

CHASTE TREE BERRY

(Vitex agnus-castus)

An Overview of the Research
and Indications



Beverly Yates, ND

SPONSORED BY:



This herb research review is intended to be used by authorized health care practitioners, clinicians, pharmacists, physicians, and any other professionally trained persons who may provide medical advice to patients or consumers. The information presented has been obtained from research of reference books, clinical and scientific published papers, and other published works. The lay reader is advised to consult a licensed health care practitioner regarding the information contained herein.

Chaste Tree Berry: An Overview of the Research and Indications

BACKGROUND AND USES

Chaste tree berry, also known as Chaste tree, Chaste berry, monk's berry, monk's pepper or *Vitex agnus castus*, is an indigenous plant in central Asia and the Mediterranean. The berries of this medicinal herb enjoy a long history of use, primarily for the purpose of correcting gynecological and reproductive problems that occur in women.

Historic usage in ancient Rome and Greece was for reducing libido and promotion of celibacy. Monks in medieval times thought that it reduced sexual desire; it does not reduce sexual desire or libido. It has been used in Europe for centuries for female hormone and gynecological conditions. The German Commission E approved the use of Chaste tree berry extract for PMS (Premenstrual Syndrome), cyclic mastalgia (tender, painful breasts), and menstrual irregularity. This botanical medicine is commonly prescribed in Germany and throughout Europe for these treatment purposes.

In contemporary usage, Chaste tree berry is prescribed to treat hyperprolactinemia, PMS, cyclic mastalgia, PMS with migraine headache, menstrual irregularities, PMDD (Premenstrual Dysmorphic Disorder) and luteal phase deficiency.

ACTIVE CONSTITUENTS

A significant number of active constituents of Chaste tree berry have been identified; these include iridoid glycosides (agnoside and aucubin), flavonoids (e.g. casticin), essential oils (e.g. limonene), and essential fatty acids (e.g. oleic acid, linolenic acid, palmitic acid).

Many extracts are standardized to casticin, agnuside or aucubin content.

MECHANISM OF ACTION

The growing body of research evidence reports that Chaste tree berry is an effective treatment option for PMS and related symptoms, cyclic mastalgia, PMDD, PMS-related migraine headaches, menstrual irregularities, luteal phase defects, and hyperprolactinemia. Chaste tree berry does not appear to affect levels of luteinizing hormone (LH) or follicle stimulating hormone (FSH). Chaste tree berry has been shown to inhibit prolactin secretion by competitively binding to dopamine receptors.

Chaste Tree Berry: An Overview of the Research and Indications

RESEARCH SUMMARY

As determined via research studies, extracts of Chaste tree berry have shown benefit in reducing symptoms of PMS, cyclic mastalgia, PMDD, hyperprolactinemia, menstrual irregularities and luteal phase deficiency.

PMS and Cyclic Mastalgia

Research shows that the extracts of Chaste tree berry are widely used to treat the symptoms of PMS.¹ Double-blind placebo controlled studies show that cyclic mastalgia, one of the common PMS symptoms, is significantly improved with the use of its extracts. One line of clinical thinking is that the cyclic mastalgia is influenced by a latent hyperprolactinemia in response to stressful situations, leading to sore, painful breasts and this phenomenon is aggravated by chronic stress. Extracts have been shown to reduce serum prolactin levels.¹

PMS

A large, open study involving 1,634 patients demonstrated efficacy and tolerance of Chaste tree berry extracts in relieving four common PMS symptom complexes: depression, anxiety, cravings and hyperhydration.² After a treatment time of 3 menstrual cycles, 93% of patients reported a decrease of these symptoms or even cessation of PMS symptoms altogether. At the end of the study, 81% of patients rated their status as very much or much better. For women who had mastalgia as the predominant symptom, after 3 months of treatment all PMS symptoms were less severe.²

