Fenugreek

Latin Name: Trigonella foenuum-graecum

MUCUS; LUNGS; Diabetes; Lactation

Use SEEDS

Native to Mediterranean Area and West Asia; Naturalized in Southern Europe, Africa and India

HISTORY

- 1) 1500 BC: on Egyptian Papyri: Induce CHILDBIRTH
- 2) Hippocrates, the Greek Physician, spoke of it
- 3) 11th Century, Sung Dynasty: Introduced to China: Edema of legs; "coldness in lower abdomen"
- 4) 1875 America in Lydia E. Pinkham's famous treatment for "female complaints" (Menstrual; Menopause dryness)

QUALITIES

- 1) NUTRIENTS: VITAMINS A; B1; B2; B3; B5; B6; B9; B12; Choline; D
 - MINERALS: Iron; Calcium; Phosphates (Phosphorus)
 - OTHER: Mucilage (about 28%); Lecithin; Tannins: Volatile Oils; Bitter; Steroidal Saponins; Amino Acids; Trigonelline

- STUDY REVIEW: Trigonelline, (major alkaloid of fenugreek), has revealed hypoglycemic, hypolipidemic, neuroprotective, antimigraine, sedative, memoryimproving, antibacterial, antiviral, anti-tumor activities, & it has also shown to reduce diabetic auditory neuropathy & platelet aggregation. (Zhou 2012)

2) MUCUS; ANTI-INFLAMMATION: Softens and dissolves hardened mucous masses; expels mucus and phlegm

- LUNGS (Soothes Mucous Membranes); Lung infections; Respiratory Irritation; Bronchial tubes; Gargle for sore throats (thins mucus; Allergies

- DIGESION: Stimulates Appetite; Lubricates Intestines; Coats Ulcers; Soothes mucous membranes in GI Tract; Inflamed Stomach and Intestines; Increases Bile; Expels toxic wastes and mucus through digestive tract

3) Diabetes; Hypoglycemia; Normalizes Blood Sugar Levels; Reduces Glucose

Absorption; Lecithin (helps dissolve cholesterol; lower blood lipids); Atherosclerosis - STUDY (diabetes and cholesterol): "...in insulin-dependent (Type I) diabetic patients. Isocaloric diets, the fenugreek diet significantly reduced fasting blood sugar and improved the glucose tolerance test. There was a 54 per cent reduction in 24-h urinary glucose excretion. Serum total cholesterol, LDL and VLDL cholesterol and triglycerides were also significantly reduced." (Sharma 1990)

4) Diuretic; Expels accumulated uric acid waste through lymphatic system; Gout

5) WOMEN: Induces Milk Production in mothers

- STUDY (Galactagogue): "...1) Measured breast milk volume of mothers who received galactagogue tea was significantly higher, 2) Infants maximum weight loss was significantly lower, and 3) Infants regained their birth weight earlier." Turkyılmaz 2011 - May stimulate Breast Development; Uterine Irritation; Vaginal Wash

- 6) Poultice (reduce inflammation): Abscesses; Boils; Wounds; Inflammations; Skin problems
- 7) OTHER
- Mild Antiseptic: Fevers
- Spermicidal (kills sperm) may help prevent pregnancies

Fenugreek References

Herb History and General Information

Blumenthal M, Goldberg A, Brinckmann J, eds., *Herbal Medicine Expanded Commission E Monographs.* Austin, TX: American Botanical Council; Newton, MA: Integrative Medicine Communications; 2000

Felter, Harvey Wickes, M.D., and John Uri Lloyd, Phr. M., Ph.D. *King's American Dispensatory;* 1898. See excerpts at <u>http://www.henriettes-herb.com</u> accessed July 22, 2014

Grieve, M. *A Modern Herbal, Vol I & II*. New York and London: Hafner Publishing Co.; 1967. See excerpts at <u>www.botanical.com</u> accessed July 22, 2014

Keith, Velma J. and Monteen Gordon. *The How To Herb Book*. Pleasant Grove, Utah: Mayfield Publications; 1996; p 31

Memorial Sloan Kettering Cancer Center. See <u>www.aboutherbs.com</u> accessed July 28, 2014

Ritchason, Jack, N.D. *The Little Herb Encyclopedia*. Pleasant Grove, Utah: Woodland Health Books; 1995; pp 85-86

