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## DHEA (dehydroepiandrosterone) - *The Fountain of Youth*

Fact Sheet for Health Professionals (rev. 2016-11-10)



**Dhea** (DeHydroEpiAndrosterone)

For Improved Vitality, Health, Energy, Mood & Quality of Life  
Pour Améliorer Vitalité, Santé, Énergie, Humeur et Qualité de Vie  
Steigert Vitalität, Gesundheit, Energie, Wohlbefinden und Lebensqualität  
Estimula la vitalidad y la energía; mejora los estados de ánimo y la calidad de vida

CLINICALLY TESTED

120 CAPSULES

**COMPOSITION** Dehydroepiandrosterone 5, 10, 20, 25, 35 and 50 mg.

**DOSAGE FORM** Capsules in tamper proof blister packs of 30 capsules packed 120 capsules in a box.

**INDICATIONS** Clinical research has shown DHEA to be important in age and stress-related low vitality and fatigue, in individuals aged 45 and over, in menopausal discomfort, in immune function, autoimmune disorders, cardiovascular health, memory, sexual performance and the maintenance of muscles mass and bone density. Animal studies indicate beneficial effects on burns, overweight, aging and a decreased risk of cancer, diabetes, heart attack and osteoporosis. Further human studies are required in order to know the extent of these effects on human beings.

**DIRECTIONS FOR USE** Unless prescribed by a physician, individuals under the age of 40 should not be taking this product, as the levels of DHEA prior to that age are usually sufficient. Individuals taking prescription medication or suffering from serious and chronic disease states are advised to consult a physician before using this product. DHEA levels should be measured to determine if supplementation is appropriate and a physician should monitor the dosages. Although DHEA generally seems to be protective against cancer, the research is not yet conclusive about hormone-responsive tumors, such as breast, ovarian and prostate cancer, although DHEA is actually being used to treat these, and other types of Cancer, and people with these tumors are advised to contact their physician before using this product. Pregnant and lactating women are advised not to take this product.

**TOXICITY** No toxicity has been seen even in dosages 100 times more than the generally recommended dose, given over a period of two years. Long-term, formal human studies are underway, but have not yet been published.

**SIDE EFFECTS** High dosages of DHEA may cause acne, unwanted hair-growth and deepening of the voice in women. All of these side effects are reversible with decreased intake. Irritability, mood changes, over-stimulation, insomnia and fatigue may also be signs of overdosing. Fertility in women may be inhibited by the androgenic metabolites of DHEA.

**RECOMMENDED DOSAGE** Take 10-50 mg daily or according to doctor's prescription. Take capsule in the morning. **For healthy individuals**, to compensate for the body's increasingly declining own production, 10 mg is recommended for people over 40 years of age, 25 mg for people over 50 years of age and 50 mg for people over 60 years of age, as general guidelines. **For therapeutic and/or continuous use, or usage in younger subjects**, a physician should be consulted, to establish the correct daily dosage and blood levels of DHEA should be measured regularly, to achieve optimum hormone levels.

**MODE OF ACTION** Dehydroepiandrosterone, DHEA, is a natural hormone produced primarily by the adrenal gland. It circulates in the body in its water-soluble form, called DHEA-sulfate or DHEAS. First isolated in 1934, it has, for many years been considered of little importance. It is now known to be an essential component in a vast number of physiological functions in the body, including metabolic conversion to both male and female sex hormones (androgens and estrogens), and to have an inverse relationship to the production of stress hormones. As levels of stress hormones rise, levels of DHEA drop. Blood levels of DHEA start rising before puberty and usually peak between the ages of twenty and thirty. At that time DHEA is the most abundant hormone in the body. Unlike other adrenal steroids, such as cortisol, DHEA begins to steadily decline with age, suggesting that DHEA may be a measure of the aging process itself.



DHEA levels have been found to be higher in healthy individuals than in unhealthy men and women, which has initiated research linking DHEA to healthy aging. More than 5000 research papers have appeared over the last three decades, suggesting a connection between DHEA levels and a great variety of diseases. DHEA is currently the focus for some of the most interesting medical research of this century. DHEA does not seem to be controlled by a "feedback loop", as with other hormones, and supplementation is not likely to stop the body's own production.

