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Evidence Package

Trigonella foenum-graecum (Fenugreek)

Table of Contents

Table 6a: Executive Summary of Therapeutic Indications

Indication identifier	System targeted	Therapeutic indication	Required dosage	Specific/ Non-specific
TRIGONELLA1	General health or body parts	• Maintain/support general health and wellbeing	6 g/day DHE	Non-specific
TRIGONELLA2	Gastrointestinal system	• Traditionally used in Western herbal medicine to decrease/reduce/relieve symptoms of indigestion/dyspepsia • Traditionally used in Western herbal medicine to relieve digestive discomfort • Traditionally used in Chinese medicine to relieve digestive discomfort • Traditionally used in Western herbal medicine to help decrease/reduce/relieve symptoms of mild gastritis • Traditionally used in Western herbal medicine to maintain/support gastrointestinal system health • Traditionally used in Western herbal medicine to maintain/support healthy appetite	6 g/day DHE	Non-specific
TRIGONELLA3	Respiratory system	• Traditionally used in Western herbal medicine as an expectorant/clear respiratory tract mucous	6 g/day DHE	Non-specific
TRIGONELLA4	Reproductive system	• Traditionally used in Western herbal medicine to maintain/support breast milk production/lactation • Traditionally used in Chinese medicine to maintain/support healthy sexual function	6 g/day DHE	Non-specific

Table 6b: Evidence Summary for Scientific Indications

INDICATION 1						
Indication	**Evidence reference details**	**Ingredient**	**Dosage**	**Patient population**	**Summary of findings**	**Balance of evidence**
		Plant/animal part and preparation	Daily dosage, frequency & method	Subject, characteristics, health condition, ages, gender, ethnicity	Include enough information to demonstrate relevance and study outcomes. Any justifications from table 4d of Checklist 4 should be included here.	'Primary supporting', 'Secondary supporting'

• Maintain/support general health and wellbeing	Health Canada Monographs, Health Canada, 2024	*Trigonella foenum-graecum* seed	Methods of preparation: Dry, Powder, Non-Standardised Extracts (Dry extract, Tincture, Fluid Extract, Decoction, Infusion) 2 - 30 grams of dried seeds, per day	NA	(Traditionally) used in Herbal Medicine to help stimulate the appetite. Traditionally) used in Herbal Medicine as a digestive tonic to aid digestion. (Traditionally) used in Herbal Medicine to help relieve dyspepsia and gastritis. Used in Herbal Medicine as a mild laxative. Traditionally used in Herbal Medicine as an expectorant to help relieve excess mucous of the upper respiratory passages (anticatarrhal). (Traditionally) used in Herbal Medicine as a nutritive tonic. (Traditionally) used in Herbal Medicine as a galactogogue/ lactogogue to help promote milk production/secretion. (Traditionally) used in Herbal Medicine as supportive therapy for the promotion of healthy glucose levels. Used in Herbal Medicine to help reduce elevated blood lipid levels (hyperlipidemia).	Primary supporting

	Botanical Council Integrative Medicine Communications (2000): *Trigonella foenum-graecum* Retrieved from Expanded commission E	*Trigonella foenum-graecum* Seed	Cut or crushed seed: 6 g per day; equivalent preparations. Fluid extract 1:1 (g/ml): 6 ml. Tincture 1:5 (g/ml): 30 ml.	NA	It has been used therapeutically for millennia in traditional Arabian, Greek, and Indian (Ayurvedic, Siddha, and Unani) medicines. Its use eventually spread eastward to China, where it was introduced into Chinese medicine during the Sung Dynasty in the eleventh century It is official in the present-day Chinese pharmacopeia for pain and 'coldness' in the lower abdomen, hernia, and weakness and edema of the legs caused by 'cold-damp'). Modern clinical studies have investigated its hypocholesterolemic and hypoglycemic actions in normal and diabetic humans. One study reported hypoglycemic activity in healthy individuals who ingested whole seed extracts. Improved plasma glucose and insulin responses and reduced 24-hour urinary glucose concentrations were reported after chronic ingestion for 21 days. In two diabetic insulin-dependent subjects, daily administration of 25 g fenugreek seed powder reduced fasting plasma-glucose profile, glycosuria, and daily insulin requirements (56 to 20 units) after eight weeks. Significant reductions in serum-cholesterol concentrations were also reported. A subsequent study investigated the lipid-	Primary supporting

					lowering activity of fenugreek seeds in 60 non-insulin dependent diabetic subjects. Isocaloric diets without and with fenugreek were given for seven days and 24 weeks, respectively. Ingestion of an experimental diet containing 25 g fenugreek seed powder daily resulted in a significant reduction of total cholesterol, low density and very low density lipoprotein cholesterol, and triglyceride levels. The effect on lipid levels was sustained and lasting. Because it also affects glucose and insulin levels, the authors concluded that it should be considered a useful dietary supplement for prevention of hyperlipidemia and atherosclerosis in diabetic subjects. In Germany, fenugreek seed is used internally as a component of cholagogue and gastrointestinal remedy compounds. In the United States, it is used similarly and also in traditional galactagogue preparations . The approved modern therapeutic applications for fenugreek seed are supportable based on its long history of use in well established systems of traditional medicine,	

					phytochemical investigations, in vitro and in vivo studies in animals, and some clinical studies. The Commission E reported secretolytic, hyperemic, and mild antiseptic activity. The British Herbal Pharmacopoeia reported its actions as demulcent and hypoglycemic. Fenugreek seeds are reported to have antidiabetic, blood cholesterol-lowering, and blood lipid-lowering actions. Hypoglycemic activity in healthy individuals has been reported for whole seed extracts. The Commission E approved internal use of fenugreek seed for loss of appetite. Traditionally, fenugreek is used internally to treat anorexia, dyspepsia, gastritis, and convalescence.	

	Barnes, J., Anderson, L., & Phillipson, D. (2007). Fenugreek. In Herbal Medicine (3rd ed., pp. 260-262). London: Pharmaceutical Press.	*Trigonella foenum-graecum* Seed	Seed 3–18 g or equivalent daily		Fenugreek seeds contain a high proportion of mucilaginous fibre, together with various other pharmacologically active compounds including steroidal and amine components. The majority of the traditional uses of fenugreek are probably attributable to the mucilage content. In addition, hypo-cholesterolaemic and hypoglycaemic actions have been documented for fenugreek in humans. **Herbal Use** Fenugreek is stated to possess mucilaginous demulcent, laxative, nutritive, expectorant and orexigenic properties. Traditionally, it has been used in the treatment of anorexia, dyspepsia, gastritis and convalescence.	Primary supporting

	World Health Organization 2007 *Trigonella* in WHO monographs on selected medicinal plants Volume 3. (pp. 338-348) WHO Press, Geneva	*Trigonella foenum-graecum* Seed Dried seeds, extracts, fluidextracts and tinctures	Internal use, cut or crushed seed, 6 g, or equivalent of preparations;		**Medicinal uses** **Uses supported by clinical data** As an adjunct for the management of hypercholesterolaemia, and hyperglycaemia in cases of diabetes mellitus. Prevention and treatment of mountain sickness. **Uses described in pharmacopoeias and well established documents** Internally for loss of appetite, and externally as a poultice for local inflammations. Treatment of pain, and weakness and oedema of the legs. **Uses described in traditional medicine** As an aphrodisiac, carminative, diuretic, emmenagogue, emollient, galactagogue and tonic. Treatment of abdominal colic, bronchitis, diarrhoea, eczema, gout, indigestion, dropsy, fever, impotence, chronic cough, liver disorders, wounds and the common cold.	Primary supporting

