

These Herbs and Spices Can Help Deter Diabetes

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✓ Fact Checked

STORY AT-A-GLANCE

- › Type 2 diabetes may be helped by making simple changes to your nutrition plan, including adding Ceylon cinnamon supplements that in studies lowered fasting glucose levels after 12 weeks of treatment
- › Ginger not only reduces fasting blood sugar (FBS) and hemoglobin A1c (HbA1c) measurements as well as inflammation, but also modulates the immune system and acts as an antioxidant
- › Fenugreek seeds lowered FBS and HbA1c in studies, even in those on diabetes medication
- › The aromatic herb rosemary reduced the risk of obesity and metabolic syndrome in an animal study; in humans it reduces blood glucose in a dose-dependent manner
- › Lowering blood sugar is a surprising benefit of consuming cannabis; other benefits include pain control and the treatment of epilepsy and inflammatory bowel disease. It also may positively affect those infected with COVID-19

Based on estimates from the National Health and Nutrition Examination Survey (NHANES) in 2005, the total prevalence of diabetes was estimated at 20.8 million people, or 7% of the population.¹ This rose dramatically by 2018, when the American Diabetes Association² reported 34.2 million people in the U.S. had diabetes. This represented 10.5% of the total population.

The U.S. Centers for Disease Control and Prevention³ estimates 1 in every 3 people in the U.S. has prediabetes, which numbered 88 million people in 2019. Diabetes is a metabolic condition in which your body develops insulin resistance.

Risk factors associated with Type 2 diabetes that are not modifiable include your age and family history. However, there is also a list of risk factors over which you do have some control. Some include weight, nutritional intake, high blood pressure, history of gestational diabetes, inactivity and a history of heart disease or stroke.⁴

Unfortunately, Type 2 diabetes is an epidemic in the U.S. Coincidentally, it is also a comorbidity that can increase your risk of contracting and even dying from COVID-19.⁵ Both high blood pressure and Type 2 diabetes have been implicated as underlying factors that increase your risk of serious illness with COVID. Yet, both can often be reversed by making healthy diet choices and lifestyle changes.

The nutritional choices you make are not always about what you cut out of your diet. Sometimes it is about what you add. Consider these next five herbs and spices that can help lower your blood sugar, four of which add flavor and punch to food.⁶

Cinnamon: The Scent of Fall

The Farmer's Almanac calls cinnamon the "star spice of the fall season."⁷ This spice has been used for thousands of years in cooking, as a fragrance and in medicine. However, it's important to be aware that there are over 250 different species of cinnamon,⁸ and they're not all created equally.

Most of the cinnamon found in the grocery store is known as Chinese cinnamon or cassia cinnamon. It tends to be less expensive and contains higher levels of coumarin. This is a powerful anticoagulant with potential carcinogenic and toxic properties.⁹

On the other hand, **Ceylon cinnamon** is less common, slightly more expensive and, importantly, has lower levels of coumarin. It is native to Southern India and Sri Lanka and claimed to be a "richer spice."¹⁰ Cassia cinnamon is a reddish-brown color while

Ceylon cinnamon is tan. While they can be used interchangeably, when used in larger amounts it is safer to use Ceylon cinnamon.

A diet high in **net carbohydrates** can lead to blood sugar levels higher than normal. This can progress to a condition known as **prediabetes** and then to Type 2 diabetes. A systematic review of literature¹¹ evaluating the use of cinnamon in people with diabetes was unable to find sufficient evidence to support its use to lower fasting blood glucose levels or A1c.

However, the lead researcher of a study in the Journal of the Endocrine Society¹² believed the issue was likely an interference between cinnamon and the medications people take to control their diabetes.¹³ For this reason, his group chose to focus only on people with prediabetes who were not yet taking medication.

When cinnamon supplements were given to the intervention group, they experienced improved fasting glucose levels after receiving a 500 milligram (mg) supplement of cinnamon for 12 weeks.¹⁴ Another study¹⁵ engaged 109 participants with Type 2 diabetes to measure whether cinnamon supplements plus usual care could lower patients' hemoglobin A1c (HbA1c) better than usual care alone.

