

# The Review on Indian Spices and their medicinal uses

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## **Abstract:**

Spices are distinguished from herbs, which are the leaves, flowers or stems of plants used for flavouring or as a garnish. Spices improves the taste and also a good source of vitamin B and C, iron, calcium, and other antioxidants. Rather than cooking spices is the part of many industries like medical, cosmetic, pharmaceutical and perfumery, and many more. Spices also helps to cure many diseases like diabetes, cardiovascular diseases, arthritis, cancer, and AIDS. Indian spices are popularly known for their flavor and aroma in domestic and in international markets. Spices provide nutrition. Many spices contain antioxidant, anti-inflammatory, anti-bacterial, and anti-viral properties which have health benefits and benefit the body. Spices enhance and complement flavor in foods with no detrimental effect on the organoleptic quality of the food. India is the largest producer of spices in the Global Market. It produces more than 70 varieties of spices. Commercial cultivation in india is undertaken on 27 spices besides the herbal spices. India has been recognised all over the world for spices and medicinal plants. Both exhibit a wide range of physiological and pharmacological properties. Spices are grown in india. The major spices exported by india are Turmeric, cumin, coriander, fenugreek, peppers, etc. This review outlines the role of some spices used in the Indian kitchen for its flavor and taste which are potential to maintain healthy heart.

**Keywords:** Indian Spices, Turmeric, Clove

## **Introduction:**

India is the land of spices grown variety of spices due to different agro-climatic conditions. India is the largest producer, con-sumer and exporter of spices in the world. India holds monopoly in export of spice oils and oleoresins. Spices account for 6 per cent contribution to the agriculture GDP [1]Spices take an important place in common man's life right from the kitchen and medicinal uses in homes. As India is blessed with a varied climate each of its states produce some spice or other. India is also known as the 'Land of Spices'. The major spices exported by India are turmeric (10%), cumin (10%), coriander (9.5%), fenugreek (4.2%), peppers (4%) and others (19%)[2]Spices means whole or ground form obtained from natural plants or vegetable products which has been used for imparting flavor, aroma and pungency to foods and also used for seasoning of foods. It also has non-food applications in dyeing, perfumery products and neutraceutical industries. It mask the spoiled flavor of meat that enhance the shelf life of foods.[3]Herbs and spices continued to be used during the middle ages for flavoring, food

preservation, and/or medicinal purposes.[4]Spices have been used for not only flavour and aroma of the foods but also provide antimicrobial properties. Spices including Clove or *Eugenia caryophyllus*, Cinnamon in the form of *Cinnamomum zeylancium*, Black pepper or *Piper nigrum*, Turmeric as *Curcuma longa* and Ajwain or *Trachyspermum ammi* are very effective as anti-bacterials. Spices have been recognized for their value of preserving foods and medicinal values due to richness in bioactive antimicrobial compounds.[5]The different Indian kitchen flavors explicitly against multidrug-resistant clinical strains of enterococci having various hereditary apparatus of harmful variables. Seven kinds of the run of the mill Indian flavors and herbs to be specific *Cuminum cyminum* (cumin), *Trigonella foenum graecum* (fenugreek), *Cinnamomum zeylanicum* (cinnamon), *Elettaria cardamomum* Maton (cardamom), *Syzygium aromaticum* (cloves), and Curcumin (turmeric). The rough ethanolic concentrate of cinnamon, cloves, turmeric, cardamom, and cumin indicated critical antibacterial movement against all the clinical disconnects of enterococci.[6]

