

ENHANCEPEP

Enhancing Deep Sensations.

ENHANCEPEP is a new TGA-certified daily supplement that acts as an advanced libido booster and sexual performance enhancer, and a preventive system against potential future onset of erectile dysfunction and sexual disorders for both men and women, through the activation of nitric oxide and selective inhibition of phosphodiesterase type 5 (PDE5) induced by alpha-MSH-enriched (alpha-melanocyte stimulating hormone peptides) colostrum and a combination of purified botanical extracts.

Principal Indication.

ENHANCEPEP supports: (1) the increase in sex drive (libido levels) and enhancement of sexual function and performance for normal men and women. (Maintenance of Sexual Health), (2) the preventive care for normal men and women against the potential onsets of erectile dysfunction and other form of sexual disorders. (Sexual Dysfunction Preventive System), and (3) the safe and accessible adjuvant to existing first-line treatments to erectile dysfunction and other sexual disorders. (Adjuvant Therapy)

ENHANCEPEP is a pro-sexual oral supplement that may complement, and may not substitute, the existing treatment plan offered by your medical practitioners.

Recommended Users.

ENHANCEPEP is recommended for general men and women seeking to maintain good sexual health with optimized libido levels, and patients with erectile dysfunction or other sexual disorders.

Composition.

Dosage Form:	Powdered Tablets		
Therapeutic Use:	Dietary Supplement		
Recommended Intake:	2 tablets/day (maximum daily dose 4-6 tablets)		
Composition: 60 tablets/pack	Colostrum Powder	50mg	The colostrum in ENHANCEPEP is enriched and purified with alpha-melanocyte stimulating hormone (alpha-MSH) peptides or insulin-like growth factor melanotropic peptides. Alpha-MSH is a bioactive peptide that is widely expressed in the central nervous system and in various peripheral tissues. The ability of alpha-MSH to cause sexual excitation has been established in various animal models. This pro-sexual peptide represents the role of melanocortigenic system in the regulation of healthy erectile state for both male and female genital organs. The peptide has superior activating effects on nitric oxide in the central nervous system ¹ that may lead to elevated intracavernous circulation and blood pressure for greater penile and clitoral erectile state ² . Alpha-MSH may improve sexual function in both males and females by inducing greater sexual desire (libido) and genital arousal ³ . The efficacy of alpha-MSH peptide is most observed in subjects with psychogenic erectile dysfunction as the peptide works at the level of the brain. This peptide has limited intrapenile mechanisms of action ⁴ , thus eliciting a rather natural sexual response with minimal or no undesirable side effects ⁵ when compared with standard PDE-5 inhibitors such as sildenafil (Viagra), vardenafil (Levitra) and tadalafil (Cialis). The safety and efficacy assessment of naturally derived alpha-MSH also bears greater promise compared to the controversial synthetic Melatonin II.
	Cynomorium Songaricum (flower) • Concentration of 10:1 equiv. to Cynomorium Songaricum Fresh	250mg 2.5g	Cynomorium Songaricum (Suoyang) is capable of improving sexual function. Recent study in animal model demonstrated that cynomorium songaricum caused improved mating readiness and increased fecundity ⁶ , and enhanced spermatogenesis as mediated through glial cell-derived neurotrophic factor (GDNF) stimulation ⁷ . A flavonoid extract from the plant was tested and results suggested an enhanced endurance exercise by reducing muscle fatigue ⁸ .
	Turnera Diffusa (leaf) • Concentration of 5:1 equiv. to Turnera Diffusa dry	200mg 1g	Turnera Diffusa (Damiana) contains a bioactive constituent Apigenin that is capable of reducing anxiety and depression associated with sexual impotency by engendering a relaxing, sedating effect ⁹ . It has traditionally been used to address both male and female sexual inadequacies with a strong psychological or emotional element, including performance anxiety, depression, stress, guilt, nervous dyspepsia and atonic constipation ¹⁰ . If unaddressed, males and females experiencing erectile dysfunction will continue to experience reinforced psychological problems even if they had entered the sexual arena with a clear state of mind. Turnera Diffusa has been shown to be particularly libido boosting and stimulating for sexually exhausted or impotent males and females. In a study involving sexually sluggish male rats, aqueous extract of this plant was demonstrated to increase sexual activity and exhibit aphrodisiac effects ¹¹ . The pro-sexual effects of Turnera Diffusa may lead to reduced post-ejaculatory intervals and the ability to achieving one ejaculatory series and resuming a second one ¹² .
	Epimedium Brevicornum (leaf) • Concentration of 100:1 equiv. to Epimedium Brevicornu fresh	5mg 500mg	Epimedium (Horny Goat Weed) species contains a natural flavonoid Icarin with pro-sexual qualities. Icarin selectively inhibits PDE-5, prevents cGMP hydrolysis and increases levels of nitric oxide to enhance relaxation of smooth muscle in the corpus cavernosum of the penis ¹³ and clitoris. PDE-5 is an intracellular enzyme that catalyzes the hydrolysis of cGMP; cGMP provides the signal

