

The Surprising Health Benefits of Baking Soda

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STORY AT-A-GLANCE

- › Baking soda, derived from natural mineral deposits, has been used for centuries and continues to gain attention for its alkalizing effects and wide-ranging health benefits
- › Its pH-balancing power helps ease acid reflux, reduce inflammation, and may even slow cancer growth by creating a less acidic environment around tumors
- › Baking soda helps whiten teeth, soothe skin rashes, neutralize body odor, and relieve urinary infections, making it a natural go-to for home remedies
- › When used before workouts, baking soda helps buffer muscle acidity for better endurance, and studies suggest it may slow the progression of chronic kidney disease
- › Beyond the body, baking soda safely deodorizes fridges, brightens laundry, clears drains, and even removes pesticides from produce — all without harsh chemicals

Baking soda is one of those ubiquitous, all-around items you always have at home, but did you know that aside from making your homemade bread fluffier and your refrigerator or cabinets smell fresher, it has a wide range of uses outside the kitchen as well?

From health and hygiene to everyday household tasks, baking soda has quietly earned its place as a trusted remedy in many homes — and science is starting to take notice of its potential, too.

What Is Baking Soda and Why Is It So Useful?

Also known as sodium bicarbonate, baking soda (NaHCO_3) is a white crystalline powder that's composed of sodium, hydrogen, carbon, and oxygen. It's a naturally alkaline compound – in fact, one of its main functions is to maintain pH balance by neutralizing excess acids or bases. Here are some more interesting facts about this product:

- **Baking soda existed in nature 4 million years ago** – When salt lakes worldwide evaporated, they formed mineral deposits called trona. This is a rock that's then processed into soda ash (sodium carbonate). Soda ash is a naturally occurring mineral that's then processed into baking soda. So while this product can be produced synthetically, the majority of commercially sold brands still come from these natural mineral deposits. In the U.S., the largest trona deposits are found in Wyoming.¹
- **It gained widespread attention during the 19th century** – American bakers Austin Church and John Dwight founded the first baking soda factory in 1846, called Church & Co. When Church's son joined the company, he changed the company name to Arm & Hammer, and also created the company's iconic logo.²
- **Baking soda's power lies in its alkalinity** – It measures around 8.3 on the pH scale, which is just above neutral. This means it effectively counteracts substances with low pH (acids), making it useful for addressing acid-related issues such as heartburn or even skin irritations.

When it's mixed with an acid – like vinegar or lemon juice – this compound acts as a chemical leavener and produces carbon dioxide gas. This is the bubbly lift needed in recipes to make cakes and cookies rise, giving them a moist and fluffy texture.³

- **Did you know that your body naturally produces baking soda, too?** In the video above, Dr. Eric Berg explains how this works:⁴

"In the stomach, you have this super acidic mixture – a pH between 1 and 3 – and then it goes into the small intestine, where it should go up to maybe 6 or 7, sometimes even 7.5 ... The neutralization of stomach acid is very

important. If we don't neutralize the stomach acid, we get severe irritation and inflammation in the small intestine. Sodium bicarbonate from the pancreas helps to neutralize this acid.

Bicarbonate isn't only produced by the pancreas. The bile ducts – the small tubes connecting the liver and the gallbladder – also secrete bicarbonate.”

8 Ways to Use Baking Soda for Your Health

Baking soda's acid-neutralizing property makes it a versatile remedy for various ailments. Its ability to adjust pH levels has been studied not just for digestive comfort, but also for enhancing athletic performance, soothing skin issues, and even supporting the body's immune and inflammatory responses. Below are some notable uses of this compound:^{5,6,7}

- 1. Provides digestive relief** – Baking soda's ability to neutralize excess stomach acid provides fast relief from indigestion, heartburn, and acid reflux. Do this by diluting a small amount – typically a 1/4 teaspoon in a cup of water – and sipping it whenever symptoms arise.
- 2. Protects against inflammation** – Conditions like arthritis and gout are rooted in inflammation, and drinking a tonic made from baking soda and water will help lower inflammation. According to research, the antacid properties of baking soda help shift proinflammatory immune cells to anti-inflammatory ones.⁸ Read more about baking soda's anti-inflammatory effects in this article, [“Baking Soda – Inexpensive Treatment for Autoimmune Diseases.”](#)
- 3. Promotes better oral health and hygiene** – Thanks to its mild abrasiveness and alkalinity, [baking soda helps remove surface stains on teeth](#), freshen breath, and reduce plaque buildup. Many toothpastes include baking soda to neutralize acids that erode enamel and create an inhospitable environment for harmful bacteria. Mouth rinses made with baking soda and water will also soothe canker sores, reduce acidity in the mouth, and support gum health.