<u>Studies</u>

Sharma RD, Raghuram TC, Rao NS. Effect of fenugreek seeds on blood glucose and serum lipids in type I diabetes. Eur J Clin Nutr. 1990 Apr;44(4):301-6. [PubMed]

Turkyılmaz C, Onal E, Hirfanoglu IM, Turan O, Koç E, Ergenekon E, Atalay Y. The effect of galactagogue herbal tea on breast milk production and short-term catch-up of birth weight in the first week of life. J Altern Complement Med. 2011 Feb;17(2):139-42. doi: 10.1089/acm.2010.0090. Epub 2011 Jan 24. [PubMed]

Zhou J, Chan L, Zhou S. Trigonelline: a plant alkaloid with therapeutic potential for diabetes and central nervous system disease. Curr Med Chem. 2012;19(21):3523-31. [PubMed]

Additional info on Studies:

GALACTAGOGUE

Maternal galactagogue herbal tea supplementation, containing fenugreek, in sixty-six (66) mother-infant pairs, seems to be useful for enhancing breast milk production and facilitating infant birth weight regain in early postnatal days. TurkyIlmaz 2011

From Abstract:

RESULTS: Maximum weight loss was significantly lower in infants in group 1 compared to both the placebo and control groups. Infants in group 1 regained their birth weight earlier than those in control and placebo groups. The mean measured breast milk volume of the mothers who received galactagogue tea was significantly higher than the placebo and control groups.

CONCLUSIONS: Maternal galactagogue herbal tea supplementation seems to be useful for enhancing breast milk production and facilitating infant birth weight regain in early postnatal days.

DIABETES and CHOLESTEROL

100 gm defatted fenugreek seed powder for 10 days to type I insulin dependent diabetics reduced fasting blood sugar, total cholesterol, LDL and VLDL, improved the glucose tolerance test and halved 24-h urinary glucose excretion Sharma 1990 From the Abstract:

The effect of fenugreek seeds was evaluated in insulin-dependent (Type I) diabetic patients. Isocaloric diets with and without fenugreek were each given randomly for 10 d. Defatted fenugreek seed powder (100 g), divided into two equal doses, was incorporated into the diet and served during lunch and dinner... The fenugreek diet significantly reduced fasting blood sugar and improved the glucose tolerance test. There was a 54 per cent reduction in 24-h urinary glucose excretion. Serum total cholesterol, LDL and VLDL cholesterol and triglycerides were also significantly reduced. The HDL cholesterol fraction, however, remained unchanged. These results indicate the usefulness of fenugreek seeds in the management of diabetes.

DIABETES, NERVE and other SYMPTOMS

A review on Trigonelline, a major alkaloid of fenugreek, has revealed hypoglycemic, hypolipidemic, neuroprotective, antimigraine, sedative, memory-improving, antibacterial,

antiviral, anti-tumor activities, & it has also shown to reduce diabetic auditory neuropathy & platelet aggregation. Zhou 2012

From the Abstract:

There is evidence that Trigonella foenum-graecum L. (fenugreek), a traditional Chinese herb, and its components are beneficial in the prevention and treatment of diabetes and central nervous system disease. The pharmacological activities of trigonelline, a major alkaloid component of fenugreek, have been more thoroughly evaluated than fenugreek's other components, especially with regard to diabetes and central nervous system disease. Trigonelline has hypoglycemic, hypolipidemic, neuroprotective, antimigraine, sedative, memory-improving, antibacterial, antiviral, and anti-tumor activities, and it has been shown to reduce diabetic auditory neuropathy and platelet aggregation. It acts by affecting β cell regeneration, insulin secretion, activities of enzymes related to glucose metabolism, reactive oxygen species, axonal extension, and neuron excitability. However, further study of trigonelline's pharmacological activities and exact mechanism is warranted, along with application of this knowledge to its clinical usage. This review aims to give readers a survey of the pharmacological effects of trigonelline, especially in diabetes, diabetic complications and central nervous system disease. In addition, because of its pharmacological value and low toxicity, the reported adverse effects of trigonelline in experimental animal models and humans are briefly reviewed, and the pharmacokinetics of trigonelline are also discussed.