# Health Benefits of Cinnamon & Nutrition Facts

# The Many Health Benefits of Cinnamon

<u>Cinnamon</u> is a powerful spice that has been used medicinally around the world for thousands of years. It is still used daily in many cultures because of its widespread health benefits, not to mention its distinctly sweet, warming taste and ease of use in recipes.

According to researchers, out of twenty-six of the most popular <u>herbs</u> and medicinal spices in the world, cinnamon actually ranks #1 in terms of its protective **antioxidant** levels! (1)

The unique smell, color and flavor of cinnamon is due to the oily part of the tree that it grows from. The health benefits of cinnamon come from the bark of the *Cinnamomum verum* (*Cinnamomum zeylanicum*) tree. The *Cinnamomum verum* tree can also be synonimously referred to as a *Cinnamomum zeylanicum*. These scientific terms simply refer to a true cinnamon tree. This bark contains several special compounds which are responsible for its many health-promoting properties, including cinnamaldehyde, cinnamic acid and cinnamate.

Researchers have concluded that cinnamon health benefits can be obtained in the form of its pure bark, essential oils, in ground spice form (which is bark powder) or in extract form when its special phenolic compounds, flavonoids and antioxidants are isolated. These compounds make cinnamon one of the most beneficial spices on earth, giving it antioxidant, anti-inflammatory, anti-diabetic, anti-microbial, immunity-boosting and potential cancer and heart disease-protecting abilities. (2)

# **Nutrition Benefits of Cinnamon**

One tablespoon of ground cinnamon contains:

- 19 calories
- 0 grams of fat, sugar, or protein
- 4 grams of fiber
- 68 percent daily value manganese
- 8 percent daily value calcium
- 4 percent daily value iron
- 3 percent daily value vitamin K

A little bit of cinnamon goes a long way, and its antioxidant abilities are what makes it especially beneficial to include in your diet. As little as ½ teaspoon of cinnamon daily can have positive effects on blood sugar levels, digestion, immunity and more; however, stronger doses are also extremely beneficial for improving heart disease risk and cutting your risk of diabetes, cancer and neurodegenerative diseases.

#### 13 Proven Health Benefits of Cinnamon

## 1. High Source of Antioxidants

Cinnamon is packed with a variety of protective antioxidants that reduce <u>free radical</u> <u>damage</u> and slow the aging process; in fact, researchers have identified 41 different protective compounds of cinnamon to date! (4) (5)

According to the <u>ORAC scale</u>, which is used to measure the concentration of antioxidants in different foods, cinnamon ranks #7 of all foods, spices and herbs across the world. And in a study that compared the antioxidant activity of 26 spices, cinnamon was deemed the winner and proved to be higher in antioxidants than other powerful herbs and spices, including garlic, thyme, rosemary and oregano.

Cinnamon health benefits are attributed to the type of antioxidants called polyphenols, phenolic acid and flavonoids. These are similar antioxidants to those that can be found in other "superfoods," including berries, red wine and dark chocolate. These compounds work to fight oxidative stress in the body, which can lead to disease formation when uncontrolled, especially as someone ages.

The different antioxidants present in cinnamon help to reduce a multitude of symptoms and diseases because they are free radical scavengers. The health benefits of cinnamon include its ability to reduce many forms of oxidative stress, including the ability to limit nitric oxide build up in the blood and lipid (fat) peroxidation, which can both add to instances of brain disorders, cancer, heart disease and other conditions. (6)

## 2. Contains Anti-inflammatory Properties

The antioxidants in cinnamon have anti-inflammatory effects, which may help lower the risk of heart disease, cancer, brain function decline and more. Researchers have identified over seven kinds of flavonoid compounds alone in cinnamon, which are highly effective at fighting dangerous **inflammation**levels throughout the body.