To use it for teeth whitening, the Hearty Soul recommends mixing equal parts baking soda and water, then brushing it gently for two minutes, then rinsing thoroughly.⁹ For gargling, add half a teaspoon to four ounces of warm water and gargle as you would a mouthwash. This needs to be done in moderation.

- 4. Enhances your physical performance** – When you exercise rigorously, your body produces lactic acid, which lowers the pH in muscle tissues and contributes to fatigue. Consuming baking soda before a workout may help buffer this lactic acid, delaying the onset of fatigue and improving endurance.

For athletes and fitness enthusiasts, a 2021 study recommends taking 300 milligrams of baking soda for every kilogram of body weight to reap its benefits. Ideally, take it between 60 and 180 minutes before your workout session.¹⁰

- 5. Reduces risk of chronic kidney disease** – Some studies^{11,12} support the use of baking soda in slowing the progression of chronic kidney disease (CKD). In these cases, sodium bicarbonate supplementation helps neutralize acid levels in the blood, easing the burden on compromised kidneys. It's believed that lowering blood acidity helps reduce damage to kidney tissue and delay disease advancement.
- 6. Eases urinary tract infections** – Baking soda helps alkalize urine, offering relief for individuals prone to urinary tract infections (UTIs). When your urine is more alkaline, it creates an environment that helps minimize the growth of certain bacteria, helping reduce irritation and discomfort during infections.
- 7. Provides relief for bug bites, rashes, or sunburn** – Make a paste using water and baking soda and apply it to the affected area to ease pain, itching, and redness. You can also add a cup or two to your lukewarm bathwater and soak in it. This remedy is also recommended to calm symptoms of psoriasis or eczema.
- 8. Works as a natural deodorant** – Baking soda combats body odor because its alkaline nature decreases acidity in your underarms. When you sweat, the sweat itself doesn't stink; however, when bacteria in your armpits break down this fluid

into acidic waste, it causes bad odor to form. Pat baking soda directly on your underarms or by mixing it with a small amount of shea butter or coconut oil, then applying it on your underarms.

How Baking Soda Helps Support Cancer Treatment

One area where baking soda shows promise is cancer treatment; according to animal studies, baking soda's alkalinity may contribute to slowing down cancer growth by creating a less favorable environment for tumors.

- **Creating a more alkaline environment for tumors can help inhibit their growth** – Cancer tumors are highly acidic, which helps them thrive and become resistant to treatments.¹³ Researchers investigated whether baking soda may be particularly beneficial in making the tumor's environment alkaline and less conducive for growth.
- **“Tumor alkalizing therapy” showed promising results** – A 2024 animal study published in *Frontiers in Oncology* found that when mice with Ehrlich ascites carcinoma were given a baking soda solution, their lifespan was extended by 30 days more; to compare, mice that were given sodium chloride lived only 14 to 18 days longer. This showed that reducing the acidity around the tumors seemed to slow down the cancer's progress.¹⁴
- **They also tried this strategy with a human patient** – The female patient was diagnosed with ovarian cancer, and had a buildup of fluid in her abdomen (ascites). She also wasn't responding to chemotherapy. After receiving baking soda solution directly into her abdomen, her cancer marker levels significantly dropped, and the ascites disappeared.

“The preclinical and clinical results obtained using sodium bicarbonate perfusion in the treatment of malignant ascites represent a small yet significant contribution to the evolving field of tumor alkalization as a

*cancer therapy. They unequivocally affirm the good prospects of this concept,” the researchers concluded.*¹⁵

While human research is still needed, these findings are promising and highlight the potential of baking soda as a supportive therapy. Another way by which baking soda may help with cancer is by easing the discomfort of cancer treatments. An article in Everyday Health recommends swishing your mouth with a mixture of baking soda, salt, and water to ease throat discomfort caused by chemotherapy or radiation. It also helps mouth sores from getting infected.¹⁶

Cleans, Deodorizes, and Protects – Baking Soda Uses for Your Home

While most people use baking soda to make fluffy cakes and chewy cookies, its usefulness stretches far beyond the mixing bowl. Whether you're looking to **ditch harsh chemical cleaners** or find safe, affordable ways to freshen your home, this simple but versatile powder offers a powerful alternative. Here are some ways to use baking soda for household chores.