	Fleming, T. (2000). *Fenugreek*. In *PDR For Herbal Medicines* (4th Ed., pp. 304-305. Montvale, NJ: Medical Economics Company, Inc	*Trigonella foenum-graecum* Seed	Whole and powdered drug is available in the form of teas. 6gm/day	NA	Approved by Commission E: • Loss of appetite • Inflammation of the skin **Unproven Uses:** Internal uses include upper respiratory catarrh, diabetes, and to increase milk production. **Chinese Medicine:** The drug is used to treat cold pain in the lower abdomen, impotence, and hernia (said to be due to cold 'chi'). **Indian Medicine:** The drug is used for fever, vomiting, anorexia, coughs, bronchitis, and colitis.	Primary supporting

	Chen, J.K. & Chen, T.T. (2004) *Semen Trigonellae* in Chinese Medical Herbology and Pharmacology (pp xx-xx) Art of Medicine Press, CA	*Trigonella foenum-graecum* fenugreek seed	3 to 10 grams in decoction.	NA	Therapeutic actions Abdominal coldness and pain, hernial pain: Treats Kidney and Spleen yang deficiencies with symptoms such as abdominal coldness, fullness and bloating or hypochondriac pain. Hernial pain and cold sensations of the scrotum are the result of lack of warmth in the Liver channel. Kidney yang deficiency with coldness, characterized by abdominal and hypochondriac fullness and pain. **Dispels Damp-Cold and Relieves Pain** Leg qi due to damp-cold: Pain and cold sensations in the knees and feet are indications of cold-damp accumulation in the lower extremities, caused by Kidney yang deficiency and the inability to circulate qi and blood to the local area.	Primary supporting

	Zhang-fu C., De-xian J. & Bare J. (2011) Semen Trigonellae in Chinese Materia (International Standard Library of Chinese Medicine Medica) (pp 577-578), PMPH-USA	*Trigonella foenum-graecum* seeds	3-10 g in decoction, or made into pills or powder.		**Clinical applications** For menstrual cold pain. For testicular cold pain or abdominal colic cold pain. For foot edema and ulcers in the pattern of cold dampness, and cold pain in the feet and knees. For impotence, spontaneous seminal emission and premature ejaculation, it can warm the kidney and assist yang. For insufficient life gate fire and kidney yang deficiency, marked by impotence, male infertility, spontaneous seminal emission and premature ejaculation. It shows effects of anti-fertility, anti-androgen, protecting the kidney, strengthening the heart, lowering blood sugar and blood pressure, diuresis, paralyzing the skeletal muscles and anti-tumor. It also relieves spasms of the gastrointestinal smooth muscles and relieves pain. β-sitosterol shows effects of relieving cough and expelling phlegm.	Primary supporting

	Bensky, Clavey, Stoger (2004) Semen Trigonellae in Chinese Herbal Materia Medica (3rd edition pp. 781-782) Eastland Press, Seattle	*Trigonella foenum-graecum* fenugreek seed,	4.5-9g	NA	**Actions and Indications** Warms the Kidneys, disperses dampness and cold, and alleviates pain: for patterns of Kidney yang deficiency accompanied by accumulation of cold or stagnant qi. Manifestations include abdominal or flank distention and pain or bulging disorders.	Secondary supporting

	Steels, Rao, A., & Vitetta, L. (2011). Physiological Aspects of Male Libido Enhanced by Standardized Trigonella foenum-graecum Extract and Mineral Formulation. Phytotherapy Research, 25(9), 1294–1300. https://doi.org/10.1002/ptr.3360	Trigonella foenum-graecum extract – Testofen plus minerals	Intervention group 2 x 300 mg Trigonella foenum-graecum extract magnesium17 mg, elemental zinc15 mg and pyridoxine 5mg Placebo 2 tablets with same look and excipients	Healthy Australian males 25–52 years of age interested in increasing libido	Aim: study was designed to evaluate the effects of a formulation containing the Testofen brand of *Trigonella foenum-graecum* extract combined with magnesium, zinc and pyridoxine on healthy males with low libido without sexual dysfunction. Methods **Inclusion** ● Healthy ● Stable sexual relationship for a minimum of 6 month and anticipating an ongoing stable relationship for the next 6 months. **Exclusion** ● Any physical disability that could have potentially limited sexual function, receiving any treatment/therapy for any sexual disorder during the past 6 months ● Prescribed anticoagulants, prescribed levodopa or calcipotriene for psoriasis, ● Diagnosed with hypertension and	Secondary supporting

					prescribed antihypertensive medications, diagnosed severe renal and/or hepatic insufficiency, genital anatomical deformities, uncontrolled diabetes mellitus, history of spinal cord injury, uncontrolled psychiatric disorder and abnormal secondary sexual characteristics. ● Diagnosed prostatic cancer or benign hypertrophy, ● History of genital surgery, current or history of chronic alcohol ● and/or drug abuse ● Diagnosed chickpea allergy ● Participation in any other clinical trial during the past 30 days. **Randomization** Randomization of the active treatment and placebo was performed using random allocation software. Randomization was based on a total of 60 subjects, randomly allocated into two arms of equal numbers of subjects (n=30 for each group).	

					Outcomes The primary outcome was efficacy of the treatment using the selfreport version of the Derogatis interview for sexual functioning-self report - DISF-SR (males).The DISF-SR consists of four domains: sexual cognition/fantasy (SC), sexual arousal (SA), sexual behaviour/experiences (SB) and orgasm (O). Completed at baseline, week 3 and week 6. The hormone profile was also collected; FBC and PSA (at baseline only) and serum testosterone and serum prolactin at baseline and 6 weeks. A secondary outcome was a quality of life (QOL) assessment, on a 5-point satisfaction scale, taken at baseline and at 6 weeks, rating the participants' satisfaction with libido, performance, muscle, strength, energy, and stamina, mood and sleep. Results 54 men completed the study, 27 per arm. Aged 25- 52 years, mean 41.3 years. **DISF-SR** There were statistically significant increases in Total DISF-SR score for	

					active intervention subjects and statistically significant interactions at both the 3 weeks (67.59 to 75.67; p<0.01) and 6 week time-points (67.59 to 82.48; p<0.01). There was a statistically significant decrease in Total DISF-SR score for placebo subjects at the 6 week time-point (72.93 to 66.81; p<0.01). **QoL** General Quality of Life: The participants additionally completed a 5 point Likert scale of improvement at completion of the trial. These results indicate that majority of the active group felt improvements in libido (81.5%; 22 of 27), recovery time (66.7%; 18 of 27) and quality of sexual performance (63.0%;17 of 27) as a result of receiving the active treatment. In addition, the majority of active treatment subjects also felt there was improvement in general energy (81.5%; 22 of 27) and wellbeing (55.6%; 15 of 27). Little change in mood and sleep in either group. There was no improvement in any of the questions in the placebo group. **Hormones**	

					The average serum testosterone levels did not change during the study, but remained within normal range. **Safety** No adverse events – minor digestive discomfort when taking active on empty stomach. Conclusion Notes that participants were mainly sedentary – not all impacts on hormone level and sexual function were controlled for. Authors conclude that: *Trigonella foenum-graecum* has potential in balancing hormones and, in particular, is a well tolerated naturally derived product to use to support libido in healthy males. *Quality assessed JBI RCT checklist* *Low to moderate* *No sample size calculation, but discussion of appropriate use of the questionnaire was good. No direct comparison of the changes in the placebo group compared to baseline and the changes in the active group compared to baseline.*	

	Mansoori, Hosseini, S., Zilaee, M., Hormoznejad, R., & Fathi, M. (2020). Effect of fenugreek extract supplement on testosterone levels in male: A meta-analysis of clinical trials. Phytotherapy Research, 34(7), 1550–1555. https://doi.org/10.1002/ptr.6627	*Trigonella foenum-graecum* extracts		4 trials – one each from, Australia and India. Two from the USA.	Aim to investigate and analyze results of RCTs investigating the effect of ethanolic extract of fenugreek seeds on the testosterone level in males. Methods The meta-analysis has been registered in the International Prospective Register Of Systematic Review (PROSPERO number: CRD42019122265). **Search strategy** PubMed, Scopus databases, Cochrane Library, Web of Science, and Google Scholar were searched and relevant results were manually searched. The search terms were fenugreek ("fenugreek" OR "trigonella") AND experimental study design ("trial" OR "clinical trial" OR "intervention"), AND testosterone ("Testosterone" OR "total testosterone" OR "sex hormone" OR "libido" OR "sperm"), AND ("resistance training" OR "sport") **Inclusion** ● RCTs on the efficacy of fenugreek extract supplementation on total testosterone levels	Secondary supporting