PMDD, Hyperprolactinemia, PMS and Luteal Phase Deficiency

A systematic research review evaluated evidence of efficacy and safety of Chaste tree berry extracts from randomized, controlled trials.⁴ Eight databases were searched, looking for the extract as the sole agent used in the research trial. Eight studies investigated PMS, two studies investigated PMDD, and two studies investigated latent hyperprolactinemia. For PMS, 7 of 8 trials found the extract to work better than the placebo control (5 of 6), magnesium oxide (1) and pyroxidine (1). For PMDD, one study found the extract to be equivalent to fluoxetine (Prozac) and the other study found fluoxetine to be better than the extract. For latent hyperprolactinemia and luteal phase deficiency, one trial reported Chaste berry extract to be superior to placebo for normalizing a shortened luteal phase, reducing TRH-stimulated prolactin secretion, and

Chaste Tree Berry: An Overview of the Research and Indications

increasing mid-luteal progesterone and 17β -estradiol levels. The other trial found the extract comparable to bromocriptine (Parlodel) for reducing serum prolactin levels and

improving cyclic mastalgia symptoms. Adverse events with the extract were mild and generally infrequent.⁴

PMS and Migraine Headaches

PMS has a number of symptoms that are typical, and headache is one of them. Women who experience migraine headaches often report that their worst ones happen shortly before their menstrual period begins. The aim of this study was to explore if the use of a Chaste tree berry extract improved migraine symptoms.⁷ Via an open label clinical observation, 107 women were enrolled in the study and given the extract as treatment for 3 months. Assessment of both PMS and migraines was conducted. A total of 100 women completed the 3-month treatment. With respect to PMS overall, 66 women reported a dramatic reduction of PMS symptoms, 26 women reported a mild reduction and 8 reported no effect. With respect to migraines, 42% of patients experienced a reduction higher than 50% in frequency of monthly attacks, and 57% of patients experienced a reduction higher than 50% in monthly days with headache. No patients reported remarkable side effects. Treatment with the Chaste tree berry extract was safe and well tolerated, and positively influenced the frequency and duration of migraine attacks. For women who suffer frequent migraines, this is a welcome result.

CLINICAL INDICATIONS, PRACTITIONER DOSING, CONTRAINDICATIONS AND TOXICITY

Clinical Indications

- PMS⁸
- Cyclic mastalgia⁵
- PMDD⁹
- Luteal phase deficiency
- PMS with migraine headache
- Hyperprolactinemia
- Menstrual irregularities
- Menopausal symptoms

Chaste Tree Berry: An Overview of the Research and Indications

Dosage Range

- **General PMS and related symptoms relief:** the dosage range used in studies and clinical practice is varied. For liquid alcohol-based tincture or encapsulated tinctures, 4:1 extract is usually around 1 ml for typical dosing, 3 – 4 times a day. For dried fruit, 0.5 - 1.0 gram taken three times daily has been used, and 3.5-4.5mg/day of dried extract has been used.
- **Hyperprolactinemia:** dosage range varies in research literature, from 20 mg daily¹⁰ to 160 mg of chaste tree berry extract up to 3 times daily.
- **Cyclic mastalgia:** dosing strategy can vary, from prescribing for daily use to prescribing just the week before the menstrual period is expected to begin (in women who have a regular, predictable menstrual cycle). Dosage range for liquid alcohol-based tincture or encapsulated tinctures, 4:1 extract is usually around 1 ml for typical dosing, 3 – 4 times a day.

Contraindications

Patients with known allergy/hypersensitivity to the Vitex (Verbenaceae) family or any chaste tree berry constituents, or to members of the Verbenaceae family, should avoid using this botanical agent.

Clinical trials have reported mild skin reactions, including itching, rash, eczema, urticaria^{2,6} and minor skin eruptions.

Toxicity

Used with the standard dosing range, Chaste tree berry appears to be safe³, if there are no concomitant conditions that warrant caution. See notes on Contraindications above.

Chaste Tree Berry: An Overview of the Research and Indications

CONCLUSIONS

The overall botanical medicine benefit profile for Chaste tree berry makes it a viable botanical agent for promoting relief from PMS, cyclic mastalgia, PMS and migraine headaches, PMDD, menstrual irregularities, hyperprolactinemia and luteal phase deficiencies.

It appears to be a safe herb for medicinal use when used within the established dosage guidelines and with regard for pertinent contraindications.