The results showed those taking **cinnamon** had lower HbA1c by 0.83% as compared to those who underwent usual care. The researchers concluded this was statistically significant and may be useful in helping to lower HbA1c, which is a measurement of long-term blood sugar control.

A 2021 paper published in Frontiers in Plant Science¹⁶ reviewed past clinical studies using Ceylon cinnamon. Although there are no specific studies evaluating the effect it may have on the cytokine storm common in severe COVID-19, they hypothesized that "the strong anti-inflammatory properties of Ceylon cinnamon may mitigate this complication."¹⁷

Additionally, the writers cite past research that concluded, "Our results demonstrate no significant side effects and toxicity of CZ [*Cinnamomum zeylanicum*], including hepatotoxicity and anti-coagulation properties."¹⁸

A Powerful Punch From Ginger

Ginger (*Zingiber officinale*) is a spice commonly used in Indian and Chinese cooking; historically, the root was also used as a tonic to treat common ailments.¹⁹ Ginger is a herbaceous perennial plant with a slight biting taste that is often ground to flavor sauces, curry and ginger ale.²⁰ The root can also be used to make tea.

The plant grows just over 2 feet high and produces a cone-like flower with yellow edges. However, it is the underground rhizome or stem that is prized for its medicinal and flavor properties. Several studies have demonstrated the effect ginger has on improving insulin sensitivity and reducing fasting plasma glucose and HbA1c.

In one study published in 2014,²¹ researchers enrolled 70 Type 2 diabetic patients who received either 1,600 mg of ginger or a placebo for 12 weeks. Those who received the ginger showed improved insulin sensitivity and improved some fractions of their lipid profile.

A second study in 2015²² demonstrated similar results with 41 Type 2 diabetic patients who received 2 grams of ginger powder supplement per day for 12 weeks. Those getting the ginger supplement significantly reduced their HbA1c and fasting blood sugars as well as other serum measurements.

An animal study²³ demonstrated **ginger was effective in reducing blood sugar** and reversing diabetic proteinuria. In women with gestational diabetes,²⁴ ginger tablets lowered fasting blood sugar but did not influence their serum blood sugar measured two hours after a meal.

Compounds found in ginger are effective in reducing the inflammatory response. Several studies²⁵ have demonstrated the antioxidant and immunomodulatory effects of ginger that may help prevent and treat several types of cancer.

These include breast, gastrointestinal²⁶ and ovarian cancers,²⁷ primarily by inducing apoptosis, inhibiting proliferation of cancer cells and sensitizing tumors to radiotherapy and chemotherapy.²⁸

However, the most common and well-established use of ginger is to alleviate symptoms of nausea and vomiting. Ginger root performed as well as other drugs prescribed for seasickness in one study,²⁹ and was more effective than a placebo in preventing postoperative nausea and vomiting in another.³⁰

Lower Your Blood Sugar and Boost Your Brain With Rosemary

Rosemary is a fragrant, aromatic herb that's easily grown in your backyard or as an indoor herb garden. It's long been used as a medicinal herb that helps improve digestion and increase circulation.³¹

Carnosic acid is a bioactive compound found in rosemary extract that demonstrated the ability to reduce the risk of obesity and metabolic syndrome in an animal study.³² Over 12 weeks, the mice fed a dietary supplement of rosemary extract showed a significant reduction in body weight, percent of fat and improved insulin levels, among other improved metabolic measurements.

In a human trial³³ using 48 adult men and women, participants were given 2 grams, 5 grams or 10 grams of rosemary leaf powder per day for four weeks. Blood samples were analyzed at the beginning and end of the study for glucose levels, lipid profile and antioxidants.

The researchers found there was a significant decrease in blood glucose levels in a dose-dependent manner, with the greatest significant difference in those given 10 grams of rosemary leaf powder per day. Total cholesterol and triglyceride levels also were lower.