					• fenugreek extract at any dosage with placebo or no intervention group • published in English • healthy male subjects more than 18 years old. **Exclusion criteria** • Studies without randomization or with no control group studies • Combinations of fenugreek extract with other complementary therapies • short duration of study (<4 weeks); • studies that did not report testosterone levels Two reviewers checked results for relevance based on title and abstract. **Data extraction** Two reviewers (MF and AM) independently extracted the suitable data by using a standardized data collection **Quality assessment** Two reviewers (MF and AM) assessed the quality of the evidences using the Cochrane risk	

					of bias assessment tool, independently. **Statistical analysis** The effect of fenugreek extract supplement on testosterone levels was calculated by the weighted mean difference (WMD) with associated 95% confidence intervals. The heterogeneity among studies was investigated by $\chi 2$ test. Fixed effect model was performed when p > .1 and I2 < 50% and random effect model was performed when p < .1 or I2 ≥ 50% on the contrary. P values <.05 with 95% confidence interval were considered statistically significant for the statistic test. Results 29 studies were identified after exclusion criteria were applied and duplicates excluded, 4 trials remained. Total testosterone	

					In comparison with placebo group, the mean total testosterone levels in the subjects receiving fenugreek extract was significantly higher (WMD = 0.85 95% CI [0.10, 1.60]; p = .026. There was heterogeneity between the trials (Q = 16.28; df = 3; p = .001; I2 = 81.6%). Limitations – small sample size meant there was a lack of relevant data on which to perform any sub-group analysis. Conclusions The authors concluded that results from clinical trials suggest that fenugreek extract supplement has an effect on serum total testosterone levels in males. Further studies with bigger samples and longer duration are required to substantiate the findings. *Quality assessed by JBI Critical Appraisal for SR MA* *Low - Moderate* *The research question did not mention free testosterone, only total testosterone, a question which is not likely to reveal anything really clinically useful. Possibly indicated by the mention of small sample size and inability to do subgroup*	

					analysis. The paper would have been better if this was clearly expressed. No clear discussion of the differences in the fenugreek extracts which include both Furosap and Testofen and a glycoside fraction.	

	Khodamoradi, Khosropanah, M. H., Ayati, Z., Chang, D., Nasli-Esfahani, E., Ayati, M. H., & Namazi, N. (2020). The Effects of Fenugreek on Cardiometabolic Risk Factors in Adults: A Systematic Review and Meta-analysis. Complementary Therapies in Medicine, 52, 102416–102416. https://doi.org/10.1016/j.ctim.2020.102416	*Trigonella foenum-graecum* seed extracts Nine studies used fenugreek seed in powder form and four studies used hydroalcoholi cextracts of fenugreek (1 g/day in four studies)		The mean age of participants were between 25 to 50 years old. Nine studies included both genders, only men (n = 3) only women (n= 2) 10 studies enrolled patients with T2DM Obesity (n = 1) Polycystic ovary syndrome (n = 1) Dyslipidemia (n= 1) Healthy volunteers (n =1),	Aim: to assess the effectiveness and safety of fenugreek on key cardiometabolic risk factors in adult populations Methods Designed in accordance to the Preferred Reporting Items of Systematic Reviews and Meta-Analysis (PRISMA) statement guideline. The study protocol was registered at the International Prospective Register of Systematic Reviews (PROSPERO): CRD42019149968 **Search** PubMed/Medline, Scopus,Embase and Cochrane Library were searched by two independent investigators from 2000 to 31 July 2019 to identify studies published in English peer-reviewed journals. **Inclusion** ● Clinical trials ● Adults ● One or more cardiometabolic risk factor measured such as anthropometric indices (weight, body mass index (BMI), waist circumference (WC)), glycemic indices	Secondary supporting

					(fasting blood sugar (FBS), glucose, 2 h postprandial (2 hPP), Hemoglobin A1C (HbA1c), Insulin resistance (HOMAIR), lipid profile (Triglyceride (TG), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), atherogenic indices (LDL-C/HDL-C, TC/HDL-C, etc.), or blood pressure (systolic and diastolic blood pressure) following supplementationwith fenugreek seed preparations ● Control group (conventional treatment or placebo). Exclusion ● Other study designs ● Enrolled pregnant, lactating women, athletes or children, ● Used fenugreek combination with other herbs or components, in breads/cake	

					• Other part of fenugreek except seed such as leaf • Any papers in which a component of fenugreek was • eliminated (a modified form) were not included. • When only one of bioactive components of fenugreek was examined • Grey literatures (conference abstracts, theses, interviews, websites, etc). **Data extraction** Study characteristics from full-text articles identified were extracted by two independent reviewers (K.KH and Z.A) based on a pre-defined extraction form. Any discrepancies were resolved with a third reviewer. **Quality assessment** Methodology quality of the eligible studies was examined using Jadad Scale by 2 independent reviewers. Data synthesis	

					The effects of fenugreek seed compared to control were quantitatively assessed on the following outcome measures: (i) FBS (mg/dL), (ii)2 hPP (mg/dL), (iii) HbA1c (%), (iv) BMI (kg/m2), (v) TC (mg/dL), (vi)TG (mg/dL), (vii) LDL-C (mg/dL), and (viii) HDL-C (mg/dL). Others lacked sufficient data. Pooled effect sizes were reported as Weighted Mean Differences (WMDs) and 95% confidence intervals (CIs). Trials were pooled using a random effect model with DerSimonian and Laird method. Heterogeneity was examined by the I2 index. I2 greater than 50% was considered as high heterogeneity. Potential publication bias was identified using Egger's regression test. If a publication bias was existed, "trim and fill" method was used to correct the pooled effect sizes. Results **Study selection** Initial screening based on titles and abstracts was performed and 30 publications were considered potentially relevant. Eventually 14	

					studies were included, 12 made it into the quantitative synthesis. **Studies**: see columns 3-5. **Fasting blood sugar (FBS)** The pooled effect estimates of 8 studies showed that fenugreek seed compared to placebo can reduce FBS by 12.94 mg/dL (95%CI: -21.39, -4.49). But there was considerable heterogeneity and when outlier studies were removed there were no significant changes. **Glucose, 2 h postprandial (2 hPP)** No significant reduction found, but there was a positive relationship between dose and reductions in 2 hpp. **Hemoglobin A1C (HbA1c)** Based on the pooled estimates obtained from 5 studies, fenugreek seed can reduce HbA1c by -0.58% (95% CI:-0.99, -0.17%) compared to control group . Between-study heterogeneity for HbA1c was low (I2:0%, p heterogeneity= 0.61).	