- **Baking soda neutralizes and eliminates odors** – Since odors are usually caused by acidic substances, baking soda’s alkalinity breaks them down at the molecular level. That’s why leaving a box of baking soda in the refrigerator or freezer is so effective at eliminating food smells. But you shouldn’t stop there, because there are many ways to use this product around the house:
 - Sprinkle it into the bottom of garbage cans, diaper pails, and litter boxes
 - Dust it all over musty-smelling carpets, cushions, or mattresses, letting it sit for 30 minutes before vacuuming
 - Remove pet odors from your dog’s bed

- **Adding it to your laundry brightens clothes and removes odors** – When your washing machine is in the rinse cycle, add a cup of baking soda to remove mildew smell. It also softens water, enhancing the effectiveness of your detergent. You can also pre-treat stains using a baking soda and water paste. Apply it to the stained area, let it sit for 15 to 30 minutes, and then wash as usual. This works well for food, oil, and even sweat stains.
- **Wash your fresh fruits and vegetables with it** – If you frequently buy conventionally grown produce, baking soda will help reduce your exposure to pesticides on the surface of your foods. One study found that soaking fruits like apples in a solution of baking soda and water removed 80% to 96% of pesticides from the surface – more effectively than either water alone or commercial rinses.¹⁷

To make your own produce wash, fill a clean basin or sink with water and add about four teaspoons of baking soda. Soak your fruits and vegetables for at least five minutes, then rinse thoroughly.

- **Clean your jewelry and silverware** – Baking soda even helps you restore shine to tarnished silver and dull jewelry. When combined with hot water and a piece of aluminum foil in a nonmetallic bowl, baking soda initiates an ion exchange that lifts tarnish off silver. Just soak the items for a few minutes and then rinse and dry thoroughly.

Use a soft toothbrush to help clean oils and dirt from surfaces, especially in hard-to-reach crevices. This method is especially appealing for those looking to avoid abrasive commercial silver polishes.

- **Use it as a drain cleaner** – Pour half a cup of baking soda down the drain, followed by an equal amount of vinegar. Allow the mixture to fizz and sit for 15 to 20 minutes before flushing with hot water. While it won't replace a commercial-strength clog remover for serious blockages, it's great for routine maintenance and keeping pipes smelling fresh.

How to Use Baking Soda Safely

While baking soda offers many benefits, remember that it is not without side effects – but only when used incorrectly or excessively. Bloating, gas, nausea, metabolic alkalosis (when the body's pH is too high), or electrolyte imbalances due to its high sodium content could occur when used in high amounts. Here are a few precautions to keep in mind:

- **If you're ingesting baking soda, you need to moderate its intake** – The Hearty Soul recommends starting small, typically half a teaspoon dissolved in a glass of water.
- **Baking soda's abrasive nature can damage your enamel** – If you're brushing with it, always gargle with plain water after.
- **It could dry out your skin** – If you're soaking in a baking soda bath or using a homemade baking soda paste on your skin, make sure to moisturize afterward with a gentle, fragrance-free moisturizer or coconut oil to prevent dryness or irritation.

Frequently Asked Questions (FAQs) About Baking Soda

Q: What are the main health benefits of baking soda?

A: Baking soda helps relieve indigestion, soothe heartburn, reduce inflammation, improve oral hygiene, enhance physical performance, support kidney health, and help manage conditions like UTIs and skin irritations.

Q: How does baking soda help with digestion and acid-related issues?

A: Its alkalizing properties help neutralize excess stomach acid, offering fast relief from acid reflux, heartburn, and indigestion. It also supports enzyme activation in the small intestine for better digestion.

Q: Can baking soda really support cancer treatment?

A: Preliminary studies suggest baking soda may help by making the area around tumors less acidic, which could slow their growth. Early research in mice and one human case showed promising results.

Q: How can baking soda be used for skin, hygiene, and fitness?

A: It helps whiten teeth, soothe canker sores, calm rashes and sunburn, and act as a natural deodorant. Athletes use it to delay fatigue by buffering lactic acid during intense workouts.

Q: Are there household uses for baking soda beyond cooking?

A: Yes, it neutralizes odors in refrigerators, carpets, and laundry; cleans drains, silverware, and produce; and works as a nontoxic cleaner – all while being affordable and eco-friendly.

Sources and References

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