## RESEARCH REPORTS ENERGY

One of the ways that DHEA seems to reverse the downward spiral of aging is by helping the body to regain more youthful energy. DHEA has shown to be a fatigue fighter. Dr. Samuel S.C. Yen, of the University of San Diego, conducted a double blind, 6-month study, which showed a remarkable increase in perceived physical and physiological well-being for both men and women taking DHEA compared to the placebo. They reported increased energy, better sleep, better ability to handle stress and no side effects.

## MEMORY

Depression and memory problems were studied in a small trial by Dr. Owen M. Wolkowits at the Department of Psychiatry at the University of CA at San Francisco. Supplementation with DHEA brought improvement in memory and a significant relief from depression. Currently two larger studies are being conducted to determine whether DHEA can effect the outcome of Alzheimer's disease.

## SEX

In both men and women, DHEA is converted to testosterone, which is known to enhance libido in both sexes. DHEA's effect on male sexual function was documented in the Massachusetts Male Aging Study on men aged forty to seventy. It was found that of 17 hormones measured, only DHEA showed consistent correlation with impotence. As DHEA levels declined, the incidence of impotence increased. It is possible that the mood and energy-enhancing effects of DHEA may be just as important as the hormonal effects. Recent studies indicate, that DHEA may actually be a "Natural Viagra" for women (September, 2000). Backed by scientific reports and clinical results, Professor Bolieux of France has strongly confirmed DHEA's very important role and beneficial effects as a "Superhormone".

## IMMUNE SYSTEM AND STRESS

Research is suggesting that the condition of our immune system is a reflection of how well or how poorly we are aging. As we age and our DHEA levels decline, we become more susceptible to the harmful effects of corticosteroids, the stress hormones, which are inhibitors of the immune response. **One of the main functions of DHEA, seems to be the maintenance of a strong and youthful immune system, by buffering or antagonizing the action of corticosteroids.**

Dr. Omid Khorram, formerly professor of medicine at the University of CA at San Diego, undertook a groundbreaking human study, giving DHEA to nine healthy, older men for five months. It was found that DHEA had a measurable rejuvenating effect on their aging immune system. It elevated the men's levels of IGF-1, normalized levels of cytokine IL 6, increased levels of cytokine IL 2, stimulated the production of B cells and macrophages, and increased the number and activity of NK cells. It is known that after periods of extreme stress, the T-helper cells do not work efficiently, which makes one vulnerable to viral disease. Studies on old mice have shown that administration of DHEA before vaccination against a virus makes the immune system respond significantly stronger than without DHEA.

## ANTIOXIDANT PROPERTIES

There are good reasons to believe that DHEA is a powerful antioxidant. It appears to prevent the formation of free radicals, by disarming NADPH, a body substance that is known to generate free radicals and convert dormant carcinogens into active ones.

## HEART

The relationship between declining DHEA levels and heart disease has been debated for decades. Several studies have shown that the levels of DHEA are lower in people with heart disease. These studies indicate that higher levels of DHEA protect against heart disease, the mechanisms of which may be a combination of prevention of excess blood clot formation, lowering of blood cholesterol (DHL), decrease of insulin resistance and reduction of free radical formation.



## MENOPAUSE

After menopause, when the ovaries stop making estrogen, small amounts of estrogen continue to be manufactured in the adrenal glands by DHEA, which is a precursor to estrogen. Supplementation with DHEA in post-menopausal women therefore, appears to be a way of increasing estrogen levels naturally. In Europe DHEA has been used for more than fifteen years to treat menopause-related discomfort, such as depression and hot flashes. Several clinical studies of DHEA's potential as a substitute for estrogen replacement therapy have shown positive results. Preliminary findings indicate that DHEA offers many of the same benefits as estrogen replacement without the harmful side effects. Dr. Pierre Diamond at Le Centre Hospitalier de l'Université Laval in Canada conducted a study, in which he gave DHEA as a replacement therapy to twenty postmenopausal women, aged sixty to seventy, for one year. DHEA was administered in the form of a topical cream. Blood levels were measured periodically. After one year on DHEA the women, without their knowledge, were switched to a placebo. During the DHEA period nearly all the women reported an increase in energy and general well-being; additionally some important physical changes were detected:

- Reduction of insulin, glucose and cholesterol levels in the blood, suggesting protection for heart disease.
- A marked increase in bone density, particularly in the hip and spine area, indicating reduction of osteoporosis.

## AUTOIMMUNE DISORDERS

In clinical trials DHEA has shown to be effective in treating Systemic Lupus Erythematosus (SLE). A double blind study at Stanford University, involving twenty-eight women with mild to moderate lupus, showed a marked improvement in two-thirds of the women on DHEA after 3 months. Additionally, they were able to reduce their regular dose of Prednisone. The women in the placebo group showed virtually no improvement.

## BURNS

DHEA also seems to have a valuable potential in the healing of burns. The risk of infections associated with burns, is not only due to the open skin, but also to a negative impact on the immune system, because of an extremely high level of stress hormones secreted in connection with the burn. In animal studies it has been shown that an injection of DHEA within three days after the burn will make the immune function bounce back to normal. If DHEA is given within three to four hours, the burn heals faster.

## WEIGHT-LOSS

In animal studies, DHEA appears to be an appetite suppressant, changing the food preference, potentially blocking the formation of acids that are stored as fat in the body. Minimal effect on obesity in humans has been seen so far. For DHEA to be used as a human weight reduction tool, it would have to be effective in lower doses.

## CANCER, DIABETES AND INCREASED LIFESPAN

Several animal studies have indicated that administration of DHEA may be beneficial in preventing cancer and diabetes and increasing lifespan, but the relevance to humans is still clinically unproven.

*Regardless of whether DHEA lengthens the lifespan, it is evident that it does have some important therapeutic applications, and used wisely, it may improve the quality of life and postpone some signs of aging. A great deal of research is underway and it will give us answers about the effects and safety of long-term use.*

## PRODUCTION/"GMP"

Although DHEA is synthetically produced (most often from diosgenin, or other sterols in the wild Mexican yam) supplemental DHEA is identical with the natural body-hormone DHEA. **The human body cannot convert these plant substances to DHEA, and any statement to this effect about "natural DHEA" is simply incorrect and not true.** DHEA has to be made synthetically to function as the DHEA synthesized by the body itself.

It is very important that the active ingredients and other raw material/components are of the **highest pharmaceutical grade/quality available**. Also, the production of the finished dosage form should be performed according to approved standards, which adhere to **Good Manufacturing Process ("GMP")**. This is applicable for all pharmaceutical products, including prescription drugs, as well as Over-The-Counter drugs ("OTC").



Preferably, there should be a **Drug Master File ("DMF")**-number for all active ingredients, as issued by the **Food & Drug Administration ("FDA")**. **The highest quality pharmaceutical grade DHEA is being offered in capsules of 5mg, 10mg, 20mg, 25mg, 35mg and 50mg.**

**All products are packed in tamper proof blister packs, 30 to each blister, in 120 capsules boxes.** Production adheres fully to the principles of **Good Manufacturing Process (GMP)**.

#### **ARTHRITIS & AUTOIMMUNE DISORDERS**

Treatment with Pregnenolone has shown marked clinical improvement in patients with **Ankylosing Spondylitis (AS)** (a chronic inflammatory disease of the joints in the spine leading to back pain or stiffening), **Lupus** (Systemic Lupus Erythematosus ("SLE"), an auto-immune conditions with swollen joints, skin rashes, mouth ulcers), **Osteo- and Rheumatoid Arthritis**, as well as **Scleroderma** (hardening and rigidity of the skin and some internal organs). Considering Pregnenolone's extraordinarily low order of toxicity and side effects, treatment with Pregnenolone should be considered as "the first line defense", according to many physicians!

