

Hormone Balance



Clinical Applications

- Supports Balance of the Female Hormone Cycle*
- May Ease Common Symptoms Associated with PMS and Menopause*
- Promotes Estrogen Detoxification*
- Provides Antioxidant Activity and Cellular Support*

*Hormone Balance delivers biologically active folate and other key methylation vitamins in combination with a targeted blend of ingredients to encourage hormone balance, help modify xenoestrogen activity, and restore tranquility. Vitex and black cohosh provide traditional hormone-balancing support; DIM and calcium D-glucarate promote estrogen detoxification; and rosemary, resveratrol, grape seed extract, and green tea extract provide antioxidant activity.**

All Big Sky Natural Health's Formulas Meet or Exceed cGMP Quality Standards

Discussion

Whether it be during menstruation, ovulation, or menopause, the hormones in the female cycle fluctuate throughout a woman's lifetime. Hormonal imbalances contribute to the irritability and cramping commonly associated with premenstrual syndrome (PMS) and the hot flashes, sleep problems, and vaginal dryness associated with menopause. Hormonal imbalances may be exacerbated by xenoestrogens, a subcategory of endocrine disruptors that specifically have estrogen-like effects. Xenoestrogens have the capability to alter hormonal function in tissues, including breast, uterus, and cervix. Xenoestrogens may disrupt neurotransmitter balance, glucose homeostasis, normal reproduction, and healthy metabolism.^[1,2] Additionally, improper aromatase conversion of excess estrogens has been associated with certain forms of hormone-dependent cancers. Femquil® provides supplemental ingredients that have been traditionally and clinically used to support healthy hormone balance and promote detoxification of excess estrogens.*

Chaste Tree Berry Extract

Chasteberry (*Vitex agnus-castus*) has been used for centuries to support women with hormone-related gynecologic complaints. Chasteberry is well-known for its balancing effect on female hormones, prompting more regular cycles. Modern research has validated this traditional use by showing that various preparations of chasteberry demonstrate positive effects in women with PMS.^[3,4] The German Commission E approves the use of chasteberry to support menstrual cycle regularity, breast tenderness, and PMS; and it is widely recommended by family physicians and gynecologists in Germany for these issues.^[5] Chasteberry iridoids and flavonoids are thought to exert benefits through indirect effects on various hormones, especially prolactin and progesterone.^[5,6] Chasteberry also supports a normal, healthy attitude during the perimenopausal transition. It appears to significantly compete for binding at the estrogen receptors. Chasteberry has normalized short luteal phases and progesterone synthesis. The popular herb may help ease the common, transient symptom of mild breast tenderness possibly by inhibiting prolactin secretion.^[7]

Black Cohosh Extract

Black cohosh (*Cimicifuga racemosa*) is an herb traditionally used by American Indians for support of gynecological issues, including menstrual cramping and related low-back discomfort. It is commonly used to address menopausal symptoms, which can be attributed to its gentle phytoestrogenic activity and ability to decrease the production of luteinizing hormone. Simply put, phytoestrogens are naturally occurring compounds in plants that have the ability to block estrogen receptor sites. Research suggests that black cohosh effectively maintains a sense of calmness and healthy outlook, and it may help address menopause-associated vasomotor symptoms.^[8,9] According to Ruhlen et al, black cohosh may exert its benefits through selective estrogen receptor modulation, serotonergic pathways, antioxidant activity, or inflammatory pathways.^[10] Various studies demonstrate that black cohosh may also reduce hot flashes, night sweats, vaginal dryness and thinning, sleep disturbances, and emotional symptoms.^[11,12]

Diindolylmethane (DIM) and Glucoraphanin

Healthy metabolism of exogenous and endogenous estrogens can be pivotal for hormonal balance.^[13] DIM (3,3'-diindolylmethane) is the stable, bioactive metabolite formed when stomach acid breaks down indole-3-carbinol (I3C), a sulfur-containing glucosinolate present in cruciferous vegetables.^[14] DIM has been found to support hormone metabolism and immune activity and stimulate antioxidant and detoxification systems.^[15] DIM helps maintain safe estrogen levels by aiding the conversion of dangerous estrogen fractions to more favorable metabolites and by promoting restoration of healthy hormone ratios. It promotes metabolism of estrogen into the favorable and protective 2-hydroxyestrone (2-OHE) metabolite versus production of 4-hydroxyestrone (4-OHE) and 16-alpha-hydroxyestrone (16-alpha-OHE) metabolites.^[16]

