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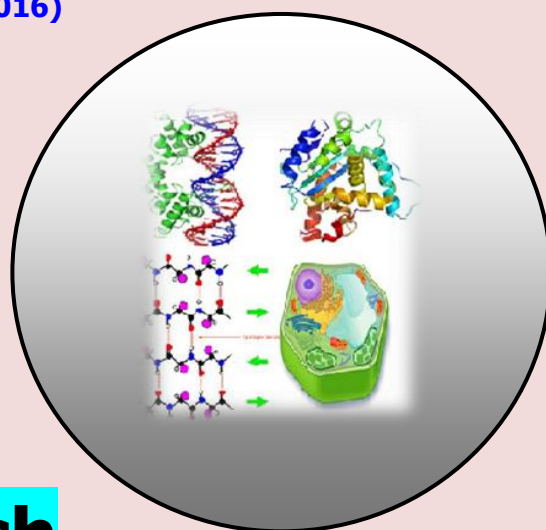
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ABSTRACT

Cardamom is a highly valued herbal spice that is used as a culinary agent in Asian cuisines because of its intrinsic flavoring capacity. Moreover, when used as a home remedy it helps cure various ailments like indigestion, nausea, lightheadedness, etc. This aromatic spice is straw-green to bright-green in color with small, black seeds inside a pod. The fibrous, oval pod has about 8 to 16 seeds. There is another variety of this herb, that is, Black Cardamom or Cardamomum amomum which is mostly found in Asia and Australia. Cardamom is the third most expensive spice in the world and is considered as the "Queen of Spices". The seeds have a sweet aroma and slightly pungent taste. Its essential oil is obtained by steam distillation of cardamom seeds. The oil and left over resin is used in processed foods, liqueurs and perfumes. The health benefits of cardamom include gastrointestinal protection, cholesterol control, control of cancer, relief from cardiovascular issues, and improvement of blood circulation in the body. It is useful for curing dental diseases and urinary tract infections such as cystitis, nephritis, and gonorrhea. Cardamom possesses aphrodisiac properties and is also used as a cure for impotence, erectile dysfunction, and premature ejaculation. Since cardamom gives out a sweet flavor, it was traditionally believed to possess aphrodisiac properties. Not only is cardamom regarded as an aphrodisiac, but it is also believed to possess the cure for impotence and premature ejaculation. In Ayurveda, cardamom has been used as a remedy for urinary tract diseases and infections such as cystitis, nephritis, and gonorrhea. Hiccups can be very annoying, especially for children. There are several remedies prescribed in folk medicine and one of the most popular among them is startling a person who is hiccupping. This may or may not work most of the time. However, cardamom is another very effective remedy. Cardamom pods and seeds can be chewed as a breath freshener. The flavors and aroma found in cardamom are due to the presence of essential oil. It is no wonder that the essential oil of cardamom is being used as a popular ingredient in chewing gum!

Keywords: Cardamom amomum, Cineole, Gastrointestinal Protection and Tridoshic.

INTRODUCTION

Cardamom is a spice that originated in India, Nepal, and Bhutan. Today, it is available in most tropical places in Asia, including India, China, Bhutan, Vietnam, Malaysia, Korea, and Japan. It is regarded as the Queen of Spices and is one of the most expensive spices, ranking third, the first and second being saffron and vanilla, respectively. It is believed that cultivation of cardamom began in the tropical and humid climate in India. In botanical terms, it belongs to the family of Zingiberaceae and its scientific name is *Elettaria cardamomum*. There are two main types or subspecies of cardamom. Their scientific names are *Elettaria*, which is called green or true cardamom, and *Amomum*, which stands for black white, or red cardamom (Mays et al., 2014).