An extensive review of the literature³⁴ also documented the effects rosemary has against obesity, metabolic syndrome, cardiovascular disease and diabetes. Another study³⁵ found supplementing with rosemary had a significant effect on HbA1c and fasting blood glucose in patients with and without Type 2 diabetes.

Interestingly, rosemary also significantly improved levels of vitamin B12 in both groups. A second exciting benefit from the herb is the effect it has on [improving cognition](#), even

at lesser amounts you might use while cooking.³⁶

Researchers from Iwate University in Japan found that carnosic acid activates a signaling pathway that protects brain cells from free radicals and is activated by the free radical damage, which means it is not active until it's needed.^{37,38}

Maple Scented Fenugreek Reduces Blood Sugar

Fenugreek is a plant from the peanut family. The seeds and leaves are used in cooking to flavor foods, beverages and tobacco.³⁹ Several studies have evaluated the effects **fenugreek seeds** may have on fasting blood sugar. In one study,⁴⁰ researchers found it had a synergistic effect with the diet to lower fasting blood sugar and HbA1c.

When evaluated in patients who used an oral hypoglycemic agent or insulin with diet and exercise to control Type 2 diabetes, the researchers found adding 10 grams of seeds soaked in hot water each day had the effect of lowering fasting blood sugar and HbA1c.

However, this effect was not noticeable until the fifth month for fasting blood sugar and the sixth month for HbA1c. Past studies had suggested the high fiber content in fenugreek led to a reduction in blood sugar, but the delayed effect in this study suggested there may be another mechanism at work.

A small study⁴¹ with 18 participants using powdered fenugreek did not demonstrate a significant change in fasting blood sugar. However, those taking the seeds soaked in hot water showed a 25% reduction in fasting blood sugar and a 30% reduction in triglycerides.

Historically, fenugreek seeds have been used to stimulate lactation. In one study,⁴² mothers using fenugreek increased milk output pumped each day by 2.47 ounces. Dr. Jack Newman, Canadian pediatrician, first published a prescribed protocol for women who wanted to breastfeed their adopted children.⁴³

The Surprising Benefits of Cannabis

The surprise in this group of herbs that help manage your blood sugar is cannabis. I have written about the [history of cannabis](#) and several articles about the many benefits to your health from the phytochemicals found in cannabis. These benefits include the treatment of [epilepsy](#), [tumor growths](#), [inflammatory bowel disease](#) and how it may even affect those infected with [COVID-19](#).

Another area where the phytochemicals in cannabis offer great hope is in the treatment of pain. Cannabinoids often work where pharmaceutical drugs have failed, including in the treatment of pain from cancer⁴⁴ and chronic nerve pain.⁴⁵ A report⁴⁶ released in 2010 on 14 clinical studies using marijuana in the treatment for pain revealed that it not only controlled pain but, in many cases, did it better than pharmaceutical alternatives.

The 2018 Farm Bill⁴⁷ included a section that legalized the production of hemp. This is also a source of cannabidiol (CBD) and a variety of other phytochemicals. The botanical name for hemp and marijuana is *Cannabis sativa*. The difference is in the amount of tetrahydrocannabinol (THC) that produces the psychoactive effects. Under the Farm Bill, hemp contains less than 0.3% THC.⁴⁸

Hemp and marijuana are known by the name cannabis. One published study⁴⁹ evaluated data from the NHANES from 4,657 adult men and women. Marijuana use was assessed, and fasting insulin and blood sugar was measured.

The researchers found of the 579 current users and 1,975 past users, current use lowered fasting insulin levels by 16% and insulin resistance by 17%. Additionally, there was a significant link between use and a smaller waist circumference.

There is growing interest on analyzing the effect of cannabis on diabetes. Research from the American Alliance for Medical Cannabis suggested it may help with stabilizing blood sugar, preventing nerve inflammation and lowering blood pressure.⁵⁰

One published study⁵¹ postulated that tetrahydrocannabivarin and cannabidiol, two non-psychoactive phytocannabinoids found in cannabis, may affect glucose metabolism in an animal model.

