TestoGain™

Hormone Specific Formulation™

DESCRIPTION

TestoGain™, provided by Douglas Laboratories®, is a *Hormone Specific Formulation™* of phytoandrogens, androgenogenic adaptogens, androgen agonists and androgen mimetics to help promote optimal testosterone function by maintaining the health of testosterone producing glands and by supporting the healthy functions of testosterone responsive tissues in both men and women. †

TestoGain™ is a *Hormone Specific Formulation™* formulated by Dr Joseph J Collins, created to support the optimal function of specific hormones through the use of hormone specific adaptogens, hormone specific agonists and hormone specific functional mimetics. This formulation may be used to as part of a hormone health program with dietary and nutrient support. In addition, these formulations may be used by clinicians as adjuvants to support optimal hormone health in patients who have been prescribed bioidentical hormone therapies, including testosterone replacement therapy.

FUNCTIONS

The primary functions of TestoGain™ are to support the natural production of testosterone and other androgens by gonadal tissue in both genders, and to support how tissues throughout the body respond to testosterone. This is accomplished by supporting the function of testosterone producing glands in both gender, and by supporting the function of testosterone tissues through the use of herbs that mimic the actions of testosterone.

The synergistic combination of specific herbs in TestoGain™ support important functions associated with optimal testosterone health in both genders through testosterone specific actions of these herbs which:

- Promote production of testosterone by gonadal tissue in both genders.
- Promote production of other androgens by adrenal glands
- Mimic specific functions of testosterone, thereby acting as testosterone functional agonists.

Epimedium sagittatum promotes testosterone production through the action of icariin, a flavonol that improves the condition of reproductive organs and increased the circulating levels of testosterone in animal studies. Icariin has phosphodiesterase-5 (PDE5) inhibitor action affecting all three PDE5 isoforms. The long history of use for treating erectile dysfunction in Traditional Chinese Medicine (TCM) may be attributed to the PDE5 inhibitor actions. PDE5 inhibitors can potentiate the sexual response in both men and women. The sexual potentiation effect and improved the quality of life was even seen in patients with chronic disease. Researchers have also described icariin as having “testosterone mimetic properties” with therapeutic potential for the management of hypoandrogenism. Epimedium also has glucocorticoid antagonist properties, which may contribute to a relative increase in anabolic function.
Mucuna pruriens (Velvet bean) promotes testosterone production in humans by its action on the hypothalamus-pituitary-gonadal axis, and raises serum levels of both testosterone and LH. Semen quality and sperm concentrations are improved in infertile men. Animal studies confirm that Mucuna causes a significant improvement in sexual behavior, libido and potency, sperm parameters, and testosterone and LH levels, as well as reproductive organs in females. Mucuna also decreases prolactin levels, which is significant because hyperprolactinemia is a major neuroendocrine-related cause of reproductive disturbances in both men and women. Significant increase of sexual behavior through enhanced libido has been attributed to L-dopa, the constituent in Mucuna that suppresses excessive prolactin. Mucuna pruriens also has a normalizing affect on blood sugar, with some researchers concluding that it can be used in diabetes-induced erectile dysfunction.
Tribulus terrestris may promote testosterone production. The concentration of blood testosterone increased statistically within 10 days in athletes consuming Tribulus. Tribulus terrestris increases testosterone, dihydrotestosterone (DHT) and dehydroepiandrosterone sulphate in primates. Chronic administration of Tribulus terrestris produced a significant increase in serum testosterone levels and sexual behavior with no significant effect on the sperm count, and no overt body system dysfunctions were observed in 28-day oral toxicity study in animal studies published January 2012. In vivo and in vitro animal studies of relaxation of the

TestoGain™
Hormone Specific Formulation™

smooth muscle of the corpus cavernosum published October, 2012 concluded that Tribulus terrestris may improve erectile dysfunction. Tribulus terrestris may also help with desire disorder in women experiencing Female Sexual Dysfunction. The ability of Tribulus terrestris to increase the release of nitric oxide from the endothelium and nitrergic nerve endings, may account for its claims as an aphrodisiac in both genders. Tribulus terrestris appears to have a gonadotropin-like activity that can increase the number of corpora lutea, primary and secondary follicles while significantly decreasing the number of ovarian cysts.

Lepidium meyenii (Maca) is a potent testosterone mimetic that improves sexual function in both men and women independent of testosterone or estrogen activity. Lepidium also enhances female fertility in mice, spermatogenesis in male mice following spermatogenic damage, and increases both the semen volume and sperm motility in men. As a cruciferous vegetable, Lepidium meyenii may provides benefits associated with consumption of cruciferous vegetables, such as a reduced risk of prostate cancer. Maca reduced prostate size after 14 days in animal studies, and prevented the prostate weight increase induced by testosterone enanthate treatment, suggesting that Maca may decrease risks of prostate disorders in men receiving testosterone replacement therapy.