Because cinnamon lowers swelling and inflammation, it can be beneficial in <u>pain</u> management, with studies showing that cinnamon helps to relive muscle soreness, PMS pains, severity of allergic reactions and other age-related symptoms of pain too. (7) (8)

#### 3. Protects Heart Health

Studies have shown that another health benefit of cinnamon is that it reduces several of the most common risk factors for heart disease, including high **cholesterol levels**, high triglyceride levels and **high blood pressure**. (9)

The special compounds in cinnamon are able to help reduce levels of total cholesterol, LDL "bad" cholesterol and triglycerides, while HDL "good" cholesterol remains stable. Cinnamon has also been shown to reduce high blood pressure, which is another threat for causing heart disease or a stroke. (10)

And there are even more heart health benefits of cinnamon. Research shows that cinnamon is a helpful blood coagulant and prevents bleeding by helping the body to form blood clots. Cinnamon also increases blood circulation and advances bodily tissue's ability to repair itself after it's been damaged. This includes heart tissue, which is in need of regeneration in order to help fight heart attacks, heart disease and stroke.

## 4. Helps Fight Diabetes

Cinnamon is known to have an anti-diabetic effect. It helps lower blood sugar levels and also can improve sensitivity to the hormone insulin, which is the vital hormone needed for keeping blood sugar levels balanced. (11)

<u>Diabetes</u> is formed when insulin resistance occurs and poor glycemic control takes places, or someone develops the inability to manage how much sugar (glucose) enters the blood stream. The same problem with insulin resistence is also associated with other conditions like metabolic syndrome and weight gain, too.

These benefits of cinnamon exist because it plays a part in blocking certain enzymes called alanines, which allows for glucose (sugar) to be absorbed into the blood. Therefore, it has been shown to decrease the amount of glucose that enters the bloodstream after a high-sugar meal, which is especially important for those with diabetes.

For this reason, many studies have shown that people with type 2 diabetes can experience significant positive effects on blood sugar markers by supplementing with cinnamon extract. (12)

#### 5. Helps Defend Against Cognitive Decline & Protects Brain Function

Research also shows that another benefit of cinnamon's protective antioxidant properties is they can help defend the brain against developing neurological disorders, such as <u>Parkinson's</u> and <u>Alzheimer's</u> diseases. (13)

One way cinnamon protects cognitive function and brain health is by activating neuro-protective proteins that protect brain cells from mutation and undergoing damage. This further reduces the negative effects of oxidative stress by stopping cells from morphing and self-destructing.

Because cinnamon contains so many <u>antioxidants</u> and anti-inflammatory compounds that reduce the effects of aging on the body and brain, in the future, we may see it being used as a possible natural therapeutic treatment or prevention for age-related neuro-degenerative diseases.

## 6. May Help Lower Cancer Risk

Because of its antioxidant abilities, cinnamon can help protect against DNA damage, cell mutation and <u>cancerous</u> tumor growth. Studies have revealed the health benefits of cinnamon that come from a compound called cinnamaldehyde include its possible ability to inhibit <u>cancer</u> tumor growth and protect DNA from damage, while also encouraging cancerous cells to self-destruct (called cell apoptosis). (14)

This is especially true in the colon; studies show that cinnamon can improve the health of the colon, thereby reducing the risk of colon cancer. (15) Cinnamon is now being investigated as a natural anti-cancer agent because of its strong antioxidant abilities, so in the future, it may be useful for those who are at higher risks for cancer to supplement with cinnamon extract.

## 7. Fights Infections & Viruses

There are many benefits of cinnamon when it comes to defending the body from illnesses. Cinnamon is a natural anti-microbial, anti-biotic, anti-fungal and anti-viral agent. The immune-boosting abilities of cinnamon are found in cinnamon's essential oils. (16)

Cinnamon is used in many cultures to naturally help fight harmful infections and viruses. Cinnamon oils also have protective abilities against various bacteria which can cause negative symptoms in the digestive tract, on the surface of the skin, and can lead to colds or the flu.

#### 8. Protects Dental Health & Freshens Breath Naturally

In studies, the extracts found in cinnamon were shown to be protective against bacteria living in the oral microflora that could cause <u>bad breath</u>, <u>tooth decay</u>, <u>cavities</u> or mouth infections. The essential oil from cinnamon has been shown to be more potent than other tested plant extracts and can be used to naturally combat bacteria in the mouth, acting like a natural anti-bacterial mouthwash.