The Spices Board of India recognizes three varieties of cardamom, which include the Malabar, Mysore and Vazhukka varieties. There is another variety, named Njallani, which has become very popular along with the three normal varieties. This variety was developed by a small farmer named Sebastian Joseph from the Idukki district in Kerala. It is found in the form of a small pod with black seeds inside. Both the seeds and the pod give a pleasant aroma and flavor. Therefore, they are used as flavoring agents in Indian cuisine. Its use is just not just limited to hot and spicy dishes; the seeds are also added to desserts and beverages to complement the sweet flavor. Cardamom tea is a very famous beverage, along with ginger tea, in India.

In India, cardamom was traditionally considered as an herb and was one of the ingredients in Ayurveda (the ancient Indian science of medicine and lifestyle) and traditional Chinese medicine. It was believed to be a remedy for teeth and gum infections, throat problems, congestion of the lungs, pulmonary tuberculosis, inflammation of the eyelids, gastrointestinal disorders, disintegrating kidneys, and gallbladder stones, and was also used as an antidote for poisons and venoms. Cardamom is packed with antioxidants. There are two kinds of cardamoms, green and black. Black cardamoms help in curing colds and cough and certain respiratory problems. It imparts warmth to the body. Due to its strong aroma, it helps in activating our taste and sensory elements and thus, aid digestion (Purshotam Kaushik, 2010). The floral and sweet aroma of cardamoms makes it a natural breath freshener. A major component of cardamom oil called cineole is known for its antimicrobial properties that promote oral hygiene and it also fights bacteria that cause bad breath. Cardamom is known to increase the blood circulation in your body and especially to your lungs and so, is often used as a natural remedy for respiratory disorders. It maintains vitality and keeps your energy levels up. Black cardamom is often touted as an effective remedy for treating high blood sugar levels. Cardamom is rich in manganese which helps in controlling blood sugar levels (Table 1). Cardamom boosts energy metabolism and helps the body burn more fat efficiently. Inhaling the sweet and soothing aroma of cardamom essential oil may help in treating sleep issues such as insomnia, restlessness, and anxiety. According to Ayurveda, cardamom is an important spice which is tridoshic which means that helps in balancing all the three doshas - Vatta, Pitta and Kapha in our body. It has significant warming properties that are soothing for your body. It is also believed in Ayurveda that the excess build-up of 'ama', a sticky substance that blocks normal circulation and lowers energy levels, leads to various diseases. Cardamom helps in preventing its accumulation and thus, reduces its negative impact (Abbas, 2011) (Figure 1).



Figure 1.

Table 1. Nutritional Profile of Cardamom.

PRINCIPLE	NUTRIENT VALUE	PERCENTAGE OF RDA
Energy	311 Kcal	15.5%
Carbohydrates	68.47 g	52.5%
Protein	10.76 g	19%
Total Fat	6.7 g	23%
Cholesterol	0 mg	0%
Dietary Fiber	28 g	70%
VITAMINS		
Niacin	1.102 mg	7%
Pyridoxine	0.230 mg	18%
Riboflavin	0.182 mg	14%
Thiamin	0.198 mg	16.5%
Vitamin A	0 IU	0%
Vitamin C	21 mg	35%
ELECTROLYTES		
Sodium	18 mg	1%
Potassium	1119 mg	24%
MINERALS		
Calcium	383 mg	38%
Copper	0.383 mg	42.5%
Iron	13.97 mg	175%
Magnesium	229 mg	57%
Manganese	28 mg	1217%
Phosphorus	178 mg	25%
Zinc	7.47 mg	68%

