

Advanced Natural Estrogen Support*



Quantum Estro Complex Natural Estrogen Formula Healthy Hormone Balance for Women of All Ages*



Quantum Estro Complex Key Benefits

- Promotes healthy hormone balance, especially estrogen metabolism and detoxification, in women of all ages*
- Effectively modulates overall estrogenic activity to help provide significant relief from common symptoms of PMS (premenstrual syndrome) such as cramping, irritability and breast tenderness, as well as symptoms of perimenopause and menopause such as hot flashes, occasional mood swings and sleep imbalances*
- Helps eliminate toxic estrogen mimics locked in hormone and neurological receptor sites*
- Promotes preferred pathways of estrogen metabolism, including the conversion of estradiol to 2-hydroxyestrone, a weaker estrogen that may help protect estrogen-sensitive tissues*
- 100% pure vegetable capsules
No toxic tablets, glues or fillers

Healthy Hormone Support For Women of All Ages*

Targeted Nutritional Support for Healthy Hormone Balance. Quantum Estro Complex promotes healthy hormone balance in women of all ages by featuring a broad range of targeted nutrients and synergists that support healthy estrogen metabolism and detoxification.* For women with hormone-related health concerns, supporting optimal hormone balance may provide significant relief and may result in improvement in common symptoms of PMS (premenstrual syndrome), perimenopause, and menopause.

Innovative, Quantum-State Ingredients

Quantum Estro Complex features SERMs which are natural-source selective estrogen receptor modulators. They help modulate estrogenic activity in the body, especially targeted at the heart, breast, uterus, ovaries and bone. Other key ingredients include well-researched agents that have the ability to modulate estrogenic activity, promote optimal estrogen balance as well as

support overall healthy hormone balance.*

This formula offers every woman a safe, effective and clinically proven way to address the natural changes that occur in their estrogen levels throughout life, from their teenage years, through menopause and after.

Comprehensive Formula Design

What makes this formula unique is that the synergism of its broad-range nutrients address multiple concerns related to hormone balance with special emphasis on estrogen activity and metabolism. Because it exerts multiple influences, **Quantum Estro Complex** is an excellent choice for a variety of women's concerns. Its hormone-balancing support may provide significant relief for women with estrogen-excess concerns as well as providing powerful nutritional support to encourage healthy estrogen balance in menopausal women.*

Estrogen Metabolism

To enable its detoxification, estrogen goes through a process called hydroxylation that yields the so-called “good” 2-hydroxyestrogen (2-OH) estrogen and the less desirable 16-hydroxyestrogen (16-OH) and 4-hydroxyestrogen (4-OH) estrogens. Because these estrogen metabolites vary greatly in their level of estrogenic activity, their ultimate effect on the body’s tissues (whether beneficial or stressful) depends on how they are processed in the body.

The 2-OH estrogen has weak estrogenic activity, while 4-OH and 16-OH estrogens show long-acting estrogenic activity and are often associated with estrogen-excess related health concerns.(1,2) Both 2-OH and 4-OH estrogens (called catechol estrogens) can be readily oxidized to quinones, which are highly reactive and can damage DNA.

However, this oxidation process can be altered if the catechol estrogens are first detoxified via Phase II liver detoxification (methylation).(3) Therefore, the goal is to achieve an adequate nutritional status so that the liver can easily render 4-OH less reactive, while supporting the beneficial properties of 2-OH.(4) Thus, we can see that supporting the liver detoxification pathway is a critical factor in supporting overall healthy estrogen activity.

Selective Estrogen Receptor Modulators (SERMs)

SERMs (selective estrogen receptor modulators) are non-steroidal compounds that do not contain actual estrogen hormones and are not considered to be hormones. However, these compounds are capable of binding to estrogen receptors and influencing their activities. SERMs are called “selective” because they can have estrogen-like effects on certain cells (i.e. turn on the cell’s estrogen receptor) or they can block the effects of estrogen on other cells (i.e. turn off the receptor).

In a woman with low estrogen levels, SERMs can help increase estrogen response by turning on receptors, such as during menopause – whereas in cases of high estrogen levels, SERMs help turn off estrogen receptors. SERMs support a moderate level of estrogen activity; when binding to the estrogen receptors, they can inhibit endogenous estrogen when too much is present, but at the same time, also support estrogen’s many important functions, especially for the heart, uterus, breast, vagina and bone. (5,6)



Key Ingredients

Natural SERMs: Isoflavones, Red Clover and DIM (Diindolylmethane)

Isoflavones (from fermented nonGMO soy). In **Quantum Estro Complex**, we use the preferred form of isoflavones from nonGMO Asian soy that has been traditionally fermented. The fermentation process converts glycone forms of isoflavones into the aglycone form – which are absorbed much more completely and quickly, and are the most effective form of the Isoflavone molecule. Soy isoflavones that have not been fermented are more difficult to digest and do not offer genistein, a key isoflavone, in its readily available form. After fermentation, major available isoflavones are genistein, daidzein, and glycitein.