Similarly to <u>peppermint</u>, one of the health benefits of cinnamon is that it can also used as a natural flavoring agent in chewing gums due to its mouth refreshing abilities. Because it removes oral bacteria, cinnamon has the ability to naturally remove bad breath without adding any chemicals to the body. For this reason cinnamon has also been traditionally used as tooth powder and to treat toothaches, dental problems, oral microbiota, and mouth sores. (17)

Cinnamon essential oil is also used in some beauty products, shampoos, and perfumes for its many health benefits that can help with fighting infection while adding a pleasant smell.

#### 9. Can Help Prevent or Cure Candida

Certain studies have concluded that cinnamon's powerful anti-fungal properties may be effective in stopping or curing Candida overgrowth in the digestive tract. (18) Cinnamon has been shown to lower amounts of dangerous Candida albicans, which is the yeast that causes <a href="Candida">Candida</a>overgrowth that can cause multiple digestive and <a href="autoimmune">autoimmune</a> symptoms. Additionally, another health benefit of cinnamon is that it helps to control blood sugar levels, and too much sugar within the digestive tract is associated with increased candida risk.

According to researchers, when patients were given cinnamon extract or cinnamon essential oil, they showed improvements in candida yeast levels and a reduction in symptoms. Cinnamon helps to fight candida naturally by boosting immune health and fighting inflammation, auto immune-reactions, and yeast within the gut.

#### 10. Benefits Skin Health

Cinnamon has anti-biotic and anti-microbial effects that protect skin from irritations, rashes, allergic reactions, and infections. Applying cinnamon essential oil directly to the skin can be helpful in reducing inflammation, swelling, pain, and redness. (19) Cinnamon and honey, another antimicrobial ingredient, are frequently used together to boost skin health for this reason and are beneficial for acne, rosacea, and signs of skin allergies.

#### 11. Helps Fight Allergies

Studies have concluded that those with allergies can find relief thanks to the benefits of cinnamon's compounds. Cinnamon has been shown to be helpful in fighting common **allergy** symptoms because it reduces inflammation and fights histamine reactions in the bodies of animals, although research is yet to come in human trials. (20, 21, 22) For that reason, many naturopaths believe it can also help to reduce symptoms of asthma attacks.

In essential oil form, cinnamon may have immune-boosting abilities and is beneficial for nutrient absorption during digestion (according to lab and animal studies), which could cut down on auto-immune reactions that can take place after consuming common allergen foods. (23, 24, 25)

#### 12. Can be Used to Sweeten Recipes without Added Sugar

Because of its naturally sweet taste, adding cinnamon to foods and recipes can help you cut down on the amount of sugar you normally use, thereby lowering the **glycemic load** of your meal. Cinnamon already has anti-diabetic effects that slow sugar from releasing into the blood stream which can help manage food cravings and weight gain, but using cinnamon for its taste is another added benefit.

One of the benefits of cinnamon over sugar is that it contains no sugar and no calories in amounts that it is used by most people, so its makes an extremely healthy addition to many meals, especially considering its many nutrients. Try using cinnamon in coffee, tea, baked goods, yogurt, on fruit, or in oatmeal instead of adding extra sugar and calories. This can help you to reduce inflammation-causing sugar, extra calories, and to fight weight gain, candida, diabetes and low energy levels.

#### 13. Can Be Used as a Natural Food Preservative

One of the less-known benefits of cinnamon is that it can be used to preserve food. Because cinnamon has anti-bacterial abilities and also acts as an antioxidant, it can be used as a preservative in many foods without the need for chemicals and artificial ingredients. (26)

A recent study reported that when pectin from fruit was coated with cinnamon leaf extract it yielded high antioxidant and antibacterial activities and stayed fresh for longer. Cinnamon plays a part in the action of tyrosinase inhibitors, which are useful in stopping discoloration on fruits and vegetables that appears as they oxidize and begin to rot.

# **History of Cinnamon**

Cinnamon has been harvested from the inner bark of trees called *Cinnamonum trees* for thousands of years. The use of cinnamon dates back as far as 4,000 years ago to Ancient Egypt. Cinnamon was considered a very valuable and rare spice at this time, frequently being sold at very high costs and given to royalty as gifts or signs of devotion.

Cinnamon was also mentioned in the Bible numerous times and was noted for its ability to fight illnesses. People have learned more about the health benefits of cinnamon as time has gone on, with research now backing up the medicinal claims of cinnamon that ancient populations have known about for centuries.

