

MEDICINAL PROPERTIES OF GINGER

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Introduction

India is known as 'The Land of Spices' and the glory of Indian spices is known throughout the world. Our nation is the largest producer, consumer and exporter of the spices in the world. According to the Spice Board of India around 63 different spices are grown in India. Commercial cultivation of such spices is limited to only about a dozen of crops, which are important in domestic market and international trade. More than 90% of spices produced in India are used for domestic consumption and the remaining are exported in raw and value-added forms.

Botany

Ginger is botanically known as *Zingiber officinale* and belongs to family Zingiberaceae. It is reported to be originated from the tropical rainforests of the Indian subcontinent to Southern Asia. Ginger is a herbaceous perennial flowering plant but are mostly grown as an annual. Height of a plant varies from 30- 90 cm. It has an underground stem also known as rhizome which is thick, flattened and covered with small scale leaves with fibrous roots that grows horizontally. The inflorescences bears flower with pale yellow petals and purple edges which arises directly from the rhizome on separate shoots. Its rhizome or root plays a major role in folk medicine and as a spice.

Major Constituents

The major constituents in ginger rhizomes includes carbohydrates (50–70%), lipids (3–8%), terpenes, and phenolic compounds (Grzanna *et al.*, 2005). Terpene components of ginger include zingiberene, β -bisabolene, α -farnesene, β -sesquiphellandrene, and α - curcumene, while phenolic compounds include gingerol, paradols, and shogaol. These gingerols (23–25%) and shogaol (18–25%) are found in higher quantity than others. Besides these, amino acids, raw fibre, ash, protein, phytosterols, vitamins (e.g., nicotinic acid and vitamin A), and minerals are also present (Shukla and Singh, 2007). In addition, the aromatic constituents of ginger include zingiberene and bisabolene and pungent constituents include gingerols and shogaols.

Medicinal properties of Ginger

Ginger possesses several medicinal properties and health benefits. Some of them includes :

Antiviral properties	Fresh rhizome of ginger is considered to have an antiviral effect against Human Respiratory Syncytial Virus (HRSV) infection. It also plays an important role in the management of common cold and fever associated with mucous secretions and management of complications due to cough and asthmatic conditions.
Anti-inflammation	Ginger is also used as the anti-inflammatory and a pain remedy. Some active constituent in ginger such as, gingerol, zingiberene, zingiberol are good effect on anti-bacterial and anti-inflammation.

Anti-tumour and anti-cancerous	Some studies also revealed that active constituent in ginger shows antitumor and anticancer properties. The 6-genero and 6-paradol had inhibitory effects on the viability and DNA synthesis of human promyelocytic.
Digestive aid	Ginger also plays a major role as digestive aid and helps in increasing appetite by secretion of different digestive enzymes inside the stomach.
Antimicrobial properties	Antimicrobial properties of ginger are effective against several intestinal problems. It is also used to avoid formation of ulcers. Ginger plays a vital role to inhibit harmful bacteria, such as <i>Escherichia coli</i> , which is responsible for most of the diarrhoea. (Wood 1998).
Antioxidant Activity	Ginger is known to exhibit a powerful antioxidant activity due to its oil which has protective effect on DNA.
Stimulation of blood circulation	Important therapeutic property of ginger includes its ability to stimulate the circulatory system that makes ginger is an important herbal remedy. It helps in nourishing the skin by increasing blood flow to the skin, removing toxin from the body, and cleansing the bowels and kidneys. (McGee2003).

Conclusion

There are several evidences from literatures on the medicinal properties of ginger. Apart from their appreciable roles in nutrition, they have been reported to possess several medicinal properties such as anti-inflammation, antimicrobial, anti-tumour, anti-cancerous and antioxidant properties. It also acts as digestive aid and helpful in stimulation of blood circulation, treating common cold and cough and several other diseases. Therefore, it can be concluded that besides its spice value ginger can also be used in various medicinal aspects for betterment of human health.

References

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