Both fermented soy isoflavones and red clover isoflavones can act as SERMs that can support healthy levels of sex hormone binding globulin (SHBG), which may also support balanced estrogenic activity since only unbound estrogens can enter target-tissue cells.(6,8,9) In addition, isoflavones have shown an ability to promote production of the “good” 2-OH estrogen over the less desirable 16-OH and 4-OH estrogens.(10) The North American Menopause Society suggests that soy isoflavones can be a natural alternative to synthetic estrogen therapy for relief of mild menopausal symptoms such as hot flashes and night sweats. 6 Isoflavones may help offset the drop in estrogen and regulate its fluctuations that occur at menopause. Isoflavone research also shows great promise for serious concerns of the breast, prostate, colon, lung, blood and skin.(11)

Isoflavones also play an important role in protecting and maintaining strong, healthy bones. Evidence shows that genistein and daidzein help conserve bone mass. Independent studies conducted at the University of Illinois and the University of Hong Kong concluded that consuming soy isoflavones helps increase bone mineral content and bone density. Another study at the University of Texas suggested that isoflavones may also stimulate bone formation. By preserving bone mass and stimulating bone turnover, researchers noted the potential role of soy isoflavones in maintaining bone health during and after menopause.

Red Clover Isoflavones. Research shows that red clover isoflavones have also been shown to support healthy arterial function and heart health (7); promote healthy bone metabolism and help provide significant relief from common symptoms of menopause such as hot flashes, occasional mood swings and sleep imbalances* (15)

DIM (Diindolylmethane). Research shows that DIM also helps balance estrogen metabolism. Over 40 studies on DIM are on file in the National Library of Medicine database. DIM has proven to be an efficient way to help increase the ratio of estrogen metabolites in favor of the “good” estrogen.(17) In addition to its estrogen balancing effect, DIM helps stimulate progesterone production and competes with testosterone for protein binding.

This helps to maintain testosterone in its free form (the most desirable form). DIM helps reduce the conversion of testosterone to estrogen.

Due to the aging process (especially prevalent when coupled with obesity or regular alcohol use), estrogen metabolism is reduced. DIM promotes healthy estrogen metabolism and helps to improve symptoms of menopause or PMS. As little as 0.5mg/kg body weight/day of DIM has been demonstrated as an effective dose. That means, for a 150 lb person, only 30 mg/day would be needed. DIM is also very effective when used in conjunction with other phytoestrogens such as isoflavones.

Resveratrol and Chrysin. Resveratrol is a potent bioflavonoid found in grapes and certain plants (such as giant knot weed). It has been classified as a SERM based on its ability to bind to estrogen receptors and act as both an estrogen agonist and antagonist.(12) Resveratrol provides many other benefits, including cardioprotective properties.(12) Chrysin is a bioflavonoid that has been shown to inhibit the activity of aromatase, an enzyme that synthesizes estrogen from androgens.(13) Aromatase is found in fat cells, including breast tissue; its inhibition may be useful in inhibiting the cell-proliferative effects of estrogen.

European Rosemary Leaf Concentrate. Research shows that the herb rosemary (*Rosmarinus officinalis*) helps enhance production of 2-OH estrogen (the “good” estrogen) while inhibiting the production of the “bad” estrogen, 16-OH, and in general, enhances estrogen detoxification.(14) In particular, rosemary concentrate shows in vitro evidence of supporting healthy breast tissue.

Chinese, Nonpesticided Royal Jelly. Royal jelly is one of the world’s most complete, natural super nutrient concentrates (unfortunately, most sources are highly pesticided from worker bees working in pesticided fields). Royal jelly is the main source of food for the queen bee which has a life span up to 50 times longer than the worker bees. Royal jelly is rich in all of the essential B vitamins, along with natural vitamins A, C, D, E and K, more than 12 important minerals, 18 amino acids, acetylcholine (a neurotransmitter), lecithin and many other constituents.

Royal jelly is a powerful anti-aging tonic with a full repertoire of master nutrients necessary to sustain life, promote longevity and vigor. Its helps to provide a feeling of well being and to promote youthfulness. Research shows that royal jelly not only promotes anti-aging and longevity, but also exerts beneficial effects on almost every body tissue as well as balancing estrogen and overall hormone metabolism.(18,19) It is excellent help during pregnancy, PMS or mild menopause symptoms such as hot flashes, mood swings, night sweats and feeling “blue.” Research also supports royal jelly’s role in memory function, liver support (cholesterol), heart and circulation efficiency, skin beauty and much more.