Today, cinnamon as we know it is made by cutting the stems of the cinnamomum tree and removing the inner bark, which curls up into cinnamon sticks. These sticks are then ground to make powdery cinnamon spice which is sold and used across the world.

The health benefits of cinnamon can also be obtained in cinnamon extract form, when its special compounds are isolated and concentrated into high doses that have powerful effects on health. Another use for cinnamon is in cinnamon essential oil, which contains high levels of cinnamon's special compounds and has numerous uses.

# **Purchasing Cinnamon**

To date, approximately 250 species of cinnamon have been identified because the cinnamon tree is grown all over the world, with different species being found on different continents.

There are two main types of cinnamon spice used today: Ceylon cinnamon (which is sometimes labeled as true cinnamon) and Cassia cinnamon which is more widely available and used. Both kinds of cinnamon have a notable spicy taste and fragrance which is due to the presence of cinnamaldehyde and occurs when cinnamon absorbs oxygen. Both types contain the mentioned health benefits, but one kind (ceylon) is actually considered to have more health benefits than the other.

#### What's the difference between ceylon cinnamon and cassia cinnamon?

Ceylon and cassia cinnamons actually come from two different, but related, trees. Ceylon cinnamon (called true cinnamon) comes from trees grown in areas like Sri Lanka and Thailand that are rarer, therefore ceylon cinnamon is more expensive and hard to find in stores. Cassia cinnamon (also called Saigon or Chinese cinnamon) comes from trees grown in China normally, is less expensive, and is more widely available. (27)

To date, cassia cinnamon (or Saigon or Chinese cinnamon) has been studied more than ceylon cinnamon has, but researchers think that ceylon cinnamon actually has potential for having more health benefits than cassia cinnamon. Ceylon cinnamon also contains less of a compound called coumarins than the cassia variety of cinnamon does. Coumarins are believed to be potentially damaging to the liver when you consume a lot of them. therefore researchers think that ceylon cinnamon is the better option for producing cinnamon extracts that feature high doses of cinnamon.

The two types of cinnamon are do have similar health benefits overall, since their plant species is very closely related, but we expect to see more evidence in the future pointing to the fact that ceylon is the better option. If you cannot find ceylon cinnamon, cassia cinnamon is still beneficial, and as long as you don't consume large amounts of cinnamon (more than 1-2 teaspoons a day for example) the coumarin compounds don't pose much of a threat according to studies.

As far as taste goes, ceylon cinnamon is said to have a lighter and more citrusy taste than cassia, which has a deeper and spicer taste. For the most part, the two are used interchangeably in recipes.

Look for organic ceylon cinnamon powder and cinnamon essential oil in health food stores or ethnic markets to get the most benefits from cinnamon. You can check the label to determine which type for cinnamon you're buying, and if the label doesn't indicate which type it is, keep in mind it's most likely the cassia variety of cinnamon, which is less expensive and more popular. Try using cinnamon within one year before replenishing your supply and buying a fresh bottle.

You can also purchase cinnamon sticks and grate fresh cinnamon yourself using a small handheld grater. Additionally, whole cinnamon sticks (also referred to as cinnamon quills) can be used to infuse liquids like mulled wine to give them a distinct flavor and to add nutrients. To determine which type of cinnamon stick you're purchasing, look at the texture; ceylon cinnamon has a thinner, more brittle bark than cassia cinnamon does.

#### **Concerns & Interactions of Cinnamon**

Cinnamon is not known to cause negative reactions or allergies, especially when used in small amounts the way that it most commonly is. At times, when taking cinnamon extract supplements or using cinnamon essential oil, it's possible to take too much which can interfere with other medicines and medical conditions.

Cinnamon can become unsafe if you take too many cinnamon supplements, especially if you're pregnant or breastfeeding, have diabetes, have liver disease, or just had surgery. Always make sure you read the recommended dose of cinnamon extracts, and other herbal extracts too, and don't consume more than is recommended without speaking with your doctor first in order to avoid complications.

If you're using cinnamon essential oil, you might also want to test a small patch of your skin to first check for irritation and allergic reactions before using larger amounts.