Cinnamomum cassia

TAXONOMICAL CLASSIFICATION:[1]

- *Kingdom: Planate*
- *Division: Tracheophyta*
- *Class: Magnoliopsida*
- *Order: Laurales*
- *Family: Lauraceae*
- *Genus: Cinnamomum*
- *Species: Cinnamomum cassia*

INTRODUCTION: [2]

Cinnamon**,** (*Cinnamomum verum*), also called Ceylon cinnamon, bushy evergreen tree of the laurel family (Lauraceae) and the spice derived from its bark. Cinnamon is native to Sri Lanka (formerly Ceylon), the neighbouring Malabar Coast of India, and Myanmar (Burma) and is also cultivated in South America and the West Indies. The spice, consisting of the

dried inner bark, is brown in colour and has a delicately fragrant aroma and a warm sweet flavour. Cinnamon is used to flavour a variety of foods, from confections to curries to beverages, and is popular in bakery goods in many places. Essential oil is distilled from the bark fragments for use in food, liqueur, perfume, and drug

Cinnamon was once more valuable than gold. In Egypt it was sought for embalming and religious practices. In medieval Europe it was used for religious rites and as a flavouring. Later it was the most profitable spice in the Dutch East India Company trade. The cinnamon tree grows in moist well-drained soils and rarely reaches more than 15 metres (49 feet) in height. The thick simple leaves have smooth margins and are usually oval; the veins are roughly parallel to each other. Young leaves are red and mature to a deep green. The small bisexual flowers are greenish to yellow and are borne in clusters. The fruit is a dark drupe.

PROPERTIES AND USES:[3][4]

- Anti-diabetic
- Anti-fungal
- Anti-oxidant
- Anti-cancer
- Anti-inflammatory
- Chest pain (angina)
- Common cold
- Diarrhea
- Ending a pregnancy (abortion)
- Erectile dysfunction (ED)
- High blood pressure
- Loss of bladder control (urinary incontinence)
- Muscle cramps
- Nausea and vomiting
- Obesity

SIDE EFFECTS OF EXCESS CONSUMPTION:[4]

- It might cause skin irritation and allergic skin reactions.

DOSAGE: [5]

- Cinnamon is generally given at dosages of 1 to 3 g/day.

RESEARCH:

1. The antioxidant activities of hot water extracts (HWECC) and ethanol extracts (EECC) from the dry bark of Cinnamomum cassia Presl were evaluated in this study. Results showed that at 1.0 mg/mL, the ethanol extracts of C. cassia (96.30%) exhibited a greater inhibition than the α-tocopherol (93.74%) on FeCl2-ascorbic acid induced lipid peroxidation of rat liver homogenate in vitro. From 0.05 to 1.0 mg/mL, the EECC demonstrated the highest superoxide anions scavenging activity and the strongest anti-superoxide formation activity ($p < 0.05$). The same extract also showed an excellent antioxidant activity in enzymatic and nonenzymatic liver tissue oxidative systems. EECC revealed the strongest antioxidant activity followed by α-tocopherol and HWECC. Compared to α-tocopherol, the IC50 values of EECC were found to be lower in thiobarbituric acid test (IC50 = 0.24 mg/mL vs 0.37 mg/mL), in cytochrome c test (IC50 = 0.16 mg/mL vs 0.27 mg/mL) and in xanthine oxidase inhibition test (IC50 = 0.09 mg/mL vs 0.19 mg/mL). The present study concludes that EECC could be used as a good source of antioxidant in the dietary supplement.[6]
2. Rats were given Cinnamomum cassia bark or extracts from Cinnamomum cassia and zeylanicum to evaluate blood glucose and plasma insulin levels in rats under various conditions. The cassia extract was superior to the zeylanicum extract. The cassia extract was slightly more efficacious than the equivalent amount of Cassia bark. A decrease in blood glucose levels was observed in a glucose tolerance test (GTT), whereas it was not obvious in rats that were not challenged by a glucose load. The elevation in plasma insulin was direct since a stimulatory in vitro effect of insulin release from INS-1 cells (an insulin secreting cell line) was observed. Thus the cassia extract has a direct antidiabetic potency.[7]

Precautions & Warnings:[8]

Pregnancy and breast-feeding: Consuming cassia cinnamon is **LIKELY SAFE** when taken in food amounts during pregnancy. There is not enough reliable information about the safety of taking Cassia cinnamon in larger amounts if you are pregnant or breast feeding. Stay on the safe side and avoid use.

Children: Cassia cinnamon is **POSSIBLY SAFE** when taken by mouth appropriately. One gram of cassia cinnamon daily has been used safely in teens for up to 3 months.

Liver disease: Cassia cinnamon contains a chemical that might harm the liver. If you have liver disease, do not take cassia cinnamon in amounts larger than the amounts normally found in food.

Perioperative: Cassia cinnamon might lower blood sugar and might interfere with blood sugar control during and after surgery. Stop taking cassia cinnamon as a medicine at least 2 weeks before a scheduled surgery.

INTERACTIONS WITH MEDICATIONS: [8]

Medications that can harm the liver (Hepatotoxic drugs) Interaction Rating: Major Do not take this combination.

Taking very large doses of cassia cinnamon might harm the liver, especially in people with existing liver disease. Taking large amounts of cassia cinnamon along with medications that might also harm the liver might increase the risk of liver damage. Do not take large amounts of cassia cinnamon if you are taking a medication that can harm the liver.

Some medications that can harm the liver include acetaminophen (Tylenol and others), amiodarone (Cordarone), carbamazepine (Tegretol), isoniazid (INH), methotrexate (Rheumatrex), methyldopa (Aldomet), fluconazole (Diflucan), itraconazole (Sporanox), erythromycin (Erythrocin, Ilosone, others), phenytoin (Dilantin), lovastatin (Mevacor), pravastatin (Pravachol), simvastatin (Zocor), and many others.

Medications for diabetes (Antidiabetes drugs) Interaction Rating: Moderate Be cautious with this combination.Talk with your health provider.

Cassia cinnamon might decrease blood sugar. Diabetes medications are also used to lower blood sugar. Taking cassia cinnamon along with diabetes medications might cause your blood sugar to go too low. Monitor your blood sugar closely. The dose of your diabetes medication might need to be changed.

Some medications used for diabetes include glimepiride (Amaryl), glyburide (DiaBeta, Glynase PresTab, Micronase), insulin, metformin (Glucophage), pioglitazone (Actos), rosiglitazone (Avandia), chlorpropamide (Diabinese), glipizide (Glucotrol), tolbutamide (Orinase), and others.

References:

1. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=834866#null
2. https://www.britannica.com/plant/cinnamon
3. https://www.researchgate.net/publication/279753018_Review_Diverse_pharmacological_properties_of_Cinnamomum_cassia_A_review
4. https://www.webmd.com/vitamins/ai/ingredientmono-1002/cassia-cinnamon
5. https://www.drugs.com/npp/cinnamon.html
6. https://onlinelibrary.wiley.com/doi/abs/10.1002/ptr.1190
7. https://onlinelibrary.wiley.com/doi/abs/10.1002/ptr.1643
8. https://www.rxlist.com/cassia_cinnamon/supplements.htm#Interactions