

Pharmacological Benefits of Cumin (*Cuminum Cyminum*)

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## Abstract

*Cumin (Cuminum Cyminum) is known by several names such as jeera, haravi, caraway, etc. and is well known for its anti-inflammatory, antiseptic, antioxidants and antimicrobial properties. It is used as a natural remedy for the treatment of numerous ailments such as digestive tract discomforts, nausea, constipation, bloating, dyspepsia and flatulence. Seeds of cumin are heavily consumed in Indian cooking because of its aroma and flavor however over consumption is associated with numerous health related side effects.*

**Keywords:** Anti-inflammatory, Antioxidants, Constipation, Belching, Folate, Lutein-zeaxanthin

## Introduction

Cumin (*Cuminum Cyminum*) is native to Asian regions and is known by several names such as jeera, haravi, caraway, krishnajraka, etc [1]. It was formerly cultivated in Mediterranean regions, Iran, India and Pakistan [2]. Cumin is well known for its anti-inflammatory, antiseptic, antioxidants and antimicrobial properties [3,4]. Cumin is a fruit of its herb but when it dries becomes a seed and is a source of iron, calcium and magnesium [5,6]. It is used as a natural remedy for the treatment of numerous ailments such as digestive tract discomforts, nausea, constipation, bloating, dyspepsia and flatulence [7-9]. Seeds of cumin is heavily consumed in Indian cooking because of its aroma and flavor however over consumption is associated with health related side effects such as belching and gastric problems and heartburns [10,11].

## Cumin Herb

Cumin plant is a 15-50 cm heighted herbaceous annual plant which is cultivated annually mostly in the month of February to March [12]. It has thread-like leaflets along with white roots [13]. The stems bear reddish white flower and possess oval shaped schizocarp [14]. Cultivation of cumin requires a fertile well drained soil and temperature of around 30°C [15]. In addition the cumin plant is drought resistance [16].

## Dietary Importance of Cumin

Several nutrients that are present in cumin has been summarized in Table 1 which is given below [17-21].

Table 1: Nutritional value of cumin

S.no	Nutrients	Value per 100g
1	Proteins	17.8g
2	Carbohydrates	44.24g
3	Dietary Fiber	10.5g
4	Folate	10 µg
5	Thiamin	0.628mg
6	Riboflavin	0.32mg
7	Niacin	4.58mg
8	Pyridoxine	0.435mg
9	Fat	22.7g
10	Vitamin E	3.3mg
11	Vitamin A	1270IU
12	Vitamin K	5.4 µg
13	Vitamin C	7.7mg
14	Potassium	68mg
15	Iron	66.36mg
16	Phosphorous	499mg
17	Manganese	3.3mg
18	Copper	0.867mg
19	Sodium	1788mg
20	Calcium	931mg
21	Magnesium	366mg
22	Carotene-β	762 µg

23	Zinc	4.8mg
24	Lutein-zeaxanthin	448 µg

### Medicinal Uses of Cumin

Following are some therapeutic uses of Cumin seeds:

#### Treatment of Anemia

Cumin seed is enriched source of iron which is required for the synthesis of hemoglobin [22]. Therefore cumin seeds fulfill the daily iron requirement of an adult to prevent symptoms of anemia.

#### Treatment of Insomnia

Some research studies have revealed that cumin oil possesses hypnotic and sedative properties which help insomniac patients in relieving fretfulness and tension to get better sleep [23].

#### Treatment of Diabetes

Cumin helps in decreasing hypoglycemia and high blood glucose level by stimulating the secretion of hormone insulin in diabetic patients [24].

#### Treatment of Acne and Skin Problems

Since cumin seeds possess antimicrobial and antioxidant property. In addition contains high concentration of Vitamin E and several essential minerals. Therefore it could be used to treat moderate acne and mild skin problems [25].

#### Treatment of Piles

Piles, also known as hemorrhoids could be treated using cumin seeds since it has high fiber content and act as a natural laxative. Therefore it promotes easy bowl removal by reducing constipation [26].

#### Treatment of Seasonal Cold

Cumin's oil act as a disinfectants and helps in treating common cold and fever caused by viral infections [27].

#### Treatment of Asthma and Respiratory Tract Infections

Consumption of cumin seeds helps in removal of phlegm and reduces mucus deposition in respiratory tract [28]. Therefore it is effective against respiratory problems such as asthma and bronchitis because of its anti-congestive nature [29].

#### Promotes Digestion

Cumin seed extracts helps in stimulating proper digestion by reducing acidity and enhancing enzyme activity for better digestion [30]. It also helps in relieving stomach ache and abdominal pain [31].

#### Promotes Lactation

As cumin contains a considerable amount of iron, it increases the secretion of milk from the mammary glands and helps build strength postnatal [32].

#### Promotes Hair Health

Cumin seed extracts deeply nourished hair roots and reduces hair loss [33]. Since it is enriched with proteins and carbohydrates which is required for healthy hair growth it also prevents the occurrence of dandruff [34].

#### Enhances Immunity

Besides being antimicrobial, cumin seeds are an enriched source of

antioxidants and essential mineral ions that reinforces the immune system to fight infection [35].

#### Reduces High Blood Pressure

Since cumin contains 68nmg of potassium which is required to maintain a normal blood pressure in the body by regulating the concentration of sodium ions [36].

#### Reduces Mensuration Pain

Menstrual cramp is easily reduced by consuming small amount of cumin seeds since it is anti-inflammatory and anti-spasmodic [37].

#### Reduces Liver Problems

Cumin promotes bile secretion and stimulates detoxification of harmful substances in order to keep our liver healthy [3].

#### Reduces Aging

Besides being inflammatory, cumin also possesses antioxidant property therefore it stops premature ageing [38].

#### Reduces Cognitive Disorders

Symptoms of cognitive disorders such as Alzheimer's disease and dementia could be reduced in such patients using cumin in their diet [39].

#### Side Effects of Cumin

Besides being used as therapeutic, over consumption of cumin has harmful health effects which are as follows:

1. Over consumption of cumin leads to digestive and gastric problems [40].
2. Overdose of cumin can interfere with the normal functions of our kidney and liver [41].
3. In lactating mothers it reduces the secretion of milk if consumed in high quantity [6].
4. It is advisable not to take cumin in diet before any surgery [42].
5. Because of its narcotic properties, it is recommended to lower cumin intake because it causes nausea, mental clouding and drowsiness [43]. In addition could lead to low blood sugar level and heavy bleeding during mensuration [5].

#### Conclusion

Cumin besides being heavily consumed in Mediterranean cooking, it has many therapeutic uses such as in boosting immunity, red blood cell synthesis, enhancing digestion, promoting lactation and healthy hair growth etc. However over consumption might lead to ill health effects.

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