Central American Nopal Cactus. The use of Nopal (commonly known as the prickly pear) dates back to the Aztec period in Mexico (around 900 AD). Nopal is highly nutritious and con-

tains a unique phytochemical, vitamin and mineral profile that contributes to its many beneficial effects. Studies show Nopal’s valuable role in promoting hormone and glandular balance. It benefits the pancreas and liver, both vitally important in maintaining blood sugar levels, triglycerides and cholesterol levels within the normal range, by helping to metabolize fat and fatty acids and eliminating excess bile acids (excess bile acid is eventually converted into cholesterol).(16)

Nopal’s pectins, lignans (natural fiber) and mucilage benefit the digestive and intestinal systems, including constipation. Nopal also aids in the balancing the nervous system, which benefits the body’s overall function. Studies have shown that Nopal also helps improve the function of the immune system.

Nopal’s many bodily effects are due in part to its abundance of essential nutrients, including polysaccharides, fiber, bioflavonoids, natural vitamins, including beta-carotene (A), B1, B2, B3, and C; natural minerals including potassium, calcium, magnesium and iron, and 18 amino acids (8 which are essential) in an easily digestible form.

Other Nutritional Synergists. Additional synergists and co-factors of this formula include European Beta-Sitosterol and sterolins (phytosterols) which appear to act either as weak forms of estrogen stimulators (agonist receptor-site action - when estrogen levels are declining) or protectors against higher levels of estrogens by competitive inhibition (antagonist receptor-site action). The next synergist, unheated, nonirradiated North Atlantic kelp, supports the thyroid’s regulation of oxygen uptake at the cell level, which is critical for detoxification of the reproductive organs and the liver.

Marine coral mineral concentrate boosts tissue oxygen levels and cellular oxygen availability to support alkaline pH levels for best tissue function. Natural-source free-form amino acids (rice source) which are highly biologically available (over 95% are free form) are the perfect co-factor/ transporter for the broad spectrum of botanical agents in this formula. Bromelain and papain are protein-digesting enzymes from pineapple and papaya fruit, assisting uptake of nutrients and aiding pain relief, especially during PMS and menopause. A full-spectrum of highly purified plant enzymes (protease, lipase, amylase, cellulase, invertase, lactase, maltase) function as critical co-factors and transporters of all the nutraceutical compounds in this formula.

Advanced Hormone Support

While **Quantum Estro Complex** provides targeted support for healthy hormone balance, we also recommend using it in combination with the **Super Food Trio** (3 key comprehensive products) to provide essential, full-spectrum, baseline nutritional support.* In addition, following a sensible dietary program combined with regular exercise will aid in helping lose body fat and improving body composition. This in turn supports healthy hormone balance since fat cells contain aromatase, and decreasing their number equates to a decrease in the “bad” forms of estrogen production.

Natural B Vitamin Support

In addition to **Quantum Estro Complex**, we also recommend **Max Stress B Nano-Plex™**, the first product of its kind which offers unique, probiotically produced, 100% natural, live-source B vitamins that are highly bioavailable, including vitamin B12, folate (L-5-MTHF) and B6. Vitamin B12 and folate function as essential cofactors for critical methylation pathways such as detoxification of catechol estrogens and homocysteine metabo-

lism. Unfortunately, the ability to metabolize folic acid to its active form, L-5-methyl tetrahydrofolate (L-5-MTHF), may be difficult for a significant segment of the population.(20) Vitamin B6 provides support for the methylation of catechol estrogens. Furthermore, vitamin B6 modulates the ability of cells in vitro to respond to steroid hormones. Low levels of B6 can lead to a prolonged and increased estrogenic response; some studies have shown that vitamin B6 decreases symptoms of PMS.(21)

Quantum Estro Complex: Ingredients

(60 Vcaps/bottle; 480 mg/Vcap)

Proprietary, "Beyond Organic", Quantum-State Blend: South American Red Clover (blossom) (*Trifolium pra.*), Chinese Non-GMO Isoflavones (fermented concentrate, non-GMO soy source), European Rosemary Leaf Extract (*Rosmarinus off.*), Chinese Non-pesticided Royal Jelly Concentrate (6%), DIM (Diindolylmethane), European Beta-sitosterol and Sterolins, Central American Nopal Cactus (pad) (*Opuntia ficus-indica*), Unheated, Nonirradiated North Atlantic Kelp (fronds) (*Laminaria dig.*), Marine Coral Mineral Concentrate (lead-free), Unheated, Free-Form Amino Acids (organic rice source), Bromelain Enzymes (from pineapple), Papain Enzymes (from papaya), Highly Purified Plant Enzymes (Protease, Lipase, Amylase, Cellulase, Invertase, Lactase, Maltase)

Recommended Use

Adults or children (age 4 and up):
Take 1 capsule, 1 to 3 times daily.
For special programs, up to 12 capsules may be taken daily.

