



DHEA TR

Serving Size 1 Capsule
Servings Per Container 120

Amount Per Serving

DHEA (dehydroepiandrosterone) 10 mg

OTHER INGREDIENTS: Rice flour, cellulose, methylcellulose, silica.

SUGGESTED USE: As a dietary supplement, take 1 to 2 capsules per day or as directed by your healthcare professional.

REFERENCES:

1. Baylis D, Bartlett DB, Syddall HE, Ntani G, Gale CR, Cooper C, Lord JM, Sayer AA. Immune-endocrine biomarkers as predictors of frailty and mortality: a 10-year longitudinal study in community-dwelling older people. *Age (Dordr)*. 2012 Mar 3.
2. Creatsa M, Armeni E, Stamatelopoulos K, Rizos D, Georgiopoulos G, Kazani M, Alexandrou A, Dendrinou S, Augoulea A, Papamichael C, Lambrinouaki I. Circulating androgen levels are associated with subclinical atherosclerosis and arterial stiffness in healthy recently menopausal women. *Metabolism*. 2012 Feb;61(2):193-201.
3. Dhatariya K, Bigelow ML, Nair KS. Effect of dehydroepiandrosterone replacement on insulin sensitivity and lipids in hypoadrenal women. *Diabetes*. 2005 Mar;54(3):765-9.
4. Feldman HA, Johannes CB, McKinlay JB, Longcope C. Low dehydroepiandrosterone sulfate and heart disease in middle-aged men: cross-sectional results from the Massachusetts Male Aging Study. *Ann Epidemiol*. 1998 May;8(4):217-28.
5. Genazzani AR, Stomati M, Valentino V, Pluchino N, Pot E, Casarosa E, Merlini S, Giannini A, Luisi M. Effect of 1-year, low-dose DHEA therapy on climacteric symptoms and female sexuality. *Climacteric*. 2011 Dec;14(6):661-8.

*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.

continued on reverse

DHEA TR

DIETARY SUPPLEMENTATION MAY SUPPORT HEALTHY PRODUCTION AND REGULATION OF ANDROGENS, ESTROGENS, CORTISOL*

- May enhance feelings of well-being*
- May protect against cardiovascular dysfunction*
- May support a healthy libido*
- May promote maintenance of healthy bone density*

DHEA (or dehydroepiandrosterone) is a hormone produced by the adrenal gland and brain which serves as a precursor for all steroidal hormone production including both testosterone and estrogens. It is the body's most abundant circulating steroid hormone, though the levels are generally higher in men than in women. Research has shown that levels peak at age 25 and markedly decline from there, with a decline of over 80% by age 70.*

ANTI-AGING: Low DHEA levels have been shown to be associated with decreased feelings of well-being, increased frailty, and increased mortality. A study involving 254 men and women between the ages of 65 and 70 measured levels of DHEA-s at baseline and 10 years later. Lower levels of baseline DHEA-s were significantly correlated with increased odds of frailty (or vulnerability to disease) 10 years later. Ninety-nine women in their seventies were given DHEA or placebo for six months along with an exercise program. The women taking DHEA were found to significantly increase their lower body strength and function as compared to the placebo group.*

CARDIOVASCULAR HEALTH: DHEA research shows that this hormone may help support cardiovascular health. The Massachusetts Male Aging study reported that men ages 40-70 with higher levels of DHEA-s were less likely to have heart disease when confounders such as age, smoking status, and alcohol intake were controlled. The research suggests that endothelial health increases with higher levels of DHEA-s. Endothelial health is central to cardiovascular health as an increase in stiffness can lead to increases in blood pressure and arterial plaque accumulation.*

BONE HEALTH: DHEA may alter bone mineral density through mechanisms related to mineral absorption and metabolism and through inflammatory processes. DHEA helps to stimulate production of insulin-like growth factor 1 (IGF-1), which is high in young people and helps maintain new bone formation. A study of women aged 50-78 years who had osteoporosis due to long-term (at least three years)

REFERENCES:

6. Haden ST, Glowacki J, Hurwitz S, Rosen C, LeBoff MS. Effects of age on serum dehydroepiandrosterone sulfate, IGF-I, and IL-6 levels in women. *Calcif Tissue Int*. 2000 Jun;66(6):414-8.
7. Hartaigh BO, Loerbroks A, Thomas GN, Engeland CG, Hollands MA, Fischer JE, Bosch JA. Age-dependent and -independent associations between depression, anxiety, DHEAS, and cortisol: From the MIPH Industrial Cohort Studies (MICS). *Psychoneuroendocrinology*. 2011 Nov 30.
8. Kenny AM, Boxer RS, Kleppinger A, Brindisi J, Feinn R, Bureson JA. Dehydroepiandrosterone combined with exercise improves muscle strength and physical function in frail older women. *J Am Geriatr Soc*. 2010 Sep;58(9):1707-14.
9. Medina MC, Souza LC, Caperuto LC, Anê GF, Amanso AM, Teixeira VP, Bordin S, Carpinelli AR, Britto LR, Barbieri RL, Borella MI, Carvalho CR. Dehydroepiandrosterone increases beta-cell mass and improves the glucose-induced insulin secretion by pancreatic islets from aged rats. *FEBS Lett*. 2006 Jan 9;580(1):285-90.
10. Nappi RE, Albani F, Santamaria V, Tonani S, Magri F, Martini E, Chiovato L, Polatti F. Hormonal and psycho-relational aspects of sexual function during menopausal transition and at early menopause. *Maturitas*. 2010 Sep;67(1):78-83.
11. Osmanagaoglu MA, Okumuş B, Osmanagaoglu T, Bozkaya H. The relationship between serum dehydroepiandrosterone sulfate concentration and bone mineral density, lipids, and hormone replacement therapy in premenopausal and postmenopausal women. *J Womens Health (Larchmt)*. 2004 Nov;13(9):993-9.

*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.

111711

DHEA TR

prednisone usage showed that, in comparison to calcium, vitamin D3 and oral thiazide diuretic, DHEA significantly increased bone osteocalcin (a calcium-binding protein), serum IGF-1, and bone mineral density in the lumbar spine and femoral neck.*

SEXUAL HEALTH: Libido has been shown to decrease with age, particularly in women. Healthy, postmenopausal women ages 50-60 were given either 10 mg DHEA, oral estradiol, oral tibolone, or a vitamin D placebo for one year. Those given DHEA were found to have significantly improved sexual function and frequency of sexual intercourse. Another study of 138 women in differing stages of menopause found that the best model for predicting sexual function during postmenopause were the levels of DHEA-s and estradiol; the lower the level of DHEA-s, the more likely they are to have a sexual dysfunction.*

INSULIN SENSITIVITY: Research is beginning to elucidate the mechanism for how DHEA may increase insulin sensitivity. DHEA supplementation was shown to increase the number and size of insulin-secreting cells in the pancreas of rats. Human trials have shown promising results as well with subjects who had below normal levels of DHEA receiving either DHEA supplementation or a placebo. The DHEA-supplemented group required significantly higher amounts of glucose to raise their blood sugar level.*

DHEA TR is specifically formulated so that clinicians can prescribe a low amount of DHEA, and increase in small increments as necessary. The fiber-based time-release system allows the product to provide a stable amount of DHEA from which the body can use what it needs, thus avoiding cortisol surges or fluctuations in levels of androgens and estrogens. The time-release lasts anywhere from 6-12 hours, depending on transit time and digestive capabilities, and this allows for a normal circadian rhythm of both DHEA and cortisol. This should be dosed in the morning, as this is the when the adrenal glands usually release DHEA.*

Contraindications: Anyone who currently has a hormone-related cancer, such as prostate, breast, or uterine cancers should not take DHEA as it can alter levels of sex hormones in the body. Also, those with liver disease should not take DHEA as it can generate free radicals in the liver during its conversion to DHEA-s. For patients without liver disease, taking an antioxidant formula such as Oxy Quench, can help protect the liver from free radical generation.*