¹ Poggioli R, Benelli A, Arletti R, Cavazzuti E, Bertolini A. Nitric oxide is involved in the ACTH-induced behavioral syndrome. Peptides. 1995;16: 1263-1268

² Mizusawa H, Hedlund P, Andersson KE. alpha-Melanocyte stimulating hormone and oxytocin induced penile erections, and intracavernous pressure increases in the rat. J Urol. 2002 Feb;167(2 Pt 1):757-60. PubMed PMID: 11792967.

³ Hadley ME, Dorr RT. Melanocortin peptide therapeutics: historical milestones, clinical studies and commercialization. Peptides. 2006 Apr;27(4):921-30. Epub 2006 Jan 18. Review. PubMed PMID: 16412534.

⁴ Giuliano, F. (2004). Control of Penile Erection by the Melanocortinergic System: Experimental Evidences and Therapeutic Perspectives. Journal of Andrology, 25: 683-691. doi: 10.1002/j.1939-4640.2004.tb02842.x

⁵ Hadley ME. Discovery that a melanocortin regulates sexual functions in male and female humans. Peptides. 2005 Oct;26(10):1687-9. Review. PubMed PMID: 15996790.

⁶ Hsin-Ping Liu, Rong-Fu Chang, Yih-Shyuan Wu, Wei-Yong Lin, and Fuu-Jen Tsai, "The Yang-Tonifying Herbal Medicine Cynomorium songaricum Extends Lifespan and Delays Aging in Drosophila." Evidence-Based Complementary and Alternative Medicine, vol. 2012, Article ID 735481, 11 pages, 2012. doi:10.1155/2012/735481

⁷ W. M. Yang, H. Y. Kim, S. Y. Park, H. M. Kim, M. S. Chang, and S. K. Park, "Cynomorium songaricum induces spermatogenesis with glial cell-derived neurotrophic factor (GDNF) enhancement in rat testes." Journal of Ethnopharmacology, vol. 128, no. 3, pp. 693-696, 2010.

⁸ Yu FR, Liu Y, Cui YZ, Chan EQ, Xie MR, McGuire PP, Yu FH. Effects of a flavonoid extract from Cynomorium songaricum on the swimming endurance of rats. Am J Chin Med. 2010;38(1):65-73. PubMed PMID: 20128045.

⁹ S. Kumar, R. Madaan, A. Sharma. "Pharmacological evaluation of Bioactive Principle of Turnera aphrodisiaca." Indian J Pharm Sci. 2008 Nov-Dec; 70(6): 740-744.

¹⁰ Priest, A.W. and Priest, L.R. "Herbal Medication. A Clinical and Dispensary Handbook." London: L.N. Fowler & Co. Ltd.

¹¹ 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. 1999;143:15-19.

¹² Estrada-Reyes R, Ortiz-López P, Gutiérrez-Ortiz J, Martínez-Mota L. Turnera diffusa Wild (Turneraceae) recovers sexual behavior in sexually exhausted males. J Ethnopharmacol. 2009 Jun 25;123(3):423-9. doi: 10.1016/j.jep.2009.03.032. Epub 2009 Mar 31. PubMed PMID: 19501274.

¹³ Xin ZC, Kim EK, Lin CS, Liu WJ, Tian L, Yuan YM, Fu J. Effects of icaritin on cGMP-specific PDE5 and cAMP-specific PDE4 activities. Asian J Androl. 2003 Mar;5(1):15-8. PubMed PMID: 12646997.