#### **NEUROLOGICAL HELP**

Pregnenolone has also been used in treating **Alzheimer's Disease (AD)** (Pregnenolone acts on the glutamate receptors and on the Cholinergic system), **Multiple Sclerosis (MS)** (the sheath (myelin) surrounding the nerves breaks down), **nerve injuries** (due to accidents, burns, electric shock), **Parkinson's Disease (PD)** and **seizures** (stimulates the NMDA-receptors and "moderates" the GABA-receptors).

#### **DEPRESSION**

Severe cases of "low mood" are called depression. Ten percent of the population suffer from **dysthymia**, a milder form of depression, with signs of helplessness, fatigue, low self-esteem, over- or under-eating, sleep irregularities and poor motivation. Depressed people also have lower levels of Pregnenolone in the Cerebrospinal fluid ("CSF"), than do healthy individuals. Pregnenolone has been successfully used in counteracting all types of depression.

#### **OTHER INDICATIONS**

Pregnenolone has been used in the treatment of **Chronic Fatigue Syndrome/ "CFS"**, **Addison Disease** (destruction of the adrenal cortex causing deficiencies in several crucial adrenal hormones), **high cholesterol levels** (traditional treatment inhibits the formation of the enzyme HMGCoA-reductase, which is involved in making cholesterol in the body, but also inhibits Pregnenolone levels), **Immune System Deficiencies** (most likely through it's conversion to DHEA), and **skin conditions** (in creams it may reverse wrinkling of the skin).

#### **ANTI-AGING/ GENERAL HEALTH AND WELL BEING/ QUALITY OF LIFE/ LONGEVITY**

Regardless of whether Pregnenolone **lengthens the lifespan**, it is evident that it does have some important therapeutic application, and used wisely, it may improve the **Quality of Life** and **postpone signs of aging or the aging process** itself, while improving general health and sense of well-being. A great deal of research is underway and it will give us answers about the effects and safety of long-term use.

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Although this product is not a drug (no medical claims are being made), it is considered to be a Dietary Supplement; no compromises are made on the quality of the ingredients, or on the production of the final dosage form. While the US market does not demand adherence to these strict rules, other markets (e.g. Europe and Asia), only accept production according to these standards, rules and regulations. As a result many products manufactured in the US, or abroad for the US market, do not meet these criteria and standards and must therefore be considered as inferior, even fraudulent.

**For your safety and for efficacy reasons, make sure you only buy and use products produced in compliance with “GMP”, containing pharmaceutical grade ingredients. Not all products are alike! “More” or “Cheap” is not always better!**

**STORAGE** Store at or below 20° C in sealed containers in a dry place.

**REFERENCES** If separate “Reference List” on Dehydroepiandrosterone is not included, please request it - or search “The Net” – for information and clinical studies. There are several thousand references on DHEA and its usages for all various medical indications as well as an effective general anti-aging remedy.

**FOR MORE INFO** Please visit [www.eurohealth.ch](http://www.eurohealth.ch)

**DISCLAIMER:** *The information presented is intended for educational purposes for health professionals and practitioners. It is obtained from published research and books. It is not intended to be prescriptive, nor replace the care of a licensed health professional in the diagnosis and treatment of illness. Rules in regards to acquisition, possession and usage of this product varies from country to country. It is up to the person acquiring/using the product to verify that all applicable criteria are met.*

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## DEHYDROEPIANDROSTERONE - (DHEA) SELECTED REFERENCES

Albrecht, E.D.; Henson, M.C., et al.: Modulation of adrenocorticotropin-stimulated baboon fetal adrenal dehydroepiandrosterone formation in vitro by estrogen at mid- and late gestation. *Endocrinology* 126(6), 1990 Jun; 3083-3088.

Araghi-Niknam, M., Liang, B., et al.: Modulation of immune dysfunction during murine leukaemia retrovirus infection of old mice by Dehydroepiandrosterone sulphate (DHEAS). *Immunology*, 0(3):344-9, 1997.

