



## **Cinnamon : scientific justified health benefits \_**

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**Abstract.** The article discusses the main properties of cinnamon and its impact on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The chemical composition and nutritional value of the product are indicated, the use of cinnamon is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of cinnamon were analyzed separately. on the human body under certain medical conditions and diseases.

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Fragrant cinnamon is one of the most useful and recognizable spices on the planet. Its characteristic smell and taste are concentrated in the oily part, or rather, in cinnamic aldehyde. The component and other antioxidants have the properties of antibiotics and immunity stimulants. They reduce the risk of heart disease, blood sugar and inflammation markers.

The calorie content of cinnamon ranges from 247-303 kcal / 100 g. A teaspoon contains 2.1 g of carbohydrates, so the spice is suitable for those who follow a ketogenic diet and low-carb diets. The presence of a large amount of iron, vitamins B1 and B2 in the composition does not play a big role, since we consume the spice in meager amounts. But the antioxidants included in the composition are of great importance and influence on health.

## **Top 7 Health Benefits of Cinnamon for Men and Women**

### **1. Fights infections, fungi, viruses**

An inexpensive food supplement contains the beneficial cinnamaldehyde. It inhibits the development of respiratory tract infections, the growth of dangerous food bacteria such as salmonella. The antimicrobial properties of the ingredient are so high that it prevents bad breath, caries. But the most

stunning discovery for scientists was the discovery associated with the HIV-1 strain - during a study of 69 medicinal plants, cinnamon was the most effective in the fight against a dangerous virus. [12]

## **2. Rich in Powerful Antioxidant Polyphenols**

Antioxidants limit the activity of free radicals and prevent or reduce the damage they cause. In this way, they reduce the risk of many deadly diseases, slow down aging. Comparing 26 spices, scientists found that cinnamon was superior to other food additives, even oregano and garlic. It is so potent that it can be used as a natural preservative. [3, 4]

## **3. Normalizes digestion and acts as a prebiotic**

The extract has long been used in Ayurvedic medicine for the treatment of gastrointestinal diseases - flatulence, indigestion. It also promotes the growth of beneficial bacteria and inhibits the growth of pathogens. Regularly including cinnamon in your diet will improve your gut health.

## **4. Protects against cancer**

The prophylactic reduces the growth of cancer cells and the formation of blood vessels in tumors. The ways of its action are not fully understood, but scientists suggest that the product is toxic to cancer cells and causes their death without affecting healthy ones. Studies have already confirmed the effectiveness of cinnamon extract in the fight against colorectal cancer, leukemia. [5, 6]

## **5. Lowers Blood Sugar and Helps Type 2 Diabetes**

Cinnamon powder slows down the digestion of carbohydrates by acting on certain pancreatic enzymes. It also prevents the development of metabolic syndrome, insulin resistance and mimics the action of the hormone. Several studies have confirmed that after taking 1–6 g of the spice, the concentration of glucose in the blood decreases by 10–29%. [7, 8, 9]

## **6. Protects Against Dementia**

Diseases of the central nervous system - Parkinson's disease, Alzheimer's disease, etc. - are associated with the death of nerve cells and atrophy of parts of the brain and spinal cord. Cinnamon inhibits the activity of the protein that provokes these pathologies, protects neurons and neural connections. Animal studies have shown that the spice significantly improves the condition in neurodegenerative diseases. [10, 11]

## **7. Reduces the risk of heart attacks**

Heart disease is the world's most common cause of premature death. Just 120 mg of spice per day is enough to prevent the development of most heart problems. A small serving lowers blood pressure, "bad" LDL cholesterol, triglycerides, and stabilizes "good" HDL cholesterol. [12, 13]

## **Does cinnamon have side effects?**

There are two main types of spice - Ceylon (real) and cassia. The latter is more common due to its low price, but it has a higher concentration of coumarin. The substance is useful and dangerous - it thins the blood, is part of drugs for the prevention of blood clots. In large quantities it is considered harmful, but it is unlikely that a person in their right mind will be able to eat so much product to harm their health. Who should be wary of the spice is diabetics, people with liver disease and anyone who takes any medication.

## How much cinnamon should you eat?

There is no strict norm for the use of the product. Some experts believe that it is enough to eat 2-4 g (0.5-1 tsp) of powder per day to get benefits. However, in some studies, scientists have raised the dosage to 6 g. Nutritionists advise against doing experiments at home and large portions can be toxic.

Store cinnamon in an airtight container in a dark place. Under such conditions, the sticks are stored for at least a year without loss of properties. They should be crushed as needed, without creating stocks - after 2-3 months, small crumbs lose their bright taste.

## What is ground cinnamon used for and where is it added?

In winter, it's hard to resist a treat with a spicy, spicy flavor that's associated with the holidays. Therefore, the ingredient is found in many confectionery products: buns, apple pies, muffins, Christmas gingerbread. They also flavor cereals, fruit and berry desserts, marinades, apple sauces and jams. A pinch of seasoning would be appropriate in coffee, latte, smoothies. In some cuisines, a sweet spice with a touch of bitterness is even added to meat dishes.

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

The spice adds flavor to food with little or no increase in calories, and is an advantage for those who value the antioxidant effect and seek to control blood sugar levels. If you want to get more benefits and look towards cinnamon supplements, it is better to stop buying them. They need more research. So far, cinnamon sticks have no competitors - a natural product has all the listed properties and, when used correctly, is safe for health.

## Literature

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