**Common Indian Spices:**

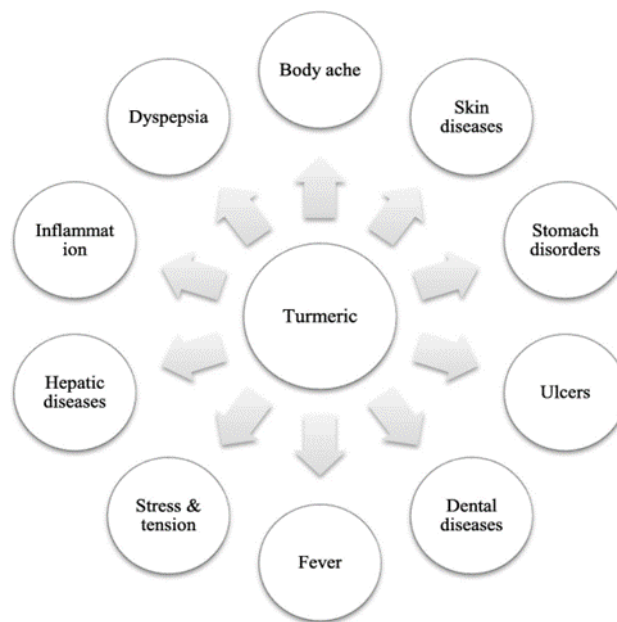
- 1.Turmeric
- 2.Cumin
- 3.Fenugreek
- 4.Cinnamon
- 5.Cardmom
- 6.Cloves

**Turmeric(Halad):**

Turmeric is derived from the rhizome of the plant *Curcuma longa* and has been used as a traditional medicine from ancient times in China and India.[7]Turmeric grown in India includes 60% of the overall area uses for spices and condiments belong to the Zingiberaceae family which is commonly cultivated in India and Southeast Asia. It is known by different names such as kunyit (Indonesian and Malay), besar (Nepali) and haldi or pasupu in some Asian nations. There are about 70 species of turmeric of which 30 species are found in India. Turmeric obtained from the rhizome of *Curcuma longa* plant which accounts 96% of the total turmeric obtained from this variety in India [8]

**Uses of Turmeric:**

Fig 1.



Turmeric has appearance yellow colored spice arises from the rhizome of *Curcuma longa* plant. Turmeric also used as traditional medicine from ancient times in China and India [31]. It is called halodhi in Assanese. In medieval Europe, turmeric also known as Indian saffron, so this widely used for alternative far more costly saffron spice. The yellow powder which is obtained from rhizome of turmeric has been used in Asian cookery, different medicine, cosmetics products, and textile and fabric coloring for the last 2000 years.[9]

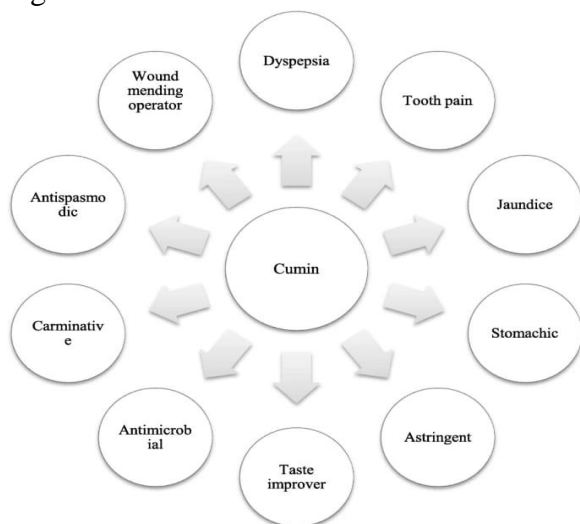
**Cumin (Jeera):**

Cumin is a blooming plant in the family Apiaceae, local to a region including the Middle East and extending east to India. It is having good properties relating to health, hence uses internationally. Cumin seed and its refined sweet-smelling water are utilized as a stimulant, antispasmodic, carminative, antimicrobial, against inflammatory, and wound-mending operator. Cumin is viewed as a craving

stimulant, and it is broadly used to a straight forwardness stomach issue, loose bowels, and fart. It is utilized as a carminative, especially in veterinary practice, and has additionally been utilized as a guide for dyspepsia and jaundice. As far as a present day examination into the practical properties of cumin, cumin oil has shown antimicrobial and antifungal movement in research center tests. Antibacterial action was tried on gram-positive and gram-negative microscopic organism’s species[10]

### Uses of cumin

Fig 2.



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The largest producer of cumin is India (70% of world cumin production) while the second largest producer is the Syria. The major importers of the Indian cumin are U.A.E, Central America, China and Vietnam. It contains essential oil 2 to 4% and the active compound is aldehyde cumino. The seeds are mainly used in curry and seasoning. It is also used in curry powder, sambar powder and rasam powder.[11] It is a good source of iron and keeps immune system healthy. Water boiled with cumin seeds is good for coping with dysentery.