Araneo BA; Ryu SY; Barton S; Daynes RA: Dehydroepiandrosterone reduces progressive dermal ischemia caused by thermal injury. *J Surg Res* 1995 Aug; 59(2): 250-62 Argtielles, A.E. et al., *Endocrine profiles and breast cancer. Lancet*, 1973; 1:165-168.

Arguelles, A. E., Poggi, U. L., Saborida, C., Hoffman, C., Chekherdemian, M., Blanchard, O.: *Endocrine Profiles and Breast Cancer. Lancet*, 1:165-168,1973.

Barrett-Connor, E., Khaw, K.T., Yen, S.S.: A prospective study of Dehydroepiandrosterone sulfate, mortality, and cardiovascular disease. *N Engl J Med*, 315:24, 1519-24, 1986, Dec 11.

Barrett-Conor, E.; Edelstein, S.L.: A prospective study of dehydroepiandrosterone sulfate and cognitive function in an older population: The Rancho Bernardo Study. *J. Am. Geriatr. Soc.* 42(4), 1994 Apr.; 420-423.

Berkenhager-Gillesse, E.G., et al.: Dehydroepiandrosterone sulphate (DHEA-S) in the oldest, old, aged 85 and over. *Ann N Y Acad Sci* (719), May 31, 1994; 543-552.

Berr, C., Lafont, S., et al.: Relationship of Dehydroepiandrosterone sulfate in the elderly with functional, psychological, and mental status, and short-term mortality: a French communitybased study. *Proc Natl Acad Sci U S A*, Vol. 93, pg 13410-13415, 1996 Nov 12.

Browne, E.S., et al.: Dehydroepiandrosterone: Antiglucoconicoid action in mice. *Am J Med Sci*, 1992; 303:366-371.

Calabrese, B.P.; Isaacs, E.R.; Regelson, W.: Dehydroepiandrosterone in multiple sclerosis: positive effects on fatigue syndrome in a non-randomizing study. In the biological role of dehydroepiandrosterone. Edited by M. Kalimi and W. Regelson, New York: de Gruyter, 1990; 95-100.

Casson P.R., Faquin, L.C., et al.: Replacement of Dehydroepiandrosterone enhances T-lymphocyte insulin binding in postmenopausal women. *Fertil Steril*,63(5):1027-31, 1995 May.

Casson, P.R., Andersen, R.N., et al.: Oral Dehydroepiandrosterone in physiologic doses modulates immune function in postmenopausal women. *Mosby, Year Book*, 1993.

Cherniske, Stephen, M.S.: *The DHEA Breakthrough*. Ballantine Books. Cleary, M.P.; Shepherd, P.; Jenits, B.: Effect of dehydroepiandrosterone on growth in lean and obese

Zucker rats. *J Nutr*, 1984; 114:1242-1251.

Cohen, S., Tyrrell, D.A., Smith, A.P.: Psychological stress and susceptibility to the common cold. *N Engl J Med*, 325(9):606-12, 1991, Aug 29.

Coleman, D.L.; Laiter, E.H.; Applerweig, N.: Therapeutic effects of dehydroepiandrosterone metabolites in diabetes mutant mice. *Endocrinology*, 1984; 115, 239-243.

Danenberg, H.D., Ben-Yehuda, A., et al.: Dehydroepiandrosterone (DHEA) treatment reverses the impaired immune response of old mice to influenza vaccination and protects from influenza infection. *Vaccine*, 13(15):1445-8, 1995.



