



Ethnomedicinal Study of *Nigella sativa*

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Abstract

Nigella sativa is also known as wild or shahi jeera and is mostly consumed as a flavoring spice in Indian and Mediterranean cooking. Besides it is also used in the preparation of ayurvedic medicine used for the treatment of gastrointestinal problems, vomiting, diabetes, dyspepsia, fever etc. This magical spice has many medicinal uses with no or less side effects. Its seeds possess antimicrobial, anti-inflammatory, anti-ageing and anti-spasmodic.

Keywords: Pyrazines; Thiamin; Niacin; Conjunctivitis; Eczema; Black Caraway; Dyspepsia; Flatulence.

Introduction

Nigella sativa is known by numerous names such as Black cumin, Black Caraway, Kala Jira, Siyah Zeera etc discovered in the tomb of King Tut [1,2]. It is a persistent aromatic spice found in dry moderate regions of Himachal Pradesh, northwest Himalayas, Kashmir and Uttaranchal [3, 4]. It is widely used in Middle-East Asian and Mediterranean cuisine [5]. Today, it is cultivated all over the world.

Cultivation of *Nigella sativa*

Nigella sativa or Black cumin seeds are curved shaped dark brownish in color with distinct pods [6]. Traditionally, black cumin seeds has been used for the treatment of ailments such as nasal congestion, headache, asthma, diabetes, toothache, arthritis, conjunctivitis, conjunctivitis, abscesses and intestinal worms [7,8,9,10]. These seeds have acerbic and bitter taste [11]. The plant

is branched, tuberous with finely dissected leaves possessing white flowers [12].

Storage of *Nigella sativa*

Nigella sativa (Black cumin) is readily available throughout the whole year in the local markets [13]. Its seeds are also available in ground powder form [14]. Release of a nice scent when black cumin seeds were squeezed between index and thumb fingers is an indication of its freshness and high quality [15]. Its seeds could easily be stored in a cool, dry airtight container for several months [16]. However it should be used early otherwise will lose its characteristic aroma and flavor [17].

Nutritional composition of *Nigella sativa*

Nigella sativa seeds contain the following nutrients which are as follows:

- a. Essential oils such as 4-isopropylbenzaldehyde, 2-methoxy-3-sec-butylpyrazine, pyrazines, 2-ethoxy-3-isopropylpyrazine 2-methoxy-3-methylpyrazine [18,19].
- b. Minerals such as calcium, iron, potassium, copper, selenium, zinc, manganese and magnesium [20, 21].
- c. Vitamins such as vitamin B-6, thiamin, niacin, riboflavin, vitamin E, vitamin A etc [22].
- d. Flavonoid phenolics such as lutein, carotenes and zeaxanthin [23].

Health Benefits of *Nigella sativa*

- a. It stimulates appetite and improves digestion by increasing gastrointestinal enzymatic secretions. Therefore it is used in the formation of herbal stomachic tonic [24].
- b. It is also used to treat diabetes [25].
- c. It reduces uterus inflammation and excites menstruation in females [26]. In addition it appeases uterine muscles and relieves menstrual cramps [27].
- d. It is used in the treatment of skin related issues such as dryness, eczema and psoriasis [28].
- e. It improves prenatal health in pregnant women and provides high iron content for enhanced lactation [29].
- f. Black cumin aids proper digestion and reduces gastric and stomach ache [30].
- g. It is also known to reduce bad cholesterol LDL to maintain good cardiovascular health [31].
- h. Act as antioxidant to eliminate toxic compounds from the body such as removal of toxins from uterus after birth [32].
- i. Since *Nigella sativa* seeds are enriched source of fibres therefore promotes colon health and prevents ulcer formation [33].
- j. It also stops gum bleeding [34].
- k. In addition to the above mentioned benefits, Black cumin is used as a medicine in diarrhea, dyspepsia, flatulence, fevers, inflammations, cough, and all anorexia [35].

Side Effects of Over Consumption of *Nigella sativa*

Very scarce information is available on the side effects of *Nigella sativa* if consumed in high amount in diet. However it is reported that over dose of *Nigella sativa* seeds might slow the process of blood clotting [36]. Thus making bleeding worse. But the exact mechanism is still under investigation. In addition to that it might cause hypoglycemia if taken in inappropriate amount [37]. It is also not recommended to take *Nigella sativa* seeds before or after surgery [38].

Conclusion

Thus *Nigella sativa* holds potential medicinal importance and could be investigated further to reveal its clinical applications.

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