### Fenugreek(Methi):

Fenugreek is one of the most common vegetables grown throughout the country. The seeds can be lightly roasted and ground and used as flavouring, especially in curry dishes. Fresh seed can be sprouted to give tasty sprouts.[12-16] Taste of this spice is bitter and thus used in small quantities in seasonings like sambar and kadhi. It improves the flavor and keeping quality of pickles. Fenugreek is a kind of seed, which are mainly used as kitchen spices in India, commonly known as maithray (Bangla, Gujarati), methi or mithi (Hindi, Nepali, Marathi, Urdu and Sanskrit). In Latin “fenugreek” or foenum-graecum is known for “Greek hay.” In medicines it is used as an aphrodisiac property, astringent, demulcent action, carminative, stomachic, diuretic, emmenagogue, emollient, expectorant, lactagogue, restorative, and tonic[17]

**Uses of Fenugreek:**

Fig.3



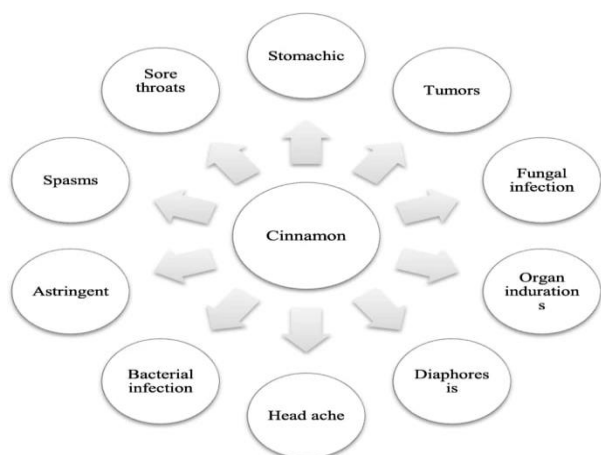
fenugreek contains three significant concoction constituents with restorative worth, for example, (1) steroidal sapogenins, (2) galactomannans, and (3) isoleucine. These constituents appear to work in a synergistic manner to create wellbeing impacts and have put fenugreek among the most ordinarily perceived “nutraceutical” or wellbeing nourishment items. Viable operators for the treatment of hypocholesterolemia confusion regularly connected with diabetes. This high proportion of galactose substitution encourages galactomannans to absorb water enabling them to shape exceptionally gooey arrangements at moderately low focuses bringing about diminished glucose ingestion inside the stomach-related tract[18].

**Cinnamon(Dalchini):**

The “cinnamon” names arise from Greek kinnám ō mon, itself ultimately from Phoenician. The botanical name for the spice, *Cinnamomum zeylanicum*, is derived from Sri Lanka’s former (colonial) name, Ceylon. In sinhala (Sri Lanka), it is also known as kurundu, Hindi as dalchini, and in Gujarati as taj. In Malayalam cinnamon is called karuva or elavarngam. The (karuvappatta/elavarngappatta) karuva dried skin has an important part of spicy curries. This spice is regarded as antipyretic, lowering in body temperature, antiseptic, astringent, inflammatory problem, carminative, diaphoretic, fungicidal, stimulant, and stomachic[19]Cinnamon is obtained from the bark of the Cinnamon tree. The bark having 1% essential oil and the active compounds present in the oil are eugenol, cineole and cinnamaldehyde. It is used for making garam masala powder. It is also act as antioxidant due to presence of methyl hydroxyl chalcone polymer. Cinnamon having many important chemical constituents likes cinamaldehyde, cinnamic acid, and cinnamate that are providing many promising health benefits such as antioxidant, anti-inflammatory, antidiabetic, anti-microbial, immunity boosting, cancer and heart disease protecting abilities