Health Benefits of Cardamom

Cardamom helps improve digestive health and prevents certain serious ailments like cancer. It also aids in diabetes treatment and helps you cope with depression. You can include cardamom in your diet as you usually do or even take cardamom milk (also called elaichi milk) to avail the wondrous benefits. According to an Indian study, cardamom can be used in cuisines not just for flavor, but also for enhancing digestion. The spice also stimulates metabolism, given its antioxidant and anti-inflammatory properties. Cardamom is also known to stimulate the secretion of bile acid in the stomach, further aiding in digestion. The spice also prevents other gastrointestinal ailments like acid reflux, heartburn, diarrhea, etc (Amma et al., 2010). Its antioxidant properties can promote heart health. Cardamom also contains fiber, the nutrient that can help lower cholesterol levels and enhance heart health. The spice also can lower blood pressure levels – and this benefits the heart. Simply have a concoction of a teaspoon of coriander and a pinch of cardamom along with a cup of freshly squeezed peach juice. Black cardamom seems to work much better than its green cousin when it comes to heart health. One study conducted on patients with ischemic heart disease had their plasma lipid profiles and antioxidant status and fibrinolytic activity (a process that prevents blood clots from growing and causing problems) getting better post the ingestion of black cardamom (Ebru et al., 2013) (Table 1).

As per a report by the Harvard Medical School, cardamom is one of the ingredients heart experts usually include in their dinners. Cardamom has diuretic properties that can benefit cases of hypertension and epilepsy. These diuretic properties of cardamom also aid in detoxification. According to a health report, cardamom can indeed help people cope with depression. Just powder a few seeds of cardamom and boil them in water along with your everyday tea. Take the tea regularly for better results. Cardamom plays a role in fighting asthma symptoms like wheezing, coughing, shortness of breath, and tightness in the chest. The spice makes breathing easier by enhancing blood circulation within the lungs. It also fights related inflammation by soothing the mucus membranes. Another report says that green cardamom can be used to treat asthma, bronchitis, and numerous other respiratory issues. Cardamom is extremely rich in manganese – a mineral that can lower the risk of diabetes. However, a lot more research is required in this aspect. Cardamom possesses antimicrobial properties that enhance oral health. According to the European Journal of General Dentistry, cardamom can protect against oral pathogens like *Streptococci mutans*. The pungent taste of cardamom even stimulates the salivary flow – and this can help prevent dental caries. Cardamom can also work well in treating bad breath. Especially when you take a mixture of spices, including the seeds of anise, cardamom, and fennel – bad breath wouldn't be a problem anymore. One study emphasizes on the use of cardamom for treating a lack of appetite. Even cardamom oil can be used as an appetite stimulant. Cardamom can also aid in the treatment of histoplasmosis – a condition in which one of the symptoms is a lack of appetite. According to an Indian study, cardamom effectively lowers blood pressure. You can simply include cardamom in your soups and stews or even baked items to keep your blood pressure levels in check. Cardamom is a proven aphrodisiac. The spice is rich in a compound called cineole, and just a small pinch of cardamom powder can release nerve stimulants and fuel your passions. Some reports say that cardamom can also treat impotence. Further research is warranted. Cardamom has muscle-relaxing properties, and these can help relieve hiccups. All you need to do is add a teaspoon of cardamom powder to hot water. Let it steep for about 15 minutes. Strain and consume slowly (Krishnamurthy, 2010).

A mixture of cardamom, cinnamon, and black pepper can work wonders for treating a sore throat. While cardamom soothes the sore throat and reduces irritation, cinnamon offers antibacterial protection. And black pepper improves the bioavailability of the two ingredients. You can take 1 gram each of cardamom and cinnamon powders, 125 mg of black pepper, along with 1 teaspoon of honey. Mix all ingredients and lick the mixture thrice a day. Cardamom also has been found to reduce nausea and prevent vomiting. In one study, test subjects who were given cardamom powder showed less frequency and duration of nausea and less frequency of vomiting. According to the Central Food Technological Research Institute in India, cardamom contains several components that relieve blood clots. But yes, adequate research is lacking in this aspect. The skin benefits of cardamom can be attributed to its antibacterial and antioxidant properties. The spice helps treat skin allergies and improves skin complexion. It can also be used as a tool to cleanse the skin. One of the benefits of cardamom is that it can give you fair skin. Cardamom essential oil helps in removing blemishes, thus giving you a fairer complexion. You can either buy skin care products containing cardamom or its essential oil. Or you can simply mix cardamom powder with honey and apply it as a face mask. Cardamom contains vitamin C, which is a powerful antioxidant. It improves blood circulation throughout the body.