- Diamond, P., Cusan, L., Gomez, J.L., et al.: Metabolic effects of 12 mo. percutaneous Dehydro-epiandrosterone replacement therapy in postmenopausal women. *J Endocr*, 150 Suppl(): S43-50, 1996 .
- Drocker, W.D.; Blumberg, J.M., et al.: Biologic activity of dehydroepiandrosterone sulfate in man. *Journal of Clinical Endocrinology*, 1972; 35, 48-0.
- Ebeling, P.; Koivisto, V.A.: Physiological importance of dehydroepiandrosterone. *Eng J Clin Endocrinol Metab* 78(6), 1994 Jun; 15-20.
- Faasati, P.; Fassati, M., et al.: Treatment of stabilized liver cirrhosis by dehydroepiandrosterone. *Agressologia* 14(4), 1973; 259-268.
- Gordon, G.; Bush, D.; Weisman, H.: Reduction of arteriosclerosis by administration of dehydroepiandrosterone. *J Clin Invest.*, Department of Medicine, Johns Hopkins Medical Institutions, 1988 Aug; 82(2):712-720.
- Haffa AL; MacEwen EG; Kurzman ID; Kemnitz JW.: Hypocholesterolemic effect of exogenous dehydroepiandrosterone administration in the rhesus monkey. *In Vivo* 1994 Nov-Dec; 8(6):993-997.
- Haffner, S.M.; Valdez, R.A.; Mykkanen, L.; Stern, M.P.; Katz, M.S.: Decreased testosterone and dehydroepiandrosterone sulfate concentrations are associated with increased insulin and glucose concentrations in non-diabetic men. *Metabolism*, 1994 May; 43(5):599-603.
- Harland, Simone, Wenzel, Axel F., Dr: Superhormon DHEA. Messidor Verlag (in German)
- Henderson, E; Yang JY; Schwartz A.: Dehydroepiandrosterone (DHEA) and synthetic DHEA analogs are modest inhibitors of HIV-1 IIB replication. *AIDS Res Human Retroviruses* 1992 May; 8(5):625-31.
- Inano H; Ishii-Ohba H; Suzuki K; et al.: Chemoprevention by dietary dehydroepiandrosterone against promotion/progression phase of radiation-induced mammary tumorigenesis in rats. *J Steroid Biochem Mol Biol* 1995 Jul;54(1-2):47-53.
- Iwasaki, M.; Darden, T.A.; Parker, C.E.; Tomer, K.B.; Pedersen, L.G.; Negishi, M.: Inherent versatility of P450 oxygenase. Conferring dehydroepiandrosterone hydroxylase activity to P-450 2a-4 by a single amino acid mutation at position 117. *Breast Cancer Rest Treat* (3), 1990 Oct, 16;261-272.
- Kalimi, Mohammed, Regelson, William: Dehydroepiandrosterone (DHEA), Biochemical, Physiological and Clinical Aspects. de Gruyter, 2001.
- Khorram, O., Vu, L., Yen, S.S.: Activation of immune function by Dehydroepiandrosterone (DHEA) in aged advanced men. *J Gerontol A Biol Sci Med Sci*, 52(1):MI-7, 1997, Jan.
- Kim, H.R., Ryu, S.Y., et al.: Administration of Dehydroepiandrosterone reverses the immune suppression induced by high dose antigen in mice. *Immunol Invest*, 24(4):583-93, 1995 May.
- Loria, R.M., Padgett, D.A., Huynh, P.N.: Regulation of the immune response by Dehydroepiandrosterone and its metabolites. *J Endocrinol*, 150 Suppl(): S209-20, 1996 Sept.
- Marrero, M.; Prough, R.A.; Frenkel, R.A.; Milewich, L.: Dehydroepiandrosterone feeding and protein phosphorylation, phosphatases and lipogenic enzymes in mouse liver. *Exp. Clin. Endocrinol* 96(2), 1990 Nov; 149-156.
- Mayer, D.; Weber, E.; Bannasch, Pl.: Modulation of liver carcinogenesis by dehydroepiandrosterone. In the biological role of dehydroepiandrosterone. Edited by M. Kalimi and W. Regelson, New York: DeGruyter, 1990; 361-385.
- Melchior, C.; Ritzmann, R.F.: Dehydroepiandrosterone is an anxiolytic in mice on the plus maze. *Pharmacol Biochem Behav* 47(3), 1994 Mar; 437-441.
- Merril, C.R.; Hanrington, M.G.; Sunderland, T.; Reduced plasma dehydroepiandrosterone concentrations with HW infections and Alzheimer's disease. In the biological role of dehydroepiandrosterone. Edited by Kalimi, M. and Regelson, W., New York: de Gruyter, 1990; 101-105.