The action of DIM is complemented by glucoraphanin, a compound isolated from broccoli seed that breaks down into sulforaphane glucosinolate (SGS). Researchers have shown that when SGS is broken down to sulforaphane (its active form), it safely and effectively upregulates the Nrf2 system, activates the antioxidant response element (ARE), enhances the production of important antioxidants, and activates vital phase II detoxification enzymes.^[17] These mechanisms provide protection from toxins, xenoestrogens, and reactive intermediates formed after phase I detoxification.*

Additional Antioxidant Activity and Detoxification Support

Femquil provides additional ingredients that provide antioxidant activity and support detoxification. Calcium D-glucarate (CGT), produced naturally in very small amounts in the body and found in many fruits and vegetables, is included for its support of glucuronidation (phase II oxidation). Green tea catechins have been found to assist in free radical scavenging and support detoxification through modification of phase I and phase II enzymes. Turmeric extract provides curcumin, a phytonutrient valued for its promotion of antioxidant activity

Continued on next page

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 60

	Amount Per Serving	%Daily Value
Vitamin B6 (as pyridoxine HCl and pyridoxal 5'-phosphate)	15 mg	882%
Folate (as (6S)-5-methyltetrahydrofolic acid, glucosamine salt) ^{S1}	340 mcg DFE	85%
Vitamin B12 (as methylcobalamin)	200 mcg	8,333%
Calcium (as dicalcium malate ^{S2} , calcium D-glucarate tetrahydrate, and calcium bisglycinate chelate ^{S3})	60 mg	5%
Magnesium (as dimagnesium malate) ^{S2}	25 mg	6%
Calcium D-Glucarate Tetrahydrate	100 mg	**
Diindolylmethane (DIM)	50 mg	**
Green Tea Extract (<i>Camellia sinensis</i>) (leaf) (45% EGCG)	50 mg	**
Black Cohosh Extract (<i>Cimicifuga racemosa</i>) (root and rhizome) (2.5% triterpene glycosides)	50 mg	**
Chaste Tree Extract (<i>Vitex agnus-castus</i>) (berry) (0.6% aucubin and 0.5% agnuside)	50 mg	**
Turmeric Extract (<i>Curcuma longa</i>) (root) (95% curcuminoids)	25 mg	**
Rosemary Extract (<i>Rosmarinus officinalis</i>) (leaf) (5% rosmarinic acid)	25 mg	**
trans-Resveratrol (from <i>Polygonum cuspidatum</i>) (root)	20 mg	**
Grape Seed Extract (<i>Vitis vinifera</i>) (seeds) (5% monomers)	12.5 mg	**
Glucoraphanin (from broccoli extract) (<i>Brassica oleracea italica</i>) (seed) ^{S3}	4.5 mg	**

** Daily Value not established.

Other Ingredients: Capsule (hypromellose and water), maltodextrin, ascorbyl palmitate, microcrystalline cellulose, silica, L-leucine, tricalcium phosphate, and hydroxypropyl cellulose.



Quatrefolic - S1. Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under US patent 7,947,662.



S2. Albion®, DimaCal®, TRAACS® and the Albion Gold Medallion design are registered trademarks of Albion Laboratories, Inc. Malates covered by U.S. Patent 6,706,904.



S3. TrueBroc® is protected by trademarks and patents of Brassica Protection Products LLC: www.brassica.com/ip

Calcium D-glucarate is licensed from Applied Food Sciences, Inc. and is protected by US patent 7,662,863.

and support of metabolic detoxification. While resveratrol (*Polygonum cuspidatum*) may be best known for its antioxidant activity, it also provides phytoestrogenic activity. Both rosemary and grape seed extracts also provide antioxidant activity.*

Folate, Methylcobalamin (B12), Vitamin B6, Calcium, and Magnesium
Readily available forms of B vitamins, including 5-methyltetrahydrofolate (folate), methylcobalamin (B12), and pyridoxal 5'-phosphate (B6) are included for their role in supporting methylation. Highly bioavailable forms of calcium and magnesium are included for their role in muscle contraction and relaxation.*