The results demonstrated that tetrahydrocannabivarin significantly reduced fasting plasma glucose and was well tolerated by the subjects. For more strategies to help manage your blood sugar, see these articles:

- [Fasting Prevents and Halts Diabetes](#)
- [Tips to Avoid Diabetes](#)
- [Why Intermittent Fasting Is More Effective Combined With Ketogenic Diet](#)

Sources and References

- ¹ Physical Therapy, 2008;88(11)
- ² American Diabetes Association
- ³ Centers for Disease Control and Prevention, Diabetes
- ⁴ National Institute of Diabetes and Digestive and Kidney Diseases
- ⁵ Centers for Disease Control and Prevention
- ⁶ The Leaf Online, April 30, 2021
- ⁷ The Old Farmer's Almanac, October 28, 2020
- ^{8, 10} A Wandering Botanist, April 26, 2020
- ⁹ Molecular Nutrition and Food Research, 2010;54(2)
- ¹¹ Cochrane Database of Systematic Reviews, 2012;2012(9)
- ^{12, 14} Journal of the Endocrine Society, 2020;4(11)
- ¹³ CNN, July 21, 2020
- ¹⁵ Journal of the American Board of Family Medicine, 2009;22(5)
- ^{16, 17} Frontiers in Plant Science, 2021;12:589783
- ¹⁸ BMC Complementary and Alternative Medicine, 2017;17(1)
- ¹⁹ Herbal Medicine: The Amazing and Mighty Ginger
- ²⁰ Encyclopedia Britannica, Ginger
- ²¹ Food Science and Nutrition, 2014; doi.org/10.3109/09637486.2014.880571
- ²² Iranian Journal of Pharmaceutical Research, 2015;14(1)
- ²³ British Journal of Nutrition, 2006;96
- ²⁴ BMC Complementary Medicine and Therapies, 2020;20(116)
- ^{25, 28} Nutrients, 2016;8(8) 495
- ²⁶ Gastroenterology Research and Practice, 2015;2015:142979
- ²⁷ Advanced Pharmaceutical Bulletin, 2017;7(2) 241
- ²⁹ Journal of Travel Medicine, 1994; 1(4):203
- ³⁰ American Journal of Obstetrics and Gynecology, 2006;194(1):95
- ³¹ Spruce Eats, October 24, 2018
- ³² Journal of Agricultural and Food Chemistry, 2015; 63: 4843
- ³³ International Journal of Clinical Medicine, 2014;5(6)

- ³⁴ Naunyn-Schmiedeberg's Archives of Pharmacology, 2016; doi.org/10.1007/s00210-016-1256-0
- ³⁵ National Journal of Physiology, Pharmacy and Pharmacology, 2017;8(1)
- ³⁶ J Med Food. 2012 Jan;15(1):10-7
- ³⁷ Journal of Neurochemistry, 2008;104(4)
- ³⁸ Science Daily, November 2, 2007
- ³⁹ Spruce Eats, April 11, 2021
- ⁴⁰ The International Quarterly Journal of Research in Ayurveda, 2017;38(1-2):24
- ⁴¹ International Journal of Vitamin and Nutrition Research, 2009;79(1):34
- ⁴² Journal of Alternative and Complementary Medicine, 2011;17(2)
- ⁴³ News Medical Life Sciences, Breastfeeding: Inducing Lactation
- ⁴⁴ Indian Journal of Palliative Care, 2020;26(1)
- ⁴⁵ CMAJ 2010 Oct 5;182(14):E694-701
- ⁴⁶ Center for Medicinal Cannabis Research, Report to the Legislature and Governor of the State of California, February 11, 2010 (PDF) page 2
- ⁴⁷ United States Senate Committee on Agriculture, Nutrition and Forestry, 2018 Farm Bill
- ⁴⁸ Food and Drug Administration, January 22, 2021, #2
- ⁴⁹ The American Journal of Medicine, 2016;126(7)
- ⁵⁰ Diabetes.co.uk, January 15, 2019, Possible benefits cannabis
- ⁵¹ Diabetes Care, 2016;39(10)