Miklos, S.: Dehydroepiandrosterone sulphate in the diagnosis of osteoporosis. *Acta Biomed Ateneo Parmense*, 66(3-4): 139-46, 1995.

Morales, A.J., Nolan, J.J., Nelson, J.C, Yen, S.S.: Effects of replacement dose of Dehydro-epiandrosterone in men and women of advancing age. *J Clin Endocrinol Metab*, 78(6)L1360-7, 1994, Jan.

Motorola, J.F. and Yen, S.S.C.: The effects of oral dehydroepiandrosterone on endocrine-metabolic parameters in postmenopausal women. *J Clin Endocrinol Metab*, 1990; 71:696-704.

Nestler, J.E.; Clore, J.N.; Blackard, W.G.: Metabolism and actions of dehydroepiandrosterone in humans. *J Steroid Biochem Mol Biol*, 1991 Dec; 20(4):807-823.

Nestler, J.E.; Clore, J.N.; Blackard, W.G.: Dehydroepiandrosterone: the missing link between hyperinsulinemia and atherosclerosis? *FASEB J*, 1992 Sept; 6(12):3073-3075.

Nordin, B.E.C., et al.: The relation between calcium absorption, serum dehydroepiandrosterone, and vertebral mineral density in postmenopausal women. *J Clin. Endocrinol Metab.*, 1985; 60:651-657.

Nyce, J.W., et al.: Inhibition of 1,2-dimethylhydrazine induced colon tumorigenesis in Balb/c mice by dehydroepiandrosterone. *Carcinogenesis*, 1984; 5:57-62.

Parough, R.A.; Webb, S.J.; Wu, H.Q.; Lapenson, D.P.; Waxman, D.J.: Induction of microsomal and peroxisomal enzymes by dehydroepiandrosterone and its reduced metabolite in rats. *Cancer Res.* 54(11), 1994 Jun 1; 2878-2886.

Ravaglia, G., Forti, P., Maioli, F., et al.: The relationship of Dehydroepiandrosterone sulfate (DHEAS) to endocrine-metabolic parameters and functional status in the oldest-old. Results from an Italian study on healthy free-living over ninety-year-olds. *J Clin Endocrinol Metab*, 81:3. 1173-8, 1996 Mar.

Regelson, William, M.D., Colman, Carol: *The Superhormone Promise*, Simon & Schuster.

Regelson, W., Kalimi, M.Y.: Dehydroepiandrosterone (DHEA)- A Pleiotropic Steroid. How can one Steroid do so much? Departments of Medicine and Physiology, Medical College of Virginia, Virginia Commonwealth Richmond, VA.

Regelson, W., Kalimi, M.Y.: Dehydroepiandrosterone (DHEA)- the Multifunctional Steroid. Medical College of Virginia, Virginia Commonwealth University, Richmond, Virginia.

Regelson, W., Loria, R. and M. Kalimi.: Dehydroepiandrosterone (DHEA)- the "Mother Steroid". Medical College of Virginia, Virginia Commonwealth University, Richmond, Virginia.

Sahelian, Ray, M.D.: *DHEA - A Practical Guide – Nature's Antidote to Aging*

Schwartz, A. G., Pashko, L. L.: Cancer Chemoprevention with the Adrenocortical Steroid Dehydroepiandrosterone and Structural Analogs. *J. Cell Biochem Suppl.* 17G: 73-79. 1993.

Schwartz, A. G., Fairman, D. K., Polansky, M., Lewbart, M. L., Pashko, L. L.: Inhibition of 7,12-Dimethylbenz[a]anthracene-initiated and 12-O-tetradecanoylphorbol-13-acetate-promoted Skin Papilloma Formation in Mice by Dehydroepiandrosterone and Two Synthetic Analogs. *Carcinogenesis* (10): 1809. 1989

Schwartz, A.G.; Fairman, D.K., et al.: The biological significance of dehydroepiandrosterone. *Carcinogenesis* (10), 1988; 1809.

