

Ginger - Powerful Immunity Booster A Review

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SUMMARY

Ginger has been known for its several scientific properties and valued for the last 2500 years in different parts of the globe. Ginger has rich phytochemistry and several health promoting perspectives. In ginger family, *Zingiber officinalis* is one of most widely used species and it is found in several foods and beverages. Ginger has been used commonly to treat diarrhea, stomach upset, indigestion and nausea. It also has anti-inflammatory and antioxidant properties. The chemistry of ginger is well documented with the respect to the oleoresin and volatile oil. It is concluded that, ginger has potential to treat numerous disorders including cancer due to its anti-inflammatory and anti-oxidant properties. In this helpful advantages provided through ginger so it is called powerful immunity booster.

INTRODUCTION

Ginger (*Zingiber officinale* Rosc.) belongs to the family *Zingiberaceae*. It originated in South-East Asia and then used in many countries as a spice and condiment to add flavor to food. Besides this, the rhizome of ginger has also been used in traditional herbal medicine. The health-promoting perspective of ginger is attributed to its rich photochemistry (Shukla et al., 2007) Ginger is an erect perennial plant growing from one to three feet in height. The stem sticks up about 12 inches above ground and is surrounded by the sheathing bases of the two-ranked leaves. It produces clusters of white and pink flower buds that bloom into yellow flowers. Ginger grows horizontally, laterally flattened with branching pieces, a configuration known as rhizome. The whole rhizome has a firm, striated texture. It is 5 to 15cm long, 1.5to 6cm wide, 2cm thick and depending on the variety can be yellow, white, or red in color.



Ginger is a member of a plant family that includes cardamom and turmeric. Its spicy aroma is mainly due to presence of ketones, especially the gingerols, which appear to be the primary component of ginger studied in much of the health-related scientific research. The rhizome, which is the horizontal stem from which the roots

grow, is the main portion of ginger that is consumed. Ginger's current name comes from the Middle English *gingivere*, but this spice dates back over 3000 years to the Sanskrit word *srngaveram*, meaning "horn root," based on its appearance. In Greek, it was called *ziggiberis*, and in Latin, *zinziberi*. Interestingly, ginger does not grow in the wild and its actual origins are uncertain. Ginger is one of the most widely consumed spices in the world, not a great deal is known regarding its metabolism or metabolites. Evaluating the bioactivity of ginger is necessary for completely understanding its mechanism of action and potential therapeutic effects (Surh 1999). Ginger has been purported to exert a variety of powerful therapeutic and preventive effects and has been used for thousands of years for the treatment of hundreds of ailments from colds to cancer. Like many medicinal herbs, much of the information has been handed down by word of mouth with little controlled scientific evidence to support the numerous claims. However, in the last few years, more organized scientific investigations have focused on the mechanisms and targets of ginger and its various components (Topic et al., 2002).

Nutritional composition of ginger (per 100g)

Constituent	Value	Constituent	Value
Moisture	15.02	Ash (g)	3.85
Protein (g)	5.08	Calcium (mg)	88.4
Fat (g)	3.72	Phosphorous (mg)	174
Insoluble Fiber	23.5	Iron (mg)	8.0
Soluble Fiber	25.5	Zinc (mg)	0.92
Carbohydrate (g)	38.35	Copper (mg)	0.545
Vitamin C (mg)	9.33	Manganese (mg)	9.13
Total carotenoids (µg)	79	Chromium (Ug)	70

Medicinal Benefits

Antimicrobial Effects

Ginger has strong antibacterial and to some extent antifungal properties. In vitro studies have shown that active constituents of ginger inhibit multiplication of colon bacteria. These bacteria ferment undigested carbohydrates causing flatulence.

Effects on Cardiovascular System

In traditional Chinese medicine, ginger is used to improve the flow of body fluids. It stimulates blood circulation throughout the body by powerful stimulatory effect on the heart muscle and by diluting blood. The improved circulation is believed to increase the cellular metabolic activity, thus contributing to the relief of cramps and tension.

Effect on Blood Pressure

Several pieces of evidence, mainly from rat studies, have suggested that ginger exerts many direct and indirect effects on blood pressure and heart rate (Jalal et al., 2014)

Antioxidant Properties of Ginger

Free radicals are the highly reactive moieties produced during food processing and in biological systems in result of many generative and derivative reactions. Many health problems linked with advancement in food processing, dietary habits and free radicals production. In such conditions of imbalance, extra antioxidant supplementation through dietary modules is essential for organism vitality (Chen et al., 2008).

Anti-Diabetic Effects

The change in the dietary style and low physical activity generates many lifestyle related disorders like blood pressure, obesity, CVD and many others. Among this Diabetes mellitus is rapidly growing health complication and one of the foremost reasons of casualties in the world.

CONCLUSION

Ginger has been safely used for centuries not only for medicinal purposes but also as a food and spice. It is well known for its multiple activities with a proven efficacy in gastrointestinal and inflammatory conditions. Preliminary studies suggest that ginger may also be safe and effective for nausea and vomiting of pregnancy when used at recommended doses for short periods of time. Some safety concerns have been raised when pregnant women used ginger in large doses

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