

APPLICATIONS

- Women's Wellness Support
- Healthy Aging
- Mood Support
- Immune Support



INTRODUCTION

Hormonal Balance is a comprehensive herbal formula designed to maintain women's wellness and support healthy aging.*

Epimedium leaf (*Epimedium grandiflorum*) belongs to the Berberidaceae family and contains flavonoids, polysaccharides, lignans, phenol glycosides, and sesquiterpenes, among others.^{1,2} Epimedium species have been used to support both women's and men's health for centuries, attributed partly to their affinity with estrogen receptor alpha (ER-alpha).^{3,4}

In traditional Chinese health practices, related Epimedium species known collectively as *yin yang huo* are used to support kidney yang, which encompasses healthy aging.* Today, this support is attributed to the constituent flavonoids and polysaccharides.²

Tribulus fruit (*Tribulus terrestris*), also known as puncture vine, belongs to the Zygophyllaceae family.⁵ It contains steroidal saponins such as spirostanol and furostanol; flavonoids such as quercetin and kaempferol; alkaloids such as tribulusamide C and tribulusterine; tannins; terpenoids; and polyphenols; among others.^{6,7}

Tribulus fruit may help maintain healthy fertility by supporting the central nervous system and the anterior pituitary gland, as well as maintaining gonadal hormones, their receptors, and folliculogenesis, already within the normal range.*⁸ Tribulus fruit has been used for centuries in both traditional Chinese health practices, where it is known as *ci ji li*, and traditional Ayurvedic health practices, where it is known as Gokshura.*^{9,6}

Jatropha stem (*Jatropha macrantha*) belongs to the Euphorbiaceae family, and is also known as Huanarpo macho.^{10,11} It has been used consistently in traditional Peruvian health practices for both women's and men's wellness.*¹² Jatropha stem

includes flavonoids, phenolic acids, lignans, coumarins, and terpenes, among others.¹¹

Muira Puama bark (*Ptychopetalum olacoides*) belongs to the Olacaceae family and is native to the Amazon region, where it is used in traditional health practices to support healthy aging, maintain brain health, and support healthy stress management.*¹³ This support is attributed to its alkaloids,¹⁴ including magnoflorine and menispermine; it also includes the triterpenoid lupeol.*¹⁵ In traditional use, Muira Puama is used as an adaptogen to support mental, physical, and sexual wellness, regardless of age.*¹⁶

Maca root (*Lepidium meyenii*) belongs to the Brassicaceae family and is native to the Peruvian Andes.^{12,17} It is sometimes called Peruvian ginseng (though it is not a true ginseng) and may support healthy aging,^{17,18} attributed to the constituent macamides and glucosinolates.*¹⁸ Maca root has been used traditionally to support healthy sexual function, maintain healthy fertility, and support comfortable menopause.*¹²

Eurycoma root (*Eurycoma longifolia*) belongs to the Simaroubaceae family and its primary constituents include ellagic acid, quercetin, and rutin; quassinoids such as eurycomanone; and alkaloids.^{19,20} It has been used in the traditional health practices of Southeast Asian countries to support sexual wellness and healthy stress management.*²¹

Eustephia bark (*Eustephia coccinea*) belongs to the Amaryllidaceae family and is used in the traditional health practices of Peru.*²²

WOMEN'S WELLNESS

Healthy Sexual Function

Tribulus fruit (*T. terrestris*), according to a Cochrane systematic review and meta-analysis, may support healthy female sexual function.*²³ In a double-blind, placebo-controlled trial, 60 premenopausal women were randomly assigned to Tribulus fruit or a placebo, daily for four weeks. According to a standardized scale, Tribulus fruit significantly supported healthy sexual function.*²⁴ Another trial with premenopausal women found the same result, attributed to maintaining healthy female testosterone levels already within the normal range.²⁵

In a double-blind, placebo-controlled, clinical trial, menopausal women were randomly assigned to Tribulus fruit or a placebo, for 90 days. Compared to the placebo, Tribulus helped support healthy sexual function, according to standardized scales.²⁶ A review of in vitro, in vivo, and human studies attributed this support to the steroidal saponin secondary metabolites protodioscin and protogracillin.*^{27,23}