					Lipid Profiles: Total Cholesterol TC, total triglyerides, HDL-C 5 trials examined the impact of fenugreek vs. placebo on TC concentrations. Fenugreek can reduce TC significantly compared to common treatment, but a meta – analysis on high quality studies did not find any significant changes. Triglycerides and HDL-C were not significantly altered. **LDL-C:** Based on the pooled estimates of 4 studies fenugreek can significantly reduce LDL-C concentrations vs. control treatment after excluding a low quality study, we found a reduction in LDL-C as well (WMD:-11.11 mg/dL, 95% CI: -20.32, -1.90; I2:1.41%, p heterogeneity=0.36) Conclusions Based on the current systematic review and meta-analysis, fenugreek seed as an adjutant therapy may reduce serum levels of FBS, LDLC and HbA1c. Taking into account the high heterogeneity in glycemic status, findings must be interpreted with great caution. More placebo controlled clinical trials with larger	

					sample size are warranted to further assess the effectiveness of fenugreek as a complementary therapy for both diabetic and non-diabetic patients to control cardio-metabolic risk factors. *Quality assessed using JBI Critical Appraisal* *Good quality SR &MA, but no subgroup analysis to separate ethanolic extracts from powders.*	

	Steels E., Steele, M. L., Harold, M., & Coulson, S. (2017). Efficacy of a Proprietary Trigonella foenum-graecum L. De-Husked Seed Extract in Reducing Menopausal Symptoms in Otherwise Healthy Women: A Double-Blind, Randomized, Placebo-Controlled Study. Phytotherapy Research, 31(9), 1316–1322. https://doi.org/10.1002/ptr.5856	*T. foenum-graecum* de-husked seed extract, Libifem®, [dry conc. 33:1, equiv 9.9-g dry herb, standardized for a minimum of 50% content of furostanol saponins] Gencor Pacific, Hong Kong.	Duration 12 weeks Intervention group n=54 600 mg/day in 2 capsules Placebo n=50 2 identical looking capsules	Healthy women with menopausal symptoms-Australia	Aim The study aimed to assess efficacy of a standardized *T. foenum-graecum* de-husked seed extract in reducing menopausal symptoms in healthy aging women, Methods **Design** A double blind randomized placebo controlled study. Randomization was performed independently of the investigators using Random Allocation Software. **Inclusion** ● Hot flushes and/or night sweats scoring greater than mild on the Menopause-Specific Quality of Life (MENQOL) questionnaire. **Exclusion** ● Taking hormone therapies or herbal ● medicines for menopausal symptoms for at least 1 month prior ● History, presence or suspicion of estrogen-dependent neoplasia, neoplastic disease or	Secondary supporting

					treatment for any neoplastic disease within the previous 2 years; ● Total hysterectomy; ● Diagnosis or history (in the last 6 months) of thromboembolic disease; ● History of cerebrovascular accident, stroke or transient ischemia or a psychiatric disorder. ● Uncontrolled diabetes, high cholesterol or hypertension, ● Active substance abuse ● Unintended weight loss of more than 15% of body weight in the last 6 months ● BMI greater than 35, being ● Vegetarian and/or consuming soy products regularly **Outcomes** Primary outcome measure was Menopause-Specific Quality of Life (MENQOL) questionnaire, and a 7 day diary of frequency of hot flushes and night sweats recorded at baseline weeks 4, 8 and 12. and serum estradiol levels.	

					Secondary outcome measures included serum estradiol evels, full blood count, fasting blood glucose (FBG), serum electrolytes, liver function tests and serum total cholesterol, HDL-cholesterol and LDL-cholesterol. Blood parameters were measured at T0 and T12 weeks **Sample size** A minimum of 49 participants per group were required to achieve a statistical power of 80% on the basis of a 20% improvement in symptoms as measured by the total domain score of the MENQOL. Results **MENQOL** Baseline characteristics described as comparable. Total MENQOL scores were not statistically different between the active and placebo groups at baseline (17.8 ± 4.2 vs 17.5 ± 5.6, p = 0.8). A significant reduction in total MENQOL score was observed in the active treatment group (12.4 ± 4.0) compared with placebo (17.1 ± 5.5) over 12 weeks (p < 0.001). A multivariable model, adjusting for age, BMI category and estradiol level at baseline (± 42 pmol/L)	

					produced the same result ($p < 0.001$). The Vasomotor domain consisted of the three questions regarding women being bothered by 'day flushes', 'night sweats' and 'sweating'. All three individual questions were significantly reduced in the active treatment group compared with the placebo group by 12 weeks of the treatment ($p < 0.001$). In Psychosocial domain, the four questions each showed significant improvement compared to placebo group, as in the Sexual domain, $p<0.001$. Vasomotor symptoms. The mean number of daily combined hot flushes and night sweats (total) were similar between both groups at baseline. A gradual significant reduction of approximately 50% in total flushes was observed in the active treatment group ($p < 0.001$) by week 12 representing a reduction in both the day flushes ($p < 0.001$) and night sweats ($p < 0.001$). **Estradiol levels.** No significant difference in baseline levels between groups and there was no significant change from	

					baseline by week 12 in either group. **Safety** There were no significant changes in health markers and no intervention related adverse events. **Limitations** Small sample size, duration of the study and wide range of symptoms experienced. Conclusion The authors conclude that this study suggests that this proprietary *T. foenum-graecum* de-husked seed extract is an effective treatment for reducing vasomotor symptoms and associated menopausal symptoms in otherwise healthy women. *Quality assessed via JBI Critical Appraisal tool:* *Mod to high quality. Limitations identified by authors.*	

	GlobinMed, Global Information Hub on Integrated Medicine, 2022	*Trigonella foenum-graecum* seed	NA	NA	T. foenum-graecum has been used in Indian and North African cuisine. As a traditional medicine, there is a variety of claims relative to its use. It is widely considered as antidiabetic and anticholesterol herb. It is used as a tonic and appetite stimulant in North Africa. In India, it is used to treat various GIT disorders. It is also said to be galactogogue and uterine stimulant. **Clinical findings** **Hypoglycaemic activity** A study on cyclists showed that T. foenum-graecum extract increases insulin concentration and glycogen resynthesis after exercise. Various clinical trials of T. foenum-graecum showed improvement in glucose tolerance in healthy volunteers as well as in type 2 and type 1 diabetic patients. **Hypocholesterolemic activity** A clinical trial on hyperlipidemic non-diabetic patients whom diet was supplemented in defatted T. foenum-graecum showed significant reduction of serum total cholesterol, LDL and VLDL cholesterol and triglyceride levels, while HDL cholesterol levels were unchanged. In another trial, T. foenum-graecum did not affect the	Secondary supporting

					blood profile in healthy subjects, but significantly reduced the total cholesterol and triglyceride without affecting the HDL-cholesterol in patients with coronary artery disease. Similar results were obtained with germinated seeds, which are less bitter. Long lasting hypo-cholesterolemic activity was also demonstrated in diabetic subjects.	
	U.S. Department of Health and Human Services. (2022). Retrieved from National Institute of Health Office of Dietary Supplements website	*Trigonella foenum-graecum* Fenugreek seed	NA	NA	In North Africa, Asia, and southern Europe, fenugreek was traditionally used for diabetes and to increase milk supply in women who were breastfeeding. A small number of studies have suggested that fenugreek may help lower blood sugar levels in people with diabetes or prediabetes, but most of these studies were not of high quality.	Secondary supporting

	Braun, L., & Cohen, M. (2015). Fenugreek. In *Herbs & Natural Supplements. An evidence-based guide* (4th ed., pp. 309-314). Chatswood, NSW: Elsevier Australia.	*Trigonella foenum-graecum* Fenugreek Dried mature seeds	General dose range: liquid extract (1: 2): 2–6 mL/day. Diabetes: 50–100 g seed daily taken in divided doses with meals, or >1 g/day ethanolic seed extract.	NA	In ancient Egypt fenugreek was used as an aphrodisiac and, together with honey, for the treatment of rickets, diabetes, dyspepsia, rheumatism, anaemia and constipation. It has also been described in early Greek and Latin pharmacopoeias for hyperglycaemia and was used by Yemenite Jews for type 2 diabetes. In the United States, it has been used therapeutically since the 19th century for postmenopausal vaginal dryness and dysmenorrhea. **Clinical use** Fenugreek is one of the more validated herbal medicines for blood glucose lowering and has multiple mechanisms of relevance to the diabetic patient. **Dyspepsia and loss of appetite** Although controlled studies are unavailable, the increased activities of pancreatic and intestinal lipases seen in animal studies provide a theoretical basis for its use in dyspepsia. Commission E approved the internal use of fenugreek seed for loss of appetite. **Elevated serum lipids**	Secondary supporting