Schwartz, A.G.: Inhibitions of spontaneous breast cancer formation in female C3H(Avy/a) mice by long-term treatment with dehydroepiandrosterone. *Cancer Res*, 1979; 39:1129-1132.

Siegel, S.F.; Finegold, D.N.; Lanes, R.; Lee, P.A.: ACTH stimulates tests and plasma dehydroepiandrosterone sulfate levels in women with hirsutism. *N. Engl. J. Med* 323(13), 1990; Sept 27; 909-911, and *N. Eng. J. Med* 324(8), 1991 Feb 21; 5645 and *Metabolism* 39(9), 1990 Sept; 967-970.

Simunova, 3.; Gregorova, I.; Soiska, J.: Metaboloicke komplekace otylosti-poloss ojejich ovbmmi dehydroeptandrosteron sulfatem. *Steroik lk.*, 1973; (75) 27-30.



Spivak, C.E.: Desensitization and noncompetitive blockage of GABAA receptors in ventral midbrain neurons by a neurosteroid dehydroepiandrosterone sulfate. Addiction Research Center, National Institute on Drug Abuse, Baltimore, Maryland. Sonka, J.; ACTA Univ. Carol (71), 1971; 1-137, 146-171.

Sonka, J., et al.: Defecit des dehydroepiandrosterone nenee syndrome? Endocrinology, 47, 1965; 152-161. Sonka, J.; Stravkova, M., Aggressologie (5), 1970; 421-426.

Sonka, J., et al.: Serum lipids and dehydroepiandrosterone excretion in normal subjects. Journal of Lipid Research, 9, 1968; 769-772.

Suitters, A.J., Shaw, S., Wales, M.R., et al.: Immune enhancing effects of Dehydroepiandrosterone sulphate and the role of steroid sulphatase. Immunology 91(2):314-21, 1997 Jan.

Sunderland, T.; Nerril, C.R.; Harrington, M.G.: DHEA and Alzheimer's disease. Lancet (2), 1989; 570.

Taelman, P., et al.: Persistence of increased bone resorption and possible role of dehydroepiandrosterone as a bone metabolism determinant in osteoporotic women in late post-menopause. Matuiitas, 1989; 11:65-73.

Watson, R.R., Huls, et al.: Dehydroepiandrosterone and diseases of aging. Drugs Aging, 1996 Oct, 9:4, 271-91.

Wise, T.; Klindt, J.; Buonomo, F.C.: Obesity and dehydroepiandrosterone / dehydroepiandrosterone sulfate relationships in lean, obese and meat-type cross-bred boars: responses to porcine growth hormone. Endocrinology 1995 Aug; 136(8):3310-7.

Yamaji, T.; Ishibashi, N.; Takau, F., et al., Acta Endocrinol (Copenh) (120), 1989; 655-660.

Yang, J.Y.; Schwartz, A.; Henderson, E.E.: Inhibition of 3'azido-3'deoxythymidine-resistant HIV-1 infection by dehydroepiandrosterone in vitro. Biochem Biophys Res Commun 1994 Jun 30; 201(3):1424-32.

Yang, J.Y.; Schwartz, A.; Henderson, E.E.: Inhibition of HIV-1 latency reactivation by dehydroepiandrosterone (DHEA) and an analog of DHEA. AIDS Res Hum Retroviruses 1993 Aug; 9(8): 747-54.

Yen, S.S.; Murphy, A.A.; Kettel, L.M.; Morales, A.J.; Roberts, V.J.: Regression of uterine leiomyomata in response to the anti-progesterone RU 486. J Clin Endocrinol Metab 1993 Feb; 76(2): 513-7.

Zumoff, B.; Levin, J.; Rosenfeld, S., et al.: Abnormal 24-hour mean plasma concentrations of dehydroepiandrosterone and dehydroepiandrosterone sulfate in women with inoperable breast cancer. Cancer Res. (41), 1981; 3360-3363.