Turnera diffusa (Damiana) can mimic functions of testosterone and act as a sexual stimulant, enhance engorgement of erectile tissue due to its vasodilatory abilities, and significantly reduce the post-ejaculatory interval. These effects were not associated to an increase in locomotor activity or anxiety-like behaviors, suggesting that the anxiolytic flavone apigenin may participate in its pro-sexual effect. The testosterone mimetic effects are also considered as part of a general adaptogen effect of Turnera diffusa.

Ptychopetalum olacoides (Muira Puama) can mimic the function of testosterone by increasing both sexual desire and sexual function. Muira puama is reputed to enhance erectile function and orgasm in aging men suffering the effects of fatigue or age-related complaints. Muira Puama has adaptogen properties (anti-stress, memory enhancement, increased physical and/or sexual performance). Prevents stress induced increase of corticosterone, indicating glucocorticoid antagonist properties, which may contribute to a relative increase in anabolic function. Traditionally used treating various age-related conditions, Muira Puama is prized as a nerve tonic that facilitates memory retrieval and improves cognitive function, due to both both antioxidant properties and acetylcholinesterase inhibitory properties, which preserving acetylcholine levels. The enhanced acetylcholine is another mechanism of improved sexual function. Acetylcholine, as a parasympathetic neurotransmitter, enhances sexual response in both genders by promoting relaxation of penile cavernous smooth muscle or clitoral cavernous smooth muscle to support penile erection or clitoral engorgement.

Eleutherococcus senticosus is best described as a functional mimetic of testosterone in that it mimics a significant number of testosterone functions including enhanced endurance capacity, elevated cardiovascular function, metabolism altered for sparing glycogen, as well as improvement of sperm motility. It also has an anti-fatigue action, enhances recovery of stress induced NK activity and inhibits stress induced corticosterone elevation. Like testosterone, it is protective against the glucocorticoids induced osteoporosis. It has significant adaptogen properties, with the ability to increase a nonspecific body resistance to stress, fatigue, and disease. Like testosterone, it can also increase endothelial nitric oxide levels, which can contribute to improved sexual function in both genders.

Eurycoma longifolia (Tongkat Ali) promotes testosterone production with a significant increase of plasma testosterone level noted in animal studies. Human studies showed similar results, with increases in serum testosterone levels. The men in the study also had less symptoms of hypogonadism. One group of researchres proposed that the proandrogenic effects of Eurycoma longifolia have can be used as an alternative treatment to prevent and treat male osteoporosis without causing the side effects associated with testosterone replacement therapy. A number of animal studies validate the usefulness of Eurycoma longifolia for androgen-deficient osteoporosis, with some researchers recommending that Eurycoma longifolia may be used in combination with low-dose testosterone in androgen-deficient osteoporosis. Eurycoma longifolia also has anti-estrogen properties and can reverse the effects of estrogen, which allows testosterone to work more effectively.

Panax Ginseng can promote testosterone production. Male patients treated with Panax ginseng showed an increase in spermatozoa number/ml and progressive oscillating motility, an increase in plasma total and free testosterone, DHT, FSH and LH levels, and a decrease in PRL. However, following acute resistance exercise,

TestoGain™

Hormone Specific Formulation™

Panax does not cause a rise in hormones levels, and does not to promote an anabolic hormonal status when taken immediately following resistance exercise. Panax Ginseng can mimic actions of testosterone associated with the increase in both sexual desire and sexual function. Various human studies demonstrate that Panax ginseng is effective for treating male erectile dysfunction. In addition, Panax ginseng improved sexual arousal in menopausal women and caused significant improvement in the Kupperman index and the Menopause Rating Scale, indicating that Panax ginseng might be used in menopausal women to improve their sexual life. Panax ginseng inhibited testosterone-induced cell proliferation in both animal studies and human prostate cells, indicating that Panax may decrease risks of prostate disorders in men receiving testosterone replacement therapy.

Withania somnifera (Ashwagandha) promotes testosterone production, and caused significant increases in serum testosterone and luteinizing hormone in men with a history of infertility. Those men also developed improved sperm count and motility. Animal studies also showed Withania has gonadotrophic and spermatogenic activity which may be due to increased interstitial cell stimulating hormone and testosterone-like effects. Animal studies also demonstrated that Withania elicited significant changes in gonadotrophin levels coupled with a significant increase in ovarian weight and profound folliculogenesis. Collectively, the research indicates that Withania improves gonadal function in both genders. However, Withania suppresses estrogen receptor-alpha function, promotes apoptosis, and inhibits growth of MCF-7, and MDA-MB-231 human breast cancer cells. None-the-less, Withania demonstrates anti-osteoporotic activity. Withania also mimics a significant number of testosterone functions including adaptogenic with increased stress tolerance, increased nitric oxide production, and increased dopaminergic activity, and cardioprotection.

INDICATIONS

TestoGain™ may be a useful dietary supplement for individuals wishing to support healthy testosterone production and function.