					Several clinical studies conducted in people with and without diabetes have identified significant lipid-lowering activity with different fenugreek preparations. **Diabetes** Fenugreek is a popular natural treatment used to aid blood sugar regulation in diabetes in numerous cultures, particularly Asia. A meta-analysis of various herbal medicines affecting HbA1C levels concluded that fenugreek supplements are effective in controlling glycaemic levels in people with type 2 diabetes. This was further confirmed in a 2014 meta-analysis which reviewed results from 10 clinical trials (n = 278). The meta-analysis concluded that ingestion of fenugreek seeds (1–100 g/day; median 25 g) for at least 1 week significantly changed fasting blood glucose by –0.96 mmol/L (95% confidence interval [CI] –1.52, –0.40; I2 = 80%; 10 trials), 2-h post-load glucose by –2.19 mmol/L (95% CI -3.19, -1.19; I2 = 71%; seven trials) and HbA1C by -0.85% (95% CI -1.49%, -0.22%; I2 = 0%; three trials)	

					compared with control interventions. Significant effects on fasting and 2-h glucose levels were only found for studies that administered medium or high doses of fenugreek seed powder (≥5 g) to people with diabetes and not in overweight people without established diabetes. The effect on fasting blood glucose appears to be dose-dependent, as no effects were seen for low doses (<5 g/day) and greater effects were seen with higher doses. The mean age of study participants in the 10 clinical studies reviewed by Neelakantan et al (2014) ranged from 22.0 to 54.4 years (median: 43.1 years) and most trials included participants with type 2 diabetes treated with diet or oral antidiabetic medication. A variety of different fenugreek preparations have been studied, including powdered fenugreek seeds, debitterised powdered fenugreek seeds (25–50 g twice daily) or hydroalcoholic seed extract (1 g/day) either in the form of capsules or as an ingredient of	

					unleavened bread. These were provided in equal doses 2–3 times daily. The effect is quite quick, as demonstrated in a study of people with type 2 diabetes (n = 166), which showed that 2-h post prandial plasma glucose levels were positively affected by fenugreek seed consumption. Trigonelline, a major alkaloid component of fenugreek, is one of the key constituents responsible for the effects seen in diabetes and has been shown to affect beta-cell regeneration, insulin secretion, activities of various enzymes related to glucose metabolism, reactive oxygen species, axonal extension and neuron excitability. The efficacy and safety of fenugreek in the treatment of patients with type 2 diabetes mellitus were investigated in 69 patients whose blood glucose levels were not well controlled by oral sulfonylureas. This 12-week trial demonstrated that combined treatment of fenugreek with sulfonylureas improved glycaemic control, further reduced blood glucose levels and ameliorated clinical symptoms in the treatment of type 2 diabetes. Fenugreek	

					treatment was also found to be safe. **Lipid lowering in diabetes** Studies investigating the effects of fenugreek seed and seed powder have demonstrated significant lipid-lowering activity in this population. Oral doses of 25 g fenugreek seed powder taken twice daily significantly reduced serum total cholesterol, triacylglyceride and LDL cholesterol in hypercholesteraemia according to a study of hypercholesterolaemic type 2 diabetic patients. Results were recorded at 3 weeks and 6 weeks. A placebo-controlled study using a lower dose of 2.5 g unaltered fenugreek seed twice daily over 3 months found that this was ineffective in type 1 diabetes but did have a lipid-lowering effect in patients with diabetes and coronary artery disease. In this population, total cholesterol and triglyceride levels were significantly reduced. Studies with defatted fenugreek seed (100 g/day) in patients with type 1 diabetes also identified significant reductions in total cholesterol, LDL and very-low-density lipoprotein cholesterol and triglyceride levels, but no changes	

					to HDL cholesterol under randomised conditions. Ethanolic extracts of fenugreek have also demonstrated good results. A 2001 double-blind, placebo-controlled study found that a dose of 1 g ethanolic extract of fenugreek was able to significantly decrease serum triglyceride levels and increase HDL cholesterol in mild to moderate type 2 diabetes mellitus. Previously, similar results were obtained with an ethanolic extract of defatted fenugreek seeds in vivo, which produced an 18–26% reduction in plasma cholesterol level. **Promoting lactation** Although fenugreek has been used traditionally for centuries as a galactogogue, to increase milk production and improve lactation, and is the most commonly used herbal galactogogue in published literature, there is only one valid clinical trial supporting its use. A double-blind randomised controlled trial involving 66 mother–infant pairs demonstrated that three cups of fenugreek herb tea per day were able to enhance breast milk production (measured on day 3 post-birth) and facilitate infant birth weight regain in the early postnatal days in exclusively breast-fed	

					infants compared to placebo. In contrast, another placebo-controlled study of mothers of premature newborns suggested that fenugreek had no effect on prolactin levels or on volume of breast milk. While little scientific research has been conducted to truly explore the effects of fenugreek in lactation, contemporary lactation consultants in the United States and Europe, midwives, herbalists and the general public continue to use it to increase milk supply when milk supply is low, with few side effects for mother or baby. **Externally — to reduce local inflammation** Commission E approves the external use of fenugreek as a poultice for local inflammation. **Other** In Ayurvedic and Unani systems of medicine, fenugreek is used to treat fever, epilepsy, paralysis, gout, dropsy, chronic cough and piles. In Morocco, fenugreek is used as a preventive treatment against the development of kidney stones. There are some tests in experimental models which provide support for this use. In Ayurveda the seeds are reported to have	

					nutritive properties and to stimulate digestive processes, and have been used to treat a range of gastrointestinal disorders. It is also used as a general tonic, mixed with milk and sugar, to promote lactation and to lower lipid and glucose levels. **Parkinson's disease** A double-blind study of 50 people with Parkinson's disease (diagnosis of over 6 months), showed that a fenugreek standardised extract (IBHB) reduced deterioration as measured by the Unified Parkinson's Disease Rating Scale. All participants were stabilised and taking L-dopa therapy together with IBHB 300 mg twice daily. IBHB had an excellent safety and tolerability profile and offers a novel use for fenugreek as integrative treatment with Parkinson's sufferers.	

	Gaby, A. (2017). Fenugreek. In *Nutritional Medicine* (2nd ed., pp. 950). Concord, NH: Fritz Perlberg Publishing.	Fenugreek *Trigonella foenum-graecum*	Tea – 3 cups of fenugreek tea /day or more	NA	Fenugreek tea. Fenugreek (Trigonella foenumgraecum) is commonly used to enhance breast milk production. Its effectiveness was confirmed in a double-blind trial. Sixty-six nursing mothers were randomly assigned to consume, in double-blind fashion, at least 3 cups per day of herbal tea containing fenugreek, placebo tea containing apple, or no tea (control). The duration of treatment was not clear, but was apparently 1 week, beginning immediately postpartum. Mean breast milk volume was significantly greater in the fenugreek group than in the other 2 groups ($p < 0.05$). Infants whose mothers received fenugreek tea regained their birth weight earlier than those in the other 2 groups ($p < 0.05$).	Secondary supporting

