

Cinnamon Health Benefits Proven

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June 12, 2024

STORY AT-A-GLANCE

- › Ayurvedic, Egyptian and ancient Roman traditions respected the healing powers of cinnamon, using it not only in food but also for perfumes and medicine
- › Cinnamon has been found in clinical studies to help alleviate colorectal and cervical cancers, diabetes, Parkinson's disease, inflammation and tooth decay and may even improve your ability to learn
- › Active ingredients in cinnamon are numerous and include cinnamaldehyde, cinnamic acid, cinnamate, procyanidins, eugenol, quercetin, kaempferol and catechin, which you can get the benefits from by using just half a teaspoonful

Editor's Note: This article is a reprint. It was originally published September 4, 2017.

Even if you rarely cook or bake, if you have anything in your cupboard in the way of spices, cinnamon is probably one of them. The warming, fragrant powder harvested from the bark of a tropical evergreen bush not only is tasty in a plethora of dishes both sweet and savory, but has a long history of use as a medicinal.

Ayurvedic medicine originated in India more than 3,000 years ago. Maharishi Ayurveda Products International (MAPI) notes that cinnamon is often used for Ayurvedic recipes to enhance the bioavailability of other herbs while combining a delicious mixture of sweet, pungent and bitter tastes, and to spice desserts and sweet dishes in the West. In Indian cooking, however, it's more often used to spice rich rice and vegetable dishes.¹

There are around 250 different species of the plant, and they're scattered across the entire planet. **Cinnamon** bark is the most often used source, but twigs and leaves from the tree are also incorporated. Healthline² notes there are two main types of cinnamon:

- There's "true" cinnamon, aka Ceylon cinnamon, from the *Cinnamomum verum* tree, native to Sri Lanka and southern India. It's described as tan-to-brown in color with many tight sticks, a highly desirable quality and texture, mildly sweet and good for cooking and desserts. Less common and more expensive, the oil contains 50% to 63% cinnamaldehyde.
- The more common dollar-store variety, called cassia, comes from the *Cinnamomum cassia* tree, or *Cinnamomum aromaticum*, which originated in Southern China but is now grown across Eastern and Southern Asia. It's the variety found in most stores and is comparatively less expensive, with 95% of its oil being cinnamaldehyde.

Cassia cinnamon has been shown to contain high amounts of coumarin, which can cause liver damage. In fact, one study showed 63 times more coumarin in cassia cinnamon than the Ceylon variety in powder form, and 18 times more than in Ceylon sticks. That's another reason why Ceylon is recommended above cassia, CNN noted.³

The Impressive Power of Cinnamon

Being one of the most studied herbs on the planet, cinnamon has been found to impart some seriously advantageous health benefits that resonate throughout your body. An in-depth review⁴ in 2014 listed several of the conditions cinnamon can help improve, also noting that it exhibits antimicrobial activity, such as against *E. coli*:⁵

Diabetes⁶

Parkinson's disease

Memory and ability to learn⁷

Colorectal and cervical cancers

Inflammation⁸

Neurological disorders⁹

Dementia

Cardiovascular health

Scientists stress that many aspects of how cinnamon is cultivated in regard to soil quality and growing conditions, stored and dried can affect its effectiveness and potency, making it somewhat of an unknown quantity, which makes it difficult to create drugs or supplements from the powder. In research, Lauri Wright, a spokeswoman for the Academy of Nutrition and Dietetics, notes:¹¹

"The doses have varied greatly among the studies, from less than 1 gram to levels that would be toxic in humans. The duration of taking the capsules has also varied greatly. That's the problem with translation of all of this work. Even when we find positive results, how do we come up with the correct compounding and dosage for maximum safety?"

Active Ingredients That Give Cinnamon Its Strength

Cinnamaldehyde, cinnamic acid and cinnamate are three of the most fundamental oils in this fragrant spice, which has an impressively wide range of capabilities. Besides being an antioxidant,¹² cinnamon is also useful in the fight against chronic diseases.

According to one study:¹³

"An ... anti-inflammatory, antidiabetic, antimicrobial, anticancer, lipid-lowering and cardiovascular-disease-lowering compound, cinnamon has also been reported to have activities against neurological disorders, such as Parkinson's and Alzheimer's diseases."

The same study notes additional compounds in cinnamon that release powerful effects against disease:

Eugenol

Borneol

Caryophyllene oxide

Caryophyllene

Bornyl acetate	Nerolidol
α -cubebene	α -terpineol
terpinolene	α -thujene

As for its antioxidant properties, among 26 spices tested, cinnamon showed the greatest potential for **antioxidant activity**, the study¹⁴ noting: "Antioxidants have been considered the most important drivers in the progress and existence of humans, as they respond to free radicals and damage in metabolic diseases and age-related syndromes of humans and other animals."