**Uses of cinnamon:**

Fig.4

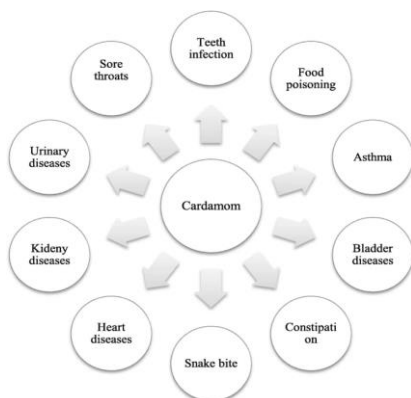


It very well may be purchased as entire sticks, used to flavor rice and meat dishes and hot apple juice; however, plans can likewise call for ground cinnamon. It has potential all the more for the most part as a characteristic nourishment additive. It has an expansive scope of chronicled utilizes in various societies, including the treatment of looseness of the bowels, joint inflammation, and different menstrual issue. It is utilized as an adjuvant in stomachic and carminative prescriptions and is additionally managed in instances of anorexia, inflammation, spewing, and tubercular ulcers.[20]

**Cardamom(Velchi):**

The common name of cardamom is *Ellettaria cardamomum* belong to the family Zingiberaceae and popularly known as the Queen of spice. The cardamom contains 2–10% volatile oil with the characteristic pleasant odor. The active compounds present in the oil cineole, terpinyl acetate, pinene, sabinene and porneol. It is used in coffee, sweet preparation, cookies, breads, cakes and preserves as flavoring substances. Cardamom is sometimes sold in the market after the extraction of essential oil. All species of cardamom are used as kitchen cooking spices. Besides the above uses it can be also helpful in flatulent indigestion and to stimulate the urge for food in humans with anorexia[21-22]The essential oil obtained from cardamom acts as a bioenhancer by increasing the glutathione-S-transferase (GST) and decreasing lipid per oxidation[23]Cardamom infusion used as a gargle to relieve sore throats. It is reported as an antidote for both snake and scorpion venom and also used for food poisoning. In Chinese it is also traditionally used to treat stomachache disorders, constipation problem, dysentery in children, and other digestion related problems. The pods of Cardamom, also effective when it is used as fried and mixed with mastic and milk, are effective against bladder problems.[24]

**Uses of cardmom:**



Black or large cardamom is also known as “Bari Ilaichi” is used in Unani system of medicine in gastrointestinal disorders. Various flavors, to be specific ginger, turmeric, and so on, have been appeared to have huge gastroprotective action. Huge cardamom (products of *Amomum subulatum*) usually known as “Heel kalan” or “Bari Ilaichi” is utilized as flavor all through the world[25]

**Cloves(Lavang):**

In India clove is grown in Nilgiris, Tembasi hills and Kanyakumari district in Tamilnadu state and Kottayam and Quilon districts in Kerala. The major component of the essential oil is Eugeniol and oil content about 15%. The oil of clove is frequently used in Ayurveda and Chinese medicine as a painkiller in dental problem[26]Clove is highly valued medicine for their carminative, stimulant, antifatulent and antihelmenthic properties.[26]Cloves are native to Indonesia and are used as a spice in cuisine all over the world. The name derives from the French ‘clou,’ meaning ‘nail’ as the buds vaguely resemble small irregular nails in shape. The spice is used in Ayurveda, Chinese medicine and Western herbalism.[27]

**Uses of clove:**

Fig.6



The clove is having the properties of cell reinforcement, hostile to contagious, against viral, against microbial, against diabetic, calming, antithrombotic, analgesic, remembering in agony, and creepy crawly safe. Dental specialist utilized it for brief filling of holes just as in teeth torment. Because of the

high substance of flavonoids, cloves are utilized as mitigating specialists. Clove oil is utilized in numerous torments like joints, muscles, or sinewy tissue, particularly rheumatoid arthritis. Clove glue is utilized cuts, chops just as to treat skin break out. Clove oil is being utilized in inhalers if there should be an occurrence of hack, cold, irritation of the mucous film in the bronchial cylinders, and so forth clove helps in counteract malignant growth and diabetic illnesses as its oil propping bloodstream and furthermore control in blood glucose[28].

### Conclusion:

spices are diversified in nature widely used in Indian culinary as well as at international level as flavoring, coloring, and preservative agents. Spices are being used as staple dietary 1Turmeric,Cumin,Fenugreek,Cinnamon,Cardmom,Cloves on the basis of culinary uses and medical uses.Presence of strong flavor and aroma spices are used in small quantities that impart lower calories to food, however it enriched the foods with varieties of essential minerals, although some spices derived form seed contain high amount of fat, protein and carbohydrates.All the spices have a wide variety of bio-functions and their additive and synergistic actions that protect human body.

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