	Therapeutic Research Center. (2024). Fenugreek. Retrieved from Natural Medicines website.	*Trigonella foenum-graecum* seed	Fenugreek seed extract: 0.6-1.2 grams daily for up to 3 months Fenugreek seed powder: 5-10 grams daily for up to 3 years; One capsule of a fenugreek product (Libifem, Gencor Pacific Ltd.) contains 300 mg of an extract equivalent to 9.9 grams of dry fenugreek product and is standardized to 50% saponin glycosides.	NA	**Possibly effective** **Diabetes** Oral fenugreek seed seems to improve glycemic control in type 2 diabetes. Meta-analyses of 5-9 clinical trials in patients with type 2 diabetes show that taking fenugreek lowers fasting glucose by approximately 17-23 mg/dL, 2-hour postprandial glucose by 23 mg/dL, and glycated hemoglobin (HbA1c) by 1.16% when compared with placebo. The most effective doses and formulations seem to include powdered seed or debitterized seed powder 5-100 mg daily, taken as capsules or added to meals, for up to 3 years or seed hydroalcoholic extract about 1 gram daily for up to 2 months. Furthermore, most research shows that fenugreek seed lowers total cholesterol levels and triglycerides in patients with diabetes, but has inconsistent effects on low-density lipoprotein (LDL) cholesterol and high-density lipoprotein (HDL) cholesterol. Dysmenorrhea. Oral fenugreek seed might help to reduce menstrual pain. Clinical research in adults with moderate to severe dysmenorrhea shows that taking fenugreek seed	Secondary supporting

					powder 1800-2700 mg three times daily for the first 3 days of menstruation followed by 900 mg three times daily for the remainder of two menstrual cycles reduces pain severity when compared with placebo. Patients taking fenugreek seed powder showed a reduction in pain severity of 3.22, compared with a reduction of only 0.18 in the placebo group. Sexual arousal. Oral fenugreek seed might help to improve sexual arousal. Clinical research shows that taking a specific fenugreek seed extract (Testofen, Gencor Pacific Ltd) 600 mg daily for 12 weeks increases sexual function by 15% over baseline, compared with no change in the placebo group; the main benefits were in sexual arousal and drive. Morning erection and sexual frequency also improve by 2- to 3-fold. Another clinical study in healthy males shows that taking the same fenugreek seed extract 600 mg daily in combination with magnesium 34 mg, zinc 30 mg, and vitamin B6 10 mg for 6 weeks, improves a composite of symptoms such as sexual cognition, sexual arousal, sexual behavior, and orgasm. The overall improvement in the composite score was 23%,	

					compared with a worsening in the placebo group. Sexual dysfunction. Oral fenugreek might help to improve sexual dysfunction. Clinical research shows that taking a specific fenugreek seed extract (Libifem, Gencor Pacific Ltd.) 300 mg twice daily for two menstrual cycles improves sexual function in healthy pre-menopausal adults with low sex drive. In one clinical trial, overall improvement based on a composite of symptoms was 26% in the fenugreek group, compared with only 2% in the placebo group. Individual scores for sexual cognition, arousal, behavior, drive, and orgasm were all improved. Patients taking fenugreek also had an increased frequency of sexual activity from 1-2 times per month to once per week, compared to no change in the placebo group.	

	Patel, K., & Lopez, G. (2022). Fenugreek. Retrieved from Examine.com . June 2022	*Trigonella foenum-graecum*, Fenugreek Seed	For lactation: 500-1000mg of fenugreek. An oral dose of 2-5g of fenugreek seeds can help blood glucose levels for diabetics.		Trigonella foenum-graecum has traditionally been used to enhance libido and masculinity. Fenugreek has also been used to alleviate blood sugar metabolism problems like diabetes. Fenugreek tea has also been recommended to new mothers to enhance milk production. Though evidence for this claim is limited, it seems to be accurate. One human study has shown that fenugreek supplementation can also enhance testosterone, but since additional evidence shows conflicting results, further evidence is needed to confirm this effect. **Milk production** Increases in milk production have been noted in some lactating women given fenugreek. In some trials, there is a significant degree of improvement, with a near doubling of milk production, but other trials find little to no improvement in milk production. **Blood glucose** Appears to result in a decrease of blood glucose following ingestion of fenugreek. Study was conducted in newly diagnosed type II diabetics with	Secondary supporting

					high blood glucose values, who consumed 1g fenugreek extract daily. Increases in insulin sensitivity (as assessed by HOMA) and decreases in insulin and glucose AUC were noted, and an increase in HDL-C and a decrease in triglycerides were noted. Fenugreek's most well-known compound is 4-hydroxyisoleucine, which works to normalize glucose metabolism. The other compounds, called trigonelline, galactomannan, and trigoneosides, also work together to provide benefits for blood sugar.	

	Association of Naturopathic Practitioners. (2022). Fenugreek Retrieved from: Herb Drug Nutrient.	*Trigonella foenum-graecum* Seed	Dry Herb: 2–4 g per day Liquid extract: 15–30 ml per week (1:2)		**Actions:** • Demulcent • Emollient • Galactagogue • Hypoglycaemic • Laxative • Nutritive • Wound healing / Vulnerary **BHP Indications:** Dyspepsia, anorexia, gastritis, convalescence. Specific indications: general debility and anorexia of convalescence WHO: As an adjunct for the management of hypercholesterolaemia, and hyperglycaemia in cases of diabetes mellitus. Prevention and treatment of mountain sickness. Internally for loss of appetite. Treatment of pain, and weakness and oedema of the legs ESCOP: Internal use: Adjuvant therapy in diabetes mellitus, anorexia, as an adjunct to a low fat diet in the treatment of mild to moderate hypercholesterolaemia.	Secondary supporting

					Commission E: Loss of appetite Indications: ● Anorexia ● Convalescence ● Diabetes mellitus ● Dyspepsia ● Gastritis	
	Bradley, P. (2006). Fenugreek. In *British Herbal Compendium* (Volume 2 pp. 154-157). British Herbal Medicine Association	*Trigonella foenum-graecum* Seed	6 g crushed seeds Adjuvant in NIDDM 25 g powdered seeds or equivalent preparations		**Therapeutics** **Actions** Hypoglyceamic, hypolipideamic, hypocholesteroleamic, appetite stimulant, nutritive, demulcent mild laxative, uterine stimulant, probably oxytocic Reputed to promote milk flow in nursing mothers. **Indications** As an adjuvant in the treatment of NIDDM **Other uses, based on experience and tradition.** General debility and loss of appetite, especially in convalescence, dyspepsia and gastritis.	Secondary supporting

	Scientific Committee. (2015). Trigonella in *British Herbal Pharmacopoeia 1983* (pp. 216-217). British Herbal Medicine Association	*Trigonella foenum-graecum* Seed	NA	NA	**Actions** Mucilaginous demulcent. Laxative. Nutritive. Expectorant. Orexigenic. **Indications** Dyspepsia. Anorexia. Gastritis. Convalescence.	Secondary supporting

	Duke, J. (1929) *Trigonella foenum-graecum* In Handbook of Medicinal Herbs (2nd Ed., pp. 296-297). CRC Press.	*Trigonella foenum-graecum* Seed	1 tbsp mashed seed/8 oz water, up to 3 ×/day as gargle); 1–6 g seed 3 ×/day 5–90 g seed/day 0.25–0.5 cup seed 6–12 g dry seed 50 g powdered seed with 0.25 liter water 6.3 g/day 1 (620 mg) capsule 2–3 ×/day	NA	Indications Alactea; Allergy; Anemia Anorexia, Atherosclerosis; Catarrh; Childbirth; Cholecystosis ; Constipation; Colitis; Cough; Dermatosis; Diabetes; Dusgeuzia; Dysmenorrhea; Dyspepsia; Fatigue; Gastritis; Hay Fever ; High Blood Pressure; High Cholesterol; Hyperglycemia; Hyperlipidemia; Impotence; Neurasthenia;	Secondary supporting