FORMULA (#201397)

Serving Size……2 v.caps…….4 v.caps

Proprietary Blend.....1,310 mg …….. 2,620 mg

Horny Goat Weed Extract (*Epimedium sagittatum*, aerial parts, standardized to 10% icariin), Velvet bean Extract (*Mucuna pruriens*, seed, standardized to 15% l-dopa), Gokhru fruit Extract *(Tribulus terrestris*, standardized to 15% saponins), Maca root (*Lepidium meyenii*), Damiana leaf (*Turnera diffusa*), Muira Puama bark(*Ptychopetalum olacoides*), *Eleutherococcus senticosus* root Extract(standardized to 0.8% eleutherosides), Tongkat Ali 100:1 Extract (*Eurycoma longifolia)*, *Panax ginseng* root Extract (standardized to 3% ginsenosides), Ashwagandha root Extract (*Withania somnifera*, standardized to 8% withanolides, 1% alkaloids, and 1% withaferine-A).

Other Ingredients: Hydroxypropyl methylcellulose (capsule), dicalcium phosphate, vegetable stearate, silica

SUGGESTED USE

As a dietary supplement, adults may take ***2*** capsules each day with food for **1 to 2 weeks** or as directed by your healthcare professional.

The dose may then be increased to ***4*** capsules each day with food for **2 to 4 months** or as directed by your healthcare professional.

After **2 to 4 months** dosage may be lowered back down to ***2*** capsules each day with food and may continue on that dosage as needed or as directed by your healthcare professional.

SIDE EFFECTS

WARNING: Not to be used by pregnant or nursing women.

TestoGain™
Hormone Specific Formulation™

STORAGE
Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

Al-Ali M, Wahbi S, Twaij H, Al-Badr A. Tribulus terrestris: preliminary study of its diuretic and contractile effects and comparison with Zea mays. J Ethnopharmacol. 2003 Apr;85(2-3):257-60.
Al-Qarawi AA, Abdel-Rahman HA, El-Badry AA, Harraz F, Razig NA, Abdel-Magied EM. The effect of extracts of Cynomorium coccineum and Withania somnifera on gonadotrophins and ovarian follicles of immature Wistar rats. Phytother Res. 2000 Jun;14(4):288-90.
Archana R, Namasivayam A. Antistressor effect of Withania somnifera. J Ethnopharmacol. 1999 Jan;64(1):91-3.
Arletti R, Benelli A, Cavazzuti E, Scarpetta G, Bertolini A. Stimulating property of Turnera diffusa and Pfaffia paniculata extracts on the sexual-behavior of male rats. Psychopharmacology (Berl). 1999 Mar;143(1):15-9.
Arushanian EB, Baida OA, Mastiagin SS, Popova AP, Shikina IB. [Effect of eleutherococcus on short-term memory and visual perception in healthy humans] Eksp Klin Farmakol. 2003 Sep-Oct;66(5):10-3. Russian.
Gauthaman K, Ganesan AP. The hormonal effects of Tribulus terrestris and its role in the management of male erectile dysfunction--an evaluation using primates, rabbit and rat. Phytomedicine. 2008 Jan;15(1-2):44-54.
Gonzales GF, Cordova A, Vega K, Chung A, Villena A, Gonez C, Castillo S. Effect of Lepidium meyenii (MACA) on sexual desire and its absent relationship with serum testosterone levels in adult healthy men. Andrologia. 2002 Dec;34(6):367-72.
Rowland DL, Tai W. A review of plant-derived and herbal approaches to the treatment of sexual dysfunctions. J Sex Marital Ther. 2003 May-Jun;29(3):185-205.
Shukla KK, Mahdi AA, Ahmad MK, Shankhwar SN, Rajender S, Jaiswar SP. Mucuna pruriens improves male fertility by its action on the hypothalamus-pituitary-gonadal axis. Fertil Steril. 2009 Dec;92(6):1934-40.
Singh S, Nair V, Gupta YK. Evaluation of the aphrodisiac activity of Tribulus terrestris Linn. in sexually sluggish male albino rats. J Pharmacol Pharmacother. 2012 Jan;3(1):43-7.
Tambi MI, Imran MK, Henkel RR. Standardised water-soluble extract of Eurycoma longifolia, Tongkat ali, as testosterone booster for managing men with late-onset hypogonadism? Andrologia. 2012 May;44 Suppl 1:226-30. doi: 10.1111/j.1439-0272.2011.01168.x.
Zhang ZB, Yang QT. The testosterone mimetic properties of icariin. Asian J Androl. 2006 Sep;8(5):601-5.

For more information on **TestoGain™** visit **DouglasLabs.com** or **TestoGain.com**

Hormone Specific Formulation™ is a trademark of Your Hormones, Inc.

† 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.

Manufactured by
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440
douglaslabs.com

You trust Douglas Laboratories.
Your patients trust you.