	<p>Epimedium Sagittatum (leaf)</p> <ul style="list-style-type: none"> Concentration of 10:1 equiv. to Epimedium Sagittatum fresh 	<p>50mg 500mg</p>	<p>leading to relaxation of smooth muscle of corpus cavernosum and penile arterioles¹⁴. The inhibition of PDE-5 activity by Icarin derived from Epimedium, cGMP is able to accumulate in both male and female corpus cavernosal smooth muscle cells, increasing smooth muscle relaxation and consequently increasing clitoral and penile blood flow, size and sensitivity.</p> <p>Icarin is capable of increasing levels of nitric oxide by stimulating the expression of neuronal nitric oxide synthase and inducible nitric oxide synthase, suggesting that Icarin have a therapeutic effect on erectile dysfunction¹⁵ for males and females. The direct enhancement of nitric oxide synthesis may be a more effective approach for the treatment of penile and clitoral erectile dysfunction than inhibition of PDE-5¹⁶. The same study also suggested that administration of Icarin increases smooth muscle content in the corpus cavernosum (the key structure in normal erectile function) of penis and clitoris, thus Icarin may have a long term therapeutic effect on erectile dysfunction and sexual disorders for male and female.</p> <p>A recent study demonstrated the significant PDE-5 selectivity and lack of cytotoxicity of Icarin when compared with sildenafil. Icarin was shown to have more specificity for PDE-5 than sildenafil¹⁷, and more selective inhibitory activity on PDE-5 than on PDE-4¹⁸.</p>
	<p>Paullinia Cupana (seed)</p> <ul style="list-style-type: none"> Concentration of 4:1 equiv. to Paullinia Cupana fresh Equiv. to Caffeine 	<p>250mg 1g 50mg</p>	<p>Paullinia Cupana (Guarana) is rich in caffeine and other natural stimulants. It is an effective energy stimulant and enhancer of physical endurance¹⁹, which may reduce general fatigue and sexual exhaustion.</p> <p>Memory, alertness and mood can be significantly increased upon administration of Paullinia Cupana extracts²⁰. The cognitive performance enhancement from the administration of Paullinia Cupana was not due to the plant's caffeine content alone, as suggested by several studies²¹.</p>
	<p>Nicotinic Acid</p>	<p>50mg</p>	<p>Nicotinic Acid, also known as niacin, is one of the forty to eighty essential human nutrients. It is an important mediator of the body's energy production, vasodilation, blood circulation and the synthesis of sex hormones estrogen, progesterone and testosterone.</p> <p>The administration of nicotinic acid may engender pro-sexual effects, most notably as the increased mucus secretion in the mouth and sexual organs of male and female, elevated sensitivities, sensations of intense warmth and a reddish cast to the skin caused by improved blood circulation and expansion of small capillaries²² (termed as 'Niacin Flush'), which further enrich the sexual experience collectively. Nicotinic acid may improve penile and clitoral erectile function by stimulating the production of prostaglandin D2²³.</p> <p>Nicotinic acid may improve histamine release to assist individuals experiencing difficulty in achieving orgasm.</p> <p>Dyslipidemia is closely related to erectile dysfunction, in particular the concomitant atherosclerosis that contributes to the nature of erectile dysfunction being a part of the cardiovascular disease complex. Nicotinic acid is an effective lipid-lowering agent that may improve the erectile function in patients suffering from dyslipidemia²⁴.</p>
<p>Inactive ingredients: Crospovidone, Cellulose – microcrystalline, Silica – colloidal anhydrous, Maltodextrin, Magnesium stearate, Calcium hydrogen phosphate.</p>			

Biological Mechanisms.

Activation of Nitric Oxide (Alpha-MSH enriched colostrum), Glial Cell-Derived Neurotrophic Factor (GDNF) stimulation (Cynomorium Songaricum), Selective PDE-5 Inhibition (Epimedium Brevicornum and Epimedium Sagittatum), Stimulation of Nitric Oxide Synthase (Epimedium Brevicornum and Epimedium Sagittatum), Increase of Smooth Muscle Content (Epimedium Brevicornum and Epimedium Sagittatum), Energy and Physical Endurance Stimulation (Paullinia Cupana), Cognitive Enhancement (Paullinia Cupana), Vasodilation and Improvement in Blood Circulation (Nicotinic Acid), Prostaglandin D2 Production (Nicotinic Acid), Increase of Histamine Release (Nicotinic Acid), Anxiolytic (Turnera Diffusa).