Maca root (*L. meyenii*) contains phytoestrogens that may help maintain normal sexual function during menopause, according to a meta-analysis of studies evaluating the effects of phytoestrogens on sexual wellness.*²⁸ Eurycoma root (*E. longifolia*) may also help maintain testosterone levels already within the normal range in women, supporting a healthy libido.*²⁹

Normal Fertility

Epimedium leaf (*E. grandiflorum*) may help maintain healthy oocytes during normal aging, as seen in an in vitro study with porcine oocytes and attributed to antioxidant support.*³⁰ More studies are needed, to understand the full impact of Epimedium leaf on women's wellness.*³¹ Tribulus fruit (*T. terrestris*) may help support normal fertility through antioxidant support.*^{6,32 2}

Jatropha stem (*J. macrantha*) is used traditionally to support normal fertility,¹² which may be due, in part, to antioxidant support.^{*11,33} Eustephia bark (*E. coccinea*) is used in traditional health practices to support uterine health.^{*22}

Hormonal Support

Epimedium leaf (*E. grandiflorum*) may help maintain estrogen levels already within the normal range, as seen with its constituent icariin in rats.^{*34} Jatropha stem (*J. macrantha*) may help with hormonal support, attributed to the constituent saponins,¹² though reports on its ability to maintain blood levels of estradiol-17beta already within the normal range are mixed.^{*35,12} Maca root (*L. meyenii*) may help maintain blood progesterone, but not estradiol, already within the normal range.^{*12} Eurycoma root (*E. longifolia*) and its constituent eurypeptides may help maintain DHEA levels already within the normal range, which may help maintain sex hormones, including female testosterone, already within the normal range.^{*21}

Perimenopausal/Menopausal Support

Epimedium leaf (*E. grandiflorum*) may help to soothe perimenopausal manifestations, supporting a healthy mood and maintaining neurotransmitter levels already within the normal range, as seen with the constituent icariin in rat models of perimenopause; more studies are needed.^{*34} Jatropha stem (*J. macrantha*) has been traditionally used for menopausal support.^{*35,12} Maca root (*L. meyenii*), according to studies, may help with perimenopausal and menopausal support, though without changes in estradiol, follicle-stimulating hormone (FSH), thyroid stimulating hormone (TSH), or sex hormone binding globulin (SHBG).^{*36}

HEALTHY AGING

Bone Support

Epimedium leaf (*E. grandiflorum*) may help maintain normal bone density.^{*37} A meta-analysis of 17 studies regarding herbal bone support concluded that herbs may help maintain normal bone density in the lumbar spine, femoral neck, and femoral trochanter.^{*38} The most prescribed herb in the meta-analysis was *Epimedium brevicornum*, a close relative of *Epimedium grandiflorum*.³⁸ Icariin, a prenylflavonoid common to both species, may help to maintain calcium levels as well as osteoblast and osteoclast activity already within the normal range, supporting healthy osteogenesis.^{*39,40}

Epimedium leaf, according to a double-blind, placebo-controlled trial with 58 postmenopausal women, may help maintain levels of bone-specific alkaline phosphatase (BSAP) already within the normal range. The participants were randomly assigned to an Epimedium prenylflavonoid extract or a placebo, daily for six weeks. There were no adverse effects, and the levels of BSAP were consistent with bone support.^{*41}

Maca root (*L. meyenii*), according to mouse studies, may help maintain bone mineral density, Matrix Gla protein (a blood marker of bone formation), and femur weight, already within the normal range.^{*18} Human studies are needed. Eurycoma root (*E. longifolia*) may help support healthy bone density as a part of healthy aging, maintaining bone calcium already within the normal range.^{*21}

Cognitive Support

Muir Puama bark (*P. olacoides*) has been shown to help support memory and cognition in mice through maintaining acetylcholinesterase (AChE) levels already within the normal range, though human studies are needed.^{*13,42} Mouse studies have also shown that Muira Puama bark ethanol extract may help support normal cognition and maintain levels of A-beta already within the normal range.^{*16,42}

