

Fenugreek (*Trigonella foenum-graecum*): Health Beneficial Effects

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PERSPECTIVE

Trigonella foenum-graecum, commonly known as fenugreek, is cultivated for its medicinal properties. Fenugreek is an erect annual herb grown in India, Bangladesh, Egypt, Iran, Afghanistan, Nepal, Pakistan, Turkey, Morocco, Spain, North Africa, southern China and southern Europe. It is one of the most generally used plants since antique times. Research on fenugreek in recent years has identified a number of health benefits and physiological attributes in both experimental animals as well as clinical trials in humans.

The seed and leaf of this plant is used for the treatment of diabetes in traditional and Ayurvedic medicine. In Ayurveda, seeds are considered demulcent, tonic and carminative, and used in dyspepsia with loss of appetite, diabetes, rheumatism, flatulence, and to puerperal women during confinement. It is also identified as one of the most effective anti-diabetic plants, used as stimulant and carminative, and in renal disorders. It is used to treat depression and anxiety in folk medicine. The seeds and green leaves, which are used in food as well as in medicinal application. In the ancient traditional medicine, Ayurveda, fenugreek has been advised as an important medicine to treat a variety of digestive and mucosal disorders.

Seeds contain major constituents like carbohydrates, proteins, lipids, fibers, vitamins, and minerals, nitrogen compounds which can be categorized under non-volatile and volatile constituents, alkaloids, chymotrypsin inhibitors and flavonoids, trypsin, anti-inflammatory steroidal saponin glycosides, spirostanol saponins, furostanol steroidal saponins, seventeen amino acids, flavone C-glycosides and seven of them being essential amino acids. The seeds are used as condiment and carminative, for rheumatism, stomach ache, wound dressing, leprosy, and have revealed uterine stimulant activity. Fenugreek seeds contain 45% dietary fiber that reduces glucose and cholesterol absorption after a meal and regulate cholesterol production in liver. Also contains 32% are insoluble fibers and 13% are soluble fibers. The aqueous extract of

Trigonella leaves given either orally or intraperitoneally possesses a hypoglycaemic effect.

Seed significantly lowered blood glucose, TGs, TC of diabetic animals and in normal mice, and further developed cancer prevention agent status. Adding of 15 g powdered fenugreek seeds drenched in water to intake significantly decreased postprandial glucose levels. The chemical components of fenugreek possessing anti-cancer activity are phytoestrogens and saponins. Saponins specifically repress cell division in cancer cells and furthermore can enact apoptotic programs which can prompt modified cell demise. Fenugreek might influence uterine contractions and be unsafe for women with hormone-sensitive cancers. Fenugreek is probable undependable for use during pregnancy as it may have abortifacient impacts.

The *T. foenum-graecum* cold water extract, well-known as fenugreek tea, has been traditionally used against respiratory infections (bronchitis and pneumonia), and since it stimulates the body during illness, the herb has also been used to decrease fever, when taken with lemon and honey. Apart from the traditional medicinal uses, fenugreek is found to have many pharmacological properties such as anti-oxidant, anti-diabetic, anti-carcinogenic, anti-nociceptive, anti-inflammatory, and hypocholesterolemic. The plant has also been employed against diseases such as bronchitis, diabetes, sore throat, wound, skin irritation, fever, swollen glands, and ulcers.

Due to its therapeutic value, the extracts/powders from therapeutic parts of fenugreek have been viably used in food and drug industries. Although it is a aware spice that has been added in the human foods, literature also provide us the use of this natural tonic to cure several types of lifestyle-related disorders such as hypercholesterolemia, cardiovascular diseases, cancer, hyperglycemia, liver ailments and sexual disorders such as testosterone-deficiency syndrome. Fenugreek is also considered as a rich source of dietary fibre and other significant nutrients needed for proper growth and development. Fenugreek has been extensively used as a taste enhancer in several traditional cuisines. It has also been used as an emulsifier and stabilizer in various kinds of food products.

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