Figure 2.

Also, the many layers of phytonutrients in the spice can improve blood circulation – which invariably enhances skin health. Cardamom, especially the black variety, has antibacterial properties. Applying a cardamom and honey mask (a mixture of cardamom powder and honey) to the affected area can give relief.

Cardamom is often used in cosmetics to impart fragrance. Due to its distinct spicy, sweet scent, both cardamom and cardamom oil are used in perfumes, soaps, body washes, powders, and other cosmetics. Oriental style perfumes and other scented products often use cardamom as an ingredient in addition to other essential oils. Cardamom can be used in skin care products for antiseptic and anti-inflammatory purposes to calm and soothe the skin, thanks to its therapeutic effects. When added to perfumes, it can stimulate the senses. Facial soaps use cardamom to impart a warming sensation to the skin. These cosmetics using cardamom for therapeutic reasons are known as aromatherapy products (Mohammed Ali and Shahnaz S. Husain, 2016). The strong scent of cardamom can ward off unpleasant odors. This makes it a great addition to cosmetic products, such as toners, that serve a specific function but smell unappealing due to the inclusion of certain ingredients. Cardamom is added to these products to mask the unpleasant scent while retaining the benefit of the cosmetic. Cardamom essential oil is often added to cosmetics that are applied to the lips (such as lip balms) to impart the taste of the oil and make the lips smooth (Jamal et al., 2006) (Figure 2).

Black cardamom helps in flushing out the toxins that could otherwise harm your skin. Chewing some black cardamom detoxifies your body, thus providing you with clearer skin. Cardamom can contribute to improved hair growth and the treatment of certain scalp issues. The antioxidant properties of cardamom, and especially the black type, nourish your scalp and improve its health. The spice also nourishes the hair follicles and enhances hair strength. You can wash your hair with cardamom water (mix the powder with water and use before shampoo) to achieve the desired results (Jazila et al., 2007). The antibacterial properties of the spice even treat scalp infections, if any. This is a given. Improved scalp health most often means stronger and better-looking hair. The spice strengthens your hair roots and offers shine and luster to your hair. These were the benefits. A simple spice can transform your health, provided you take it on a regular basis. And now, we have an important question to address – what is the difference between cardamom and coriander? Firstly, why should we care about such a comparison?

CONCLUSION

Cardamom has digestive, antispasmodic, carminative, anti-inflammatory, anti-microbial, aphrodisiac and diuretic properties. It boosts digestion and stops nausea, vomiting. Plus, the herb aids in eliminating belching and flatulence. Some other health benefits of cardamom (Elaichi) include relief from stomach pain, colon spasms (caused by ulcerative colitis) and menstrual cramps. Besides, application of cardamom oil cures teeth and gum infections. Its pleasing fragrance removes bad breath (Halitosis).

Furthermore, the herb works as a mild circulatory stimulant. This warm spice improves blood circulation to the lungs. Plus, it can help lower blood pressure, especially in case of primary hypertension. The therapeutic herb also promotes urination and aids in detoxification of the body. Cardamom (Elaichi) benefits the immune system as well. In addition, studies show that it has antioxidant properties that can increase the levels of glutathione (a natural antioxidant in the body). It is also believed to have antitumor qualities. Cardamom essential oil has a balsamic aroma and expectorant qualities. Thus, when used in aromatherapy, it helps break up mucus and congestion in sinuses and lungs. It is also beneficial for those suffering from asthma or bronchitis. It has a soothing effect on muscles, nervous system and gives mental clarity. It is high in phytochemical cineole, which is a central nervous stimulant. Further, the herb's diaphoretic properties are useful in increasing perspiration.

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