1. Muti P, Bradlow HL, Micheli A, et al. Estrogen metabolism and risk of breast cancer: a prospective study of the 2:16-hydroxyestrone ratio in premenopausal and postmenopausal women. *Epidemiology* 2000;11(6):635-40.
2. Bradlow HL, Telang NT, Sepkovic DW, et al. 2-Hydroxyestrone: the 'good' estrogen. *J Endocrin* 1996;150:S259-S65.
3. Butterworth M, Lau SS, Monks TJ. 17-estradiol metabolism by hamster hepatic microsomes. Implications for the catechol-O-methyl transferase-mediated detoxification of catechol estrogens. *Drug Metab Dispos* 1996;24(5):588-94.
4. Zhu BT, Conney AH. Is 2-methoxyestradiol an endogenous estrogen metabolite that inhibits mammary carcinogenesis? *Cancer Res* 1998;58:2269-77.
5. Setchell KDR. Soy isoflavones - benefits and risks from nature's selective estrogen receptor modulators (SERMs). *J Am Coll Nutr* 2001;20(5):354S-62S.
6. North American Menopause Society (NAMS). The role of isoflavones in menopausal health: consensus opinion of the North American Menopause Society. *Menopause*. 2000;7(4):215-229.
7. Nestel PJ, Pomeroy S, Kay S, et al. Isoflavones from red clover improve systemic arterial compliance but not plasma lipids in menopausal women. *J Clin Endocrinol Metab* 1999;84(3):895-98.
8. Cassidy A. Potential tissue selectivity of dietary phytoestrogens and estrogens. *Curr Opin Lipidol* 1999;10:47-52.
9. Pino AM, Valladares LE, Palma MA, et al. Dietary isoflavones affect sex hormone-binding globulin levels in postmenopausal women. *J Clin Endocrinol Metab* 2000;85(8):2797-800.
10. Xu X, Duncan AM, Merz BE, et al. Effects of soy isoflavones on estrogen and phytoestrogen metabolism in premenopausal women. *Cancer Epidemiol Biomarkers Prev* 1998;7(12):1101-08.
11. Baber RJ, Templeman C, Morton T, Kelly GE, West L. Randomized, placebo-controlled trial of an isoflavone supplement and menopausal symptoms in women. *Climacteric*. 1999b;2(2):85-92.
12. Bowers JL, Tyulmenkov V, Jernigan SC, et al. Resveratrol acts as a mixed agonist/antagonist for estrogen receptors. *Endocrinology* 2000;141(10):3657-67.
13. Jeong HJ, Shin YG, Kim IH, et al. Inhibition of aromatase activity by flavonoids. *Arch Pharm Res* 1999;22(3):309-12.
14. Zhu BT, Loder DP, Cai MX, et al. Dietary administration of an extract from rosemary leaves enhances the liver microsomal metabolism of endogenous estrogens and decreases their uterotrophic action in CD-1 mice. *Carcinogenesis* 1998;19(10):1821-27.
15. Howes JB, Sullivan D, Lai N. The effects of dietary supplementation with isoflavones from red clover on the lipoprotein profiles of postmenopausal women with mild to moderate hypercholesterolemia. *Atherosclerosis*. 2000;152(1):143-147.
16. Trejo-Gonzalez, A. Gabriel-Ortiz, G., Puebla-Perez, A.M et al. A purified extract from prickly pear cactus (*Opuntia fuliginosa*) controls experimentally induced diabetes in rats. *Journal of Ethnopharmacology* 1996;55:27-33.
17. Chang YC, Riby J, Chang GH, Peng BC, Firestone G, Bjeldanes LF. "Cytostatic and antiestrogenic effects of 2-(indol-3-ylmethyl)-3,3'-diindolylmethane, a major in vivo product of dietary indole-3-carbinol" In: *Biochem Pharmacol* (1999 Sep 1) 58(5):825-34.
18. Mishima S, Suzuki KM, Isohama Y, Kuratsu N, Araki Y, Inoue M, Miyata T. Royal jelly has estrogenic effects in vitro and in vivo. *J Ethnopharmacol*. 2005 Oct 3;101(1-3):215-20.
19. Sver L, Orsolich N, Tadic Z, et al. A royal jelly as a new potential immunomodulator in rats and mice. *Comp Immunol Microbiol Infect Dis* 1996;19:31-8.
20. Lucock M. Folic acid: nutritional biochemistry, molecular biology, and role in disease processes. *Molec Gen Metab* 2000;71:121-38.
21. Tully DB, Allgood VE, Cidlowski JA. Modulation of steroid receptor-mediated gene expression by vitamin B6. *FASEB J* 1994;8(3):343-49.