Cardiovascular Support

Tribulus fruit (*T. terrestris*) may help maintain healthy blood pressure already within the normal range.^{*9} Maca root (*L. meyenii*), according to a small study with 29 postmenopausal women, may help maintain diastolic blood pressure already within the normal range.^{*36}

OTHER

Mood Support

Maca root (*L. meyenii*), according to the previous study with 29 postmenopausal women, may also help maintain a healthy mood.^{*36} In a small, double blind, crossover study with 14 postmenopausal women, participants were randomly assigned to Maca root or a placebo, for six weeks, then switched to the other treatment for an additional six weeks. While no hormonal changes were seen, Maca root helped to maintain a normal mood and support healthy stress management, compared to placebo.^{*43} The ethanol extract of Muira Puama bark (*P. olacoides*) may also help with mood support.^{*16}

Immune Support

Eurycoma root (*E. longifolia*), according to a randomized, controlled trial with 126 middle-aged adults, may help with immune system support. The participants were assigned to Eurycoma root or a placebo, for four weeks. Compared to the placebo, Eurycoma root helped to maintain total, naive, and CD4+ T cell numbers already within the normal range.^{*44}

SAFETY AND CAUTIONS

Epimedium leaf (*E. grandiflorum*) is generally well tolerated,^{41,45,46} and animal studies have not shown toxicity.² Side effects may include dizziness, dry mouth, or thirst.⁴⁵ Theoretically, Epimedium leaf may increase the risk of bleeding when taken with anticoagulant or antiplatelet medications.⁴⁵

Tribulus fruit (*T. terrestris*) is generally well tolerated.⁴⁷⁻⁴⁹ Tribulus fruit should be avoided in pregnancy as it has affected fetal development in animal studies.⁴⁷ It may increase the levels and adverse effects of lithium when taken concurrently.⁴⁷

Jatropha stem (*J. macrantha*) has a long history of safe use in traditional health practices and is generally well tolerated.¹² There are no currently known interactions with pharmaceuticals.

Muir puama bark (*P. olacoides*) is generally well tolerated. In one mouse study, it had additive effects with diazepam.⁵⁰ While there are no known adverse effects or drug interactions in humans,¹⁵ it is worth noting that molecular docking studies have shown that eight compounds in Muira puama bark may bind to estrogen receptors, resulting in selective estrogen receptor modulation,⁵¹ and caution may be warranted in those with estrogen-sensitive conditions.

Maca root (*L. meyenii*) is generally well tolerated and has been used for centuries to support sexual function. No adverse events have been reported in clinical trials,^{18,52} and there are no currently known interactions in humans.⁵²

Eurycoma root (*E. longifolia*) is generally well tolerated and shows little inhibition of CYP isoenzymes, making CYP-related drug interactions unlikely.²¹ Due to potential effects on estrogen levels, it should be avoided in those with estrogen receptor-positive breast cancer.²¹ It may reduce the levels and effectiveness of propranolol.^{21,53}

Eustephia bark (*E. coccinea*) has a long history of safe use in traditional Peruvian medicine, though information is limited.²²

NutraMedix.

**KEEP OUT OF REACH OF CHILDREN**

STORAGE: Keep tightly closed in a dry place at room temperature. (59-86°F or 15-30°C)

SHAKE WELL BEFORE EACH USE:

Take 20 drops twice daily. Can be taken under the tongue or in 2-4 oz. (60-120 mL) of water. Do not use if pregnant or nursing. Stop use if adverse reactions develop.

NutraMedix.
Jupiter, Florida 33458 USA
www.nutramedix.com
561-745-2917



HORMONAL BALANCE

FOR WOMEN

Dietary Supplement
2 oz. (60 mL)

Supplement Facts

Serving Size: 20 drops
Servings Per Container: 60

Amount Per Serving	% Daily Value
Proprietary Blend	1.0mL*
Epimedium leaf extract, Tribulus fruit extract, <i>Jatropha macrantha</i> stems extract, Muira Puama bark extract, Maca root extract, <i>Eurycoma longifolia</i> root extract, <i>Eustephia coccinea</i> bark extract	

*Daily Value not established

Other ingredients: mineral water, ethanol (20-24%)



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