Competitive Analysis. Current approaches for the pathophysiological treatment and enhancement of patients with erectile dysfunction or sexual disorders can be classified as: (1) Synthetic oral PDE-5 inhibitors: sildenafil citrate (Viagra), vardenafil (Levitra), tadalafil (Cialis), (2) Corrective invasive surgery: penile prostheses, penile arterial revascularization, venous ligation surgery, (3) Penile injections: Caverject, Edex (Alprostadil), and (4) Herbal oral treatments: yohimbe, horny goat weed. There are reservations towards the effectiveness of current oral pharmacological approaches to target erectile function. PDE-5 inhibitors are reported to cause several dose-related drug reactions, including headache, dizziness, flushing, dyspepsia, nasal congestion, rhinitis or sudden hearing loss. The efficacy of this class of drug-grade molecules is less prominent without sexual stimulation. PDE-5 inhibitor requires at least a minimal nitric oxide signal induced by sexual stimulation to fully function. Hence, without sexual stimulation, the PDE-5 inhibitor itself is unable to increase intracellular cGMP synthesis and induce erection. Moreover, treatment with PDE-5 inhibitors has had limited success even under sexual stimulation. Therefore, direct enhancement of nitric oxide synthesis may be an effective approach for the treatment of erectile dysfunction. It is also equally important to address the capacity for sexual stimulation (libido) to achieve an optimized sexual health and satisfaction. Hence, there is a need for a solution for sexual dysfunction, which works effectively and holistically to not only ensure optimized erectile state without undesirable side effects, but also increase libido levels. The market for clinical treatment and effective supplementation of sexual health is large and progressively growing globally. There is no pharmaceutical-grade or real therapeutic solutions with solid scientific studies that could simultaneously address both erectile dysfunction and libido disorders. The sexual health supplement market is saturated with a large number of brands offering herbal treatments, with no guarantee of satisfactory quality and therapeutic effects. Consumers may generally be perplexed, as there are no clear comparative points between these products.

Precaution.

If you are pregnant or breast feeding, seek the advice of a healthcare professional before taking ENHANCEPEP. This product contains colostrum powder that may contain lactose. If symptoms persist consult your healthcare practitioner. This product contains 50mg of caffeine per dose. This product is meant to supplement and not to replace a balanced diet, or the primary treatments or advice from your doctor or healthcare provider.

Storage.

Store in cool and dry condition.

For Additional Information, Enquiries or Updates, visit the website myopep.lab-rms.com or contact info@lab-rms.com.

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¹⁵ Liu WJ, Xin ZC, Xin H, Yuan YM, Tian L, Guo YL. Effects of icariin on erectile function and expression of nitric oxide synthase isoforms in castrated rats. Asian J Androl. 2005 Dec;7(4):381-8. PubMed PMID: 16281085.

¹⁶ Lin CS, Ho HC, Chen KC, Lin G, Nunes L, Lue TF. Intracavernosal injection of vascular endothelial growth factor induces nitric oxide synthase isoform. BJU Int 2002; 89: 955-60.

¹⁷ Mario Dell'Agli, Germana V. Galli, Esther Dal Cero, Federica Belluti, Riccardo Matera, Elisa Zironi, Giampiero Pagliuca, Enrica Bosio. "Potent Inhibition of Human Phosphodiesterase-5 by Icarin Derivatives." Journal of Natural Products 2008; 71(9): 1513-1517.

¹⁸ Liu WJ, Xin ZC, Xin H, Yuan YM, Tian L, Guo YL. Effects of icariin on erectile function and expression of nitric oxide synthase isoforms in castrated rats. Asian J Androl. 2005 Dec;7(4):381-8. PubMed PMID: 16281085.

¹⁹ Roberts, A.T., et al. "The effect of a herbal supplement containing black tea and caffeine on metabolic parameters in humans." Altern. Med. Rev. 2005 Dec; 10 (4): 321-5.

²⁰ Lieberman, H.R., et al. "Effects of caffeine, sleep loss, and stress on cognitive performance and mood during U.S. Navy Seal training." Psychopharmacology. 2002; 164(3): 250-61.

²¹ Haskell CF, Kennedy DO, Wesnes KA, Milne AL and Scholey AB. 2007. A double-blind, placebo-controlled, multi-dose evaluation of the acute behavioural effects of guarana in humans. Journal of Psychopharmacology, 21, 65-70.

²² Eklund B, Kaijser L, Nowak J, Wennmalm A. Prostaglandins contribute to the vasodilation induced by nicotinic acid. Prostaglandins. 1979 Jun;17(6):821-30. PubMed PMID: 504690.

²³ Gentile V, Antonini G, Antonella Bertozzi M, Dinelli N, Rizzo C, Ashraf Virmani M, Koverech A. Effect of propionyl-L-carnitine, L-arginine and nicotinic acid on the efficacy of vardenafil in the treatment of erectile dysfunction in diabetes. Curr Med Res Opin. 2009 Sep;25(9):2223-8. doi: 10.1185/03007990903138416. PubMed PMID: 19624286.

²⁴ Ng CF, Lee CP, Ho AL, Lee VW. Effect of niacin on erectile function in men suffering erectile dysfunction and dyslipidemia. J Sex Med 2011 Aug 2. Doi: 10.1111/j.1743-6109.2011.02414.x.