Cinnamon also contains procyanidins and catechins, and is known to kill human parasites (nematocidal)¹⁵ as well as resist termite infestation,¹⁶ kill mosquito larvae (larvicidal) and three different mosquito species, and also protect certain woods from decay (antifungal), which is useful for any wood manufacturing industry.¹⁷

Food production finds extracts from cinnamon to be useful for diminishing the browning that occurs on **mushrooms**, fruit and vegetables when they're exposed to oxygen, making cinnamon an antityrosinase agent and tyrosinase inhibitor that's also valuable in skin health, cosmetics and agriculture.¹⁸

Traditional Healing and Prevention Echoed in Modern Studies

Many centuries before Ayurvedic approaches emerged, and as an example of its strong, pleasant fragrance, Egyptians used cinnamon to mask the smell during the embalming process, and the Romans' funeral pyres required it for covering the acrid smell of burning flesh. Dark brown **Cassia bark oil**, extracted from the same tree, is robust with combined woody, sweet and balsamic notes, and beneficial for treating colds, fevers and flu symptoms using vapor therapy.

Powdered cassia bark itself helps improve digestive issues, including diarrhea, flatulence and colic. Over centuries and all the way to the present, cinnamon has been

used as a spice for food, perfume and medicine, but some of these uses cross over to having two or more uses, such as the spice being used for the refreshing flavor of chewing gum and to remedy **bad breath**.

MAPI notes that cinnamon was traditionally useful to aid digestion and soothe stomach problems. Further, a number of powerful polyphenols, such as rutin, catechin, quercetin, kaempferol and isorhamnetin, a more obscure metabolite of quercetin that Chemical Book says "may reduce the risk of cancer, improve heart health and ease diabetes complications," are also found in cinnamon.¹⁹

Cinnamon Improves Glucose and Lipids of People With Type 2 Diabetes

Wright said she believes one of the most dramatic advantages cinnamon consumption demonstrates is in the way it helps control blood sugar, as it helps diabetics deal with **insulin sensitivity** and glucose transport, and at the same time decreases inflammation.

In one study, 18 people with Type 2 diabetes participated in a 12-week trial, in which half the group took 1,000 milligrams (mg) of cassia cinnamon supplements and the other half a placebo.

According to the study conclusion, all the subjects in the cinnamon group had a statistically significant decrease in their blood sugar levels (comparable to oral medications available for diabetes), while the placebo group had less positive results.²⁰ Registered dietitian and nutrition writer Lisa Drayer observed:²¹

"I like the fact that the amount that showed benefits for blood sugar and cholesterol in that study was 1 to 6 grams, which is the range of half-teaspoon to 3 teaspoons, or one tablespoon, so it's easy to sprinkle on ... yogurt or use in recipes."

To test the premise of cinnamon's effectiveness for diabetes, Melinda Maryniuk, a registered dietitian on the professional practice committee for the American Diabetes

Association, recommends that diabetics do a self-test — paired blood glucose testing by eating half a teaspoon of cinnamon in the morning to see if there's any difference in your blood sugar levels before and after you eat.

Check again two to three hours later. Meanwhile, though, she advises at-home researchers to work with their doctor if they opt for experimentation, especially if you're taking diabetes medications, "as it might drop your blood sugars too low."²²

Studies Reveal the Healing Power of Cinnamon Against Cancer

Cancer, notably colorectal cancer, has been examined by scientists using cinnamic compounds as a method of chemoprevention through a pathway known as Nrf2/Keap1-ARE, which Science Direct describes as capable of preventing "cancer initiation and progression in normal and premalignant tissues."²³ In the study,²⁴ cinnamaldehyde was found to "represent an underappreciated chemopreventive dietary factor targeting colorectal carcinogenesis."

In addition, it, along with an extract made from *Cinnamomum cassia* bark, induces upregulation of cellular glutathione (the super-antioxidant) levels in human colon cancer cells.

It's also been shown to suppress tumor progression by curbing angiogenesis, or the development of new blood vessels,²⁵ kill tumor cells in a clinical setting²⁶ and, in another study, was proven to be useful as a potent chemopreventive drug in cervical cancer, as well as for restraining tumor cell growth and enhancing tumor cell apoptosis.²⁷

However you choose to use cinnamon, it's a good idea to make friends with it and find new ways of getting it into your diet — particularly Ceylon cinnamon — as it can offer you immense advantages that scientists are clear will enhance and improve your health.

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