	Premila M.S (2006) *Fenugreek* Ayurvedic Herbs A Clinical Guide to the Healing Plants of Traditional Indian Medicine (pp. 256) Routledge Taylor & Francis Group	*Trigonella foenum-graecum* Fenugreek seeds	25 g of fenugreek seeds/day is generally used in NIDDM patients to improve glucose tolerance and lipid levels	NA	The seeds are aromatic, bitter, carminative, tonic, and a galactagogue. Internally it is used for inflammation of the gastrointestinal tract, for diarrhea, and dysentery probably because of the mucilage present in the seeds. The seeds are a rich source of dietary fiber with 45-60 percent total carbohydrates, mostly as soluble fiber present as mucilage, 20-30 percent protein, and 10 percent of fixed oil. There are also several steroidal saponins in the seeds. Fenugreek seeds have been shown to have an antioxidant effect. The hypocholesterolemic activity has been reported by several authors. Fenugreek is considered to exert its antidiabetic effect in different ways—through its fiber content in a manner similar to guar gum both being rich in galactomannans, through inhibition of intestinal glucosidase and through insulin release by 4-hydroxyisoleucine. A number of small clinical trials have been conducted to evaluate the hypoglycemic activity of fenugreek. The hypoglycemic activity of fenugreek seeds and leaves was tested in normal subjects and diabetic patients. In an acute study on healthy volunteers, a single dose of various forms of	Secondary supporting

					fenugreek were tried out—25 g seeds, 5 g gum isolate, or 150 g leaves being given, the seeds being administered in four different forms—as whole seeds, defatted seeds, degummed seeds, and cooked seeds. Maximal reduction of blood glucose was shown by whole seeds. Therefore, in NIDDM patients 25 g of fenugreek seed powder in two divided doses was mixed with their usual diet for 21 days. There was significant reduction in blood glucose levels and insulin response. In addition, there was significant reduction ($p < 0.05$) in 24-hour urinary glucose output and in cholesterol levels. In type I diabetics,100 g of defatted fenugreek, given in divided doses at lunch and dinner for 10 days, significantly reduced fasting blood sugar, improved glucose tolerance, reduced 24-hour urinary glucose excretion by 54 percent, and also showed a significant hypolipidemic effect. A similar study in 15 NIDDM patients, who were fed randomly meals in cross-over design and incorporated with or without 100 g of defatted fenugreek seed powder, produced similar results. Also in type II diabetics, fed with 15 g of fenugreek seed powder soaked in water per day, there was	

					postprandial lowering of blood sugar level. In a cross-over study to determine whether the improved glucose tolerance was owing to the effect of fenugreek on the absorption or metabolism of glucose, the diet was either randomly incorporated with 25 g of fenugreek seed or left out in ten NIDDM patients as pretreatment for 15 days prior to intravenous glucose load. Results showed that the addition of fenugreek to the diet significantly reduced the area under the plasma glucose curve and increased glucose clearance, suggesting that improved peripheral glucose utilization contributes to improved glucose tolerance. Fenugreek also significantly increased molar insulin binding sites of erythrocytes. Studies have also been conducted to observe the hypolipidemic effect of fenugreek seeds in diabetic patients, who are known to be at risk of developing cardiovascular disease. An open long-term study was carried on 60 NIDDM patients to study the effect of fenugreek on lipid levels. There was an initial control period of 7 days followed by an experimental period of 24 weeks when patients consumed 25 g of fenugreek seed powder in two divided doses as soup in water	

					before lunch and dinner. The was a significant fall in total cholesterol, LDL, and VLDL cholesterol, and also in triglyceride levels.225 A double-blind placebo-controlled study was conducted in order to evaluate the effects of fenugreek on glycemic control and insulin resistance in newly diagnosed mild-to-moderate NIDDM patients. In the treatment group, 12 patients received 1 g·day1 of aqueous alcoholic extract of fenugreek seeds, whereas the control group of 13 patients received placebo capsules for 2 months along with diet and exercise. Patients were randomly assigned either to treatment group or to placebo group. Both groups were checked to make sure they had similar baseline values. At the end of 2 months both the fasting and after meal blood sugar levels were comparable in the two groups. However, area under curve of blood glucose and insulin was significantly ($p < 0.001$) lower in the treatment group. There was also a decrease in insulin resistance and a significant decrease in triglyceride and Clinical studies have demonstrated the beneficial effect of fenugreek	

					seeds in hyperlipidemic patients and in diabetic patients. In an open exploratory trial 10 hyperlipidemic patients were given isocaloric diets with or without the addition of 100 g of debitterized fenugreek powder for 20 days. Patients receiving a diet with added fenugreek showed significant reduction in total serum cholesterol, LDL, VDL cholesterol, and triglyceride levels. HDL cholesterol did not change but ratios with respect to total cholesterol and LDL and VLDL showed a favorable change. In patients with mild to moderate hypercholesterolemia, fenugreek seeds were able to reduce cholesterol levels. In another open trial, 20 hypercholesterolemic patients, ages 50-65 years, were given germinated fenugreek seeds powder in packets of 12.5 g and 18 g to incorporate daily one packet into any food of their choice for 1 month. It was found that fasting blood levels taken one day before the start of the trial and after the treatment period of 1 month showed significant reduction of total cholesterol and LDL levels at the 18 g dose level, although there was a hypolipidemic effect at both levels. No significant change in HDL, VLDL, and triglyceride levels	

					was seen in any of the patients. Germination was found to bring about definite changes in the soluble fiber content of the seeds. In a single blind trial with placebo control, 18 hypercholesterolemic patients were divided into three groups and were given 50 g packets of defatted deodorized fenugreek seed powder (FG), 50 g placebo powder, or 25 g placebo powder plus 25 g FG powder to be taken orally before lunch and dinner for 20 days. Lipid profiles were checked with fasting blood samples on 0, 10, and 20 days. Significant changes in total cholesterol, triglycerides, and VLDL levels were seen in both the fenugreek groups as compared to placebo	

	Williamson E.M. (Editor) 2002 Insert ingredient in Major Herbs of Ayurveda (pp. 315-319) Churchill Livingstone	*Trigonella foenum-graecum* seeds	Powdered seeds 6 g a day	NA	**Traditional and modern use** The seeds are given to breastfeeding mothers to increase the flow of breast milk. Used in the treatment of dyspepsia and to regulate blood sugar. **Medicinal and pharmacological activities** The traditional use has been validated scientifically. Studies on human volunteers support the use of fenugreek seeds in diabetes, especially NIDDM. In a controlled clinical trial the effect of three preparations of seeds (raw, boiled and germinated) were seen in 6 healthy and 6 diabetics. Raw and germinated seeds significantly reduced postprandial glucose levels in all subjects. A trial conducted on 21 NIDDM patients showed that whole seeds of fenugreek lowered postprandial blood glucose levels. This effect was seen on a single dose of 15g taken with a test meal.	Secondary supporting

INDICATION 2						
Indication	**Evidence reference details**	**Ingredient**	**Dosage**	**Patient population**	**Summary of findings**	**Balance of evidence**
		Plant/animal part and preparation	Daily dosage, frequency & method	Subject, characteristics, health condition, ages, gender, ethnicity	Include enough information to demonstrate relevance and study outcomes. Any justifications from table 4d of Checklist 4 should be included here.	'Primary supporting', 'Secondary supporting'
• Traditionally used in Western herbal medicine to decrease/reduce /relieve symptoms of indigestion /dyspepsia • Traditionally used in Western herbal	Health Canada Monographs, Health Canada, 2024	*Trigonella foenum-graecum* seed	Methods of preparation: Dry, Powder, Non-Standardised Extracts (Dry extract, Tincture, Fluid Extract, Decoction, Infusion) 2 - 30 grams of dried seeds, per day	NA	(Traditionally) used in Herbal Medicine to help stimulate the appetite. Traditionally) used in Herbal Medicine as a digestive tonic to aid digestion. (Traditionally) used in Herbal Medicine to help relieve dyspepsia and gastritis. Used in Herbal Medicine as a mild laxative. (Traditionally) used in Herbal Medicine as a nutritive tonic.	Primary supporting

medicine Relieve digestive discomfort • Traditionally used in Western herbal medicine to help decrease/reduce/relieve symptoms of mild gastritis • Traditionally used in Western herbal medicine to maintain/support gastrointestinal system health	Botanical Council Integrative Medicine Communications (2000): *Trigonella foenum-graecum* Retrieved from Expanded commission E	*Trigonella foenum-graecum* Seed	Cut or crushed seed: 6 g per day; equivalent preparations. Fluid extract 1:1 (g/ml): 6 ml. Tincture 1:5 (g/ml): 30 ml.	NA	In Germany, fenugreek seed is used internally as a component of cholagogue and gastrointestinal remedy compounds. The Commission E approved internal use of fenugreek seed for loss of appetite. Traditionally, fenugreek is used internally to treat anorexia, dyspepsia, gastritis, and convalescence.	Primary supporting
	Barnes, J., Anderson, L., & Phillipson, D. (2007). Fenugreek. In Herbal Medicine (3rd ed., pp. 260-262). London: Pharmaceutical Press.	*Trigonella foenum-graecum* Seed	Seed 3–18 g or equivalent daily		**Herbal Use** Fenugreek is stated to possess mucilaginous demulcent, laxative, and nutritive. Traditionally, it has been used in the treatment of anorexia, dyspepsia, gastritis and convalescence.	Primary supporting