ABOUT THE AUTHOR

Dr. Beverly Yates, Naturopathic Physician, graduated from the National College of Naturopathic Medicine in 1994. She is also a graduate of the Massachusetts Institute of Technology with a B. S. degree in Electrical Engineering. Dr. Yates served as the lead supervising doctor for the first ever fully accredited Naturopathic and Integrative medical residency in the state of California. Dr. Yates was a Featured Speaker for the California Naturopathic Doctors Association Integrative Medicine conference on Cardiology, presenting continuing medical education on Women and Cardiovascular Disorders.

Dr. Yates serves as a National Media Representative for the American Association of Naturopathic Physicians, appearing as an expert in natural medicine on TV shows in select metropolitan areas. She is a member of the Medical Advisory Board for Schwabe North America, and is on the Scientific Advisory Board for Gaia Herbs, Inc.; Northwood BioNaturals, LLC; and BSP Pharma, Inc. Recently, in response to Dr. Yates' contributions to community health, she provided testimony for the Tri-Caucus of the California legislature concerning the growing impact of obesity and diabetes in communities of color around the state and the country.

Dr. Yates has appeared on numerous TV broadcast networks including ABC, CBS, CNN, CW, Fox, NBC, and PBS; her radio interviews include NPR, CNN Radio, and Sirius International Satellite; and her print interviews include Essence Magazine, Good Housekeeping Magazine and Women's World newspaper. She presents continuing medical education (CME) to physicians and other health professionals all over the country.

Dr. Yates is a nationally recognized author [book: Heart Health for Black Women: A Natural Approach to Healing and Preventing Heart Disease, Marlowe & Co., 2000] and contributing author [medical textbook: Maternal Newborn and Child Nursing: Family Centered Care, Prentice Hall, 2003].

Chaste Tree Berry: An Overview of the Research and Indications

REFERENCES

- ¹ Wuttke W, Jarry H, Christoffel V, Spengler B, Seidlová-Wuttke D. Chaste tree (Vitex agnus-castus)-- pharmacology and clinical indications. *Phytomedicine* 2003 May;10(4):348-57.
- ² Loch EG, Selle H, Boblitz N. Treatment of premenstrual syndrome with a phytopharmaceutical formulation containing Vitex agnus castus. *J Womens Health Gend Based Med.* 2000 Apr;9(3):315-20.
- ³ Daniele C, Thompson Coon J, Pittler MH, Ernst E. Vitex agnus castus: a systematic review of adverse events. *Drug Safety* 2005;28(4):319-32.
- ⁴ van Die MD, Burger HG, Teede HJ, Bone KM. Vitex agnus-castus Extracts for Female Reproductive Disorders: A Systematic Review of Clinical Trials. *Planta Med.* 2012 Nov 7. [Epub ahead of print]
- ⁵ Kubista E, Müller G, Spona J. Treatment of mastopathies with cyclic mastodynia. Clinical results and hormonal profiles. *Rev Fr Gynecol Obstet.* 1987 Apr;82(4):221-7.
- ⁶ Schellenberg R. Treatment for the premenstrual syndrome with agnus castus fruit extract: prospective, randomised, placebo controlled study. *BMJ.* 2001 Jan 20;322(7279):134-7.
- ⁷ Ambrosini A, Di Lorenzo C, Coppola G, Pierelli F. Use of Vitex agnus-castus in migrainous women with premenstrual syndrome: an open-label clinical observation. *Acta Neurol Belg.* 2012 Jul 12. [Epub ahead of print]
- ⁸ Zamani M, Neghab N, Torabian S. Therapeutic effect of Vitex agnus castus in patients with premenstrual syndrome. *Acta Med Iran.* 2012;50(2):101-6.
- ⁹ Ciotta L, Pagano I, Stracquadanio M, Di Leo S, Andò A, Formoso C. Psychic aspects of the premenstrual dysphoric disorders. New therapeutic strategies: our experience with Vitex agnus castus. *Minerva Ginecol.* 2011 Jun;63(3):237-45.
- ¹⁰ Milewicz A, Gejdel E, Sworen H, Sienkiewicz K, Jedrzejak J, Teucher T, Schmitz H. Vitex agnus castus extract in the treatment of luteal phase defects due to latent hyperprolactinemia. Results of a randomized placebo-controlled double-blind study. *Arzneimittelforschung.* 1993 Jul;43(7):752-6.