medscape, Hypercalciuria Treatment & Management](#)
- ²² [Biometals. 2021; 34\(4\): 715–736](#)
- ²³ [Arthritis Foundation, Best Fruits for Arthritis](#)
- ²⁴ [Antioxidants 2022, 11\(6\), 1150](#)
- ²⁵ [Nutrients 2022, 14\(23\), 5152](#)
- ²⁶ [World J Clin Cases. 2021 Aug 16; 9\(23\): 6591–6607](#)
- ²⁷ [Human Nutrition & Metabolism Volume 34, December 2023, 200223](#)
- ²⁸ [Real Simple, June 12, 2024](#)
- ²⁹ [Delish, July 10, 2024](#)
- ³⁰ [Texas A&M Today, July 1, 2020](#)
- ³¹ [The Spruce Eats, May 12, 2022](#)
- ³² [Gut Microbes. 2023; 15\(1\): 2229945](#)
- ³³ [Curr Opin Endocr Metab Res. 2021 Aug; 19: 41–45](#)