• Traditionally used in Western herbal medicine to maintain/support healthy appetite • Traditionally used in Chinese medicine to relieve digestive discomfort	World Health Organization 2007 *Trigonella* in WHO monographs on selected medicinal plants Volume 3. (pp. 338-348) WHO Press, Geneva	*Trigonella foenum-graecum* Seed Dried seeds, extracts, fluidextracts and tinctures	Internal use, cut or crushed seed, 6 g, or equivalent of preparations;		**Uses described in pharmacopoeias and well established documents** Internally for loss of appetite. **Uses described in traditional medicine** As a carminative, and tonic. Treatment of abdominal colic, diarrhoea, indigestion and liver disorders.	Primary supporting
	Fleming, T. (2000). *Fenugreek*. In *PDR For Herbal Medicines* (4th Ed., pp. 304-305. Montvale, NJ: Medical Economics Company, Inc	*Trigonella foenum-graecum* Seed	Whole and powdered drug is available in the form of teas. 6gm/day	NA	**Approved by Commission E:** • Loss of appetite **Chinese Medicine:** The drug is used to treat cold pain in the lower abdomen and hernia (said to be due to cold 'chi').	Primary supporting

	Chen, J.K. & Chen, T.T. (2004) *Semen Trigonellae* in Chinese Medical Herbology and Pharmacology (pp xx-xx) Art of Medicine Press, CA	*Trigonella foenum-graecum* fenugreek seed	3 to 10 grams in decoction.	NA	Therapeutic actions Abdominal coldness and pain Treats Kidney and Spleen yang deficiencies with symptoms such as fullness and bloating or hypochondriac pain. Kidney yang deficiency with coldness, characterized by abdominal and hypochondriac fullness and pain.	Primary supporting
	Zhang-fu C., De-xian J. & Bare J. (2011) Semen Trigonellae in Chinese Materia (International Standard Library of Chinese Medicine Medica) (pp 577-578), PMPH-USA	*Trigonella foenum-graecum* seeds	3-10 g in decoction, or made into pills or powder.		**Clinical applications** For abdominal colic cold pain. It also relieves spasms of the gastrointestinal smooth muscles and relieves pain.	Primary supporting

INDICATION 3						
Indication	**Evidence reference details**	**Ingredient**	**Dosage**	**Patient population**	**Summary of findings**	**Balance of evidence**
		Plant/animal part and preparation	Daily dosage, frequency & method	Subject, characteristics, health condition, ages, gender, ethnicity	Include enough information to demonstrate relevance and study outcomes. Any justifications from table 4d of Checklist 4 should be included here.	'Primary supporting', 'Secondary supporting'
• Traditionally used in Western herbal medicine as an expectorant/ clear respiratory tract mucous	Health Canada Monographs, Health Canada, 2024	*Trigonella foenum-graecum* seed	Methods of preparation: Dry, Powder, Non-Standardised Extracts (Dry extract, Tincture, Fluid Extract, Decoction, Infusion) 2 - 30 grams of dried seeds, per day	NA	Traditionally used in Herbal Medicine as an expectorant to help relieve excess mucous of the upper respiratory passages (anticatarrhal).	Primary supporting

	Barnes, J., Anderson, L., & Phillipson, D. (2007). Fenugreek. In Herbal Medicine (3rd ed., pp. 260-262). London: Pharmaceutical Press.	*Trigonella foenum-graecum* Seed	Seed 3–18 g or equivalent daily		**Herbal Use** Fenugreek is stated to possess mucilaginous demulcent, and expectorant properties.	Primary supporting
	World Health Organization 2007 *Trigonella* in WHO monographs on selected medicinal plants Volume 3. (pp. 338-348) WHO Press, Geneva	*Trigonella foenum-graecum* Seed Dried seeds, extracts, fluidextracts and tinctures	Internal use, cut or crushed seed, 6 g, or equivalent of preparations;		**Uses described in traditional medicine** Treatment of bronchitis, and the common cold.	Primary supporting

	Fleming, T. (2000). *Fenugreek*. In *PDR For Herbal Medicines* (4th Ed., pp. 304-305. Montvale, NJ: Medical Economics Company, Inc	*Trigonella foenum-graecum* Seed	Whole and powdered drug is available in the form of teas. 6gm/day	NA	Internal uses include upper respiratory catarrh.	Primary supporting

INDICATION 4						
Indication	**Evidence reference details**	**Ingredient**	**Dosage**	**Patient population**	**Summary of findings**	**Balance of evidence**
		Plant/animal part and preparation	Daily dosage, frequency & method	Subject, characteristics, health condition, ages, gender, ethnicity	Include enough information to demonstrate relevance and study outcomes. Any justifications from table 4d of Checklist 4 should be included here.	'Primary supporting', 'Secondary supporting'
• Traditionally used in Western herbal medicine to maintain/support breast milk production/lactation • Traditionally used in Chinese medicine to	Health Canada Monographs, Health Canada, 2024	*Trigonella foenum-graecum* seed	Methods of preparation: Dry, Powder, Non-Standardised Extracts (Dry extract, Tincture, Fluid Extract, Decoction, Infusion) 2 - 30 grams of dried seeds, per day	NA	(Traditionally) used in Herbal Medicine as a galactogogue/ lactogogue to help promote milk production/secretion.	Primary supporting

maintain/support healthy sexual function	Botanical Council Integrative Medicine Communications (2000): *Trigonella foenum-graecum* Retrieved from Expanded commission E	*Trigonella foenum-graecum* Seed	Cut or crushed seed: 6 g per day; equivalent preparations. Fluid extract 1:1 (g/ml): 6 ml. Tincture 1:5 (g/ml): 30 ml.	NA	In the United States, it is also in traditional galactagogue preparations .	Primary supporting
	World Health Organization 2007 *Trigonella* in WHO monographs on selected medicinal plants Volume 3. (pp. 338-348) WHO Press, Geneva	*Trigonella foenum-graecum* Seed Dried seeds, extracts, fluidextracts and tinctures	Internal use, cut or crushed seed, 6 g, or equivalent of preparations;		**Uses described in traditional medicine** As an aphrodisiac, galactagogue and tonic. Treatment of impotence.	Primary supporting

	Fleming, T. (2000). *Fenugreek*. In *PDR For Herbal Medicines* (4th Ed., pp. 304-305. Montvale, NJ: Medical Economics Company, Inc	*Trigonella foenum-graecum* Seed	Whole and powdered drug is available in the form of teas. 6gm/day	NA	**Chinese Medicine:** The drug is used to treat impotence, (said to be due to cold 'chi').	Primary supporting
	Zhang-fu C., De-xian J. & Bare J. (2011) Semen Trigonellae in Chinese Materia (International Standard Library of Chinese Medicine Medica) (pp 577-578), PMPH-USA	*Trigonella foenum-graecum* seeds	3-10 g in decoction, or made into pills or powder.		**Clinical applications** For testicular cold pain. For impotence, spontaneous seminal emission and premature ejaculation, it can warm the kidney and assist yang. For insufficient life gate fire and kidney yang deficiency, marked by impotence, male infertility, spontaneous seminal emission and premature ejaculation.	Primary supporting