Directions

Take two capsules twice daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

References

- Singleton DW, Khan SA. Xenoestrogen exposure and mechanisms of endocrine disruption. *Front Biosci*. 2003 Jan 1;8:s110-8. Review. [PMID: 12456297]
- Nadal A, Ropero AB, Laribi O, et al. Nongenomic actions of estrogens and xenoestrogens by binding at a plasma membrane receptor unrelated to estrogen receptor alpha and estrogen receptor beta. *Proc Natl Acad Sci U S A*. 2000 Oct 10;97(21):11603-8. [PMID: 11027358]
- Schellenberg R, Zimmermann C, Drewe J, et al. Dose-dependent efficacy of the Vitex agnus castus extract Ze 440 in patients suffering from premenstrual syndrome. *Phytomedicine*. 2012 Nov 15;19(14):1325-31. [PMID: 23022391]
- Zamani M, Neghab N, Torabian S. Therapeutic effect of Vitex agnus castus in patients with premenstrual syndrome. *Acta Med Iran*. 2012;50(2):101-06. [PMID: 22359078]
- Roemheld-Hamm B. Chasteberry. *Am Fam Physician*. 2005 Sep 1;72(5):821-24. [PMID: 16156340]
- Schellenberg R. Treatment for the premenstrual syndrome with agnus castus fruit extract: prospective, randomised, placebo controlled study. *BMJ*. 2001 Jan 20;322(7279):134-37. [PMID: 11159568]
- Chopin LB. Vitex agnus castus essential oil and menopausal balance: a research update. *Complement Ther Nurs Midwifery*. 2003 Aug;9(3):157-60. [PMID: 12852933]
- Geller SE, Studee L. Botanical and dietary supplements for menopausal symptoms: what works, what does not. *J Womens Health (Larchmt)*. 2005 Sep;14(7):634-49. [PMID: 16181020]
- Nappi RE, Malavasi B, Brundu B, et al. Efficacy of Cimicifuga racemosa on climacteric complaints: a randomized study versus low-dose transdermal estradiol. *Gynecol Endocrinol*. 2005 Jan;20(1):30-5. [PMID: 15969244]
- Ruhlen RL, Sun GY, Sauter ER. Black cohosh: insights into its mechanism(s) of action. *Integr Med Insights*. 2008;3:21-32. [PMID: 21614156]
- Lieberman S. A review of the effectiveness of Cimicifuga racemosa (black cohosh) for the symptoms of menopause. *J Womens Health*. 1998 June;7(5):525-9. [PMID: 9650153]
- Mohammad-Alizadeh-Charandabi S, Shahnazi M, Nahaei J, et al. Efficacy of black cohosh (Cimicifuga racemosa L.) in treating early symptoms of menopause: a randomized clinical trial. *Chin Med*. 2013 Nov 1;8(1):20. [PMID: 24499633]
- Lord RS, Bongiovanni B, Bralley JA. Estrogen metabolism and the diet-cancer connection: rationale for assessing the ratio of urinary hydroxylated estrogen metabolites. *Altern Med Rev*. 2002 Apr;7(2):112-29. [PMID: 11991791]
- Bradlow HL. Review. Indole-3-carbinol as a chemoprotective agent in breast and prostate cancer. *In Vivo*. 2008 Jul-Aug;22(4):441-5. [PMID: 18712169]
- Riby JE, Xue L, Chatterji U, et al. Activation and potentiation of interferon-gamma signaling by 3,3'-diindolylmethane in MCF-7 breast cancer cells. *Mol Pharmacol*. 2006 Feb;69(2):430-9. [PMID: 16267208]
- Cavalieri E, Frenkel K, Liehr JG, et al. Estrogens as endogenous genotoxic agents—DNA adducts and mutations. *J Natl Cancer Inst Monogr*. 2000;(27):75-93. [PMID: 10963621]
- Keum YS. Regulation of the Keap1/Nrf2 system by chemopreventive sulforaphane: implications of posttranslational modifications. *Ann N Y Acad Sci*. 2011 Jul;1229:184-89. [PMID: 21793854]

Formulated To Exclude

Wheat, gluten, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

***These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.**

Distributed By: Big Sky Natural Health
87 Lone Peak Drive
Big Sky, MT 59716
406-993-6949

DRS-280
REV. 05/26/21