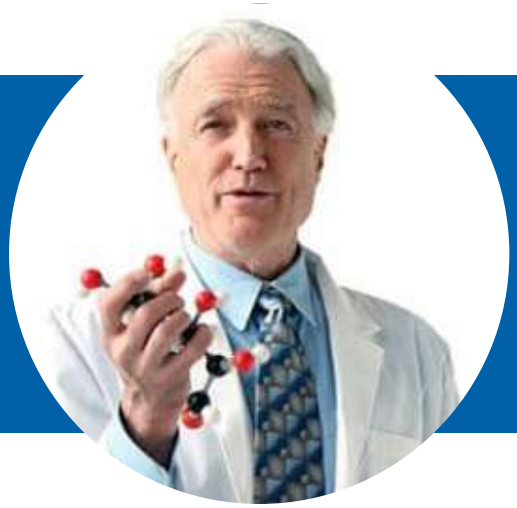
The Case for DHEA



Presented by Stephen Cherniske, MSc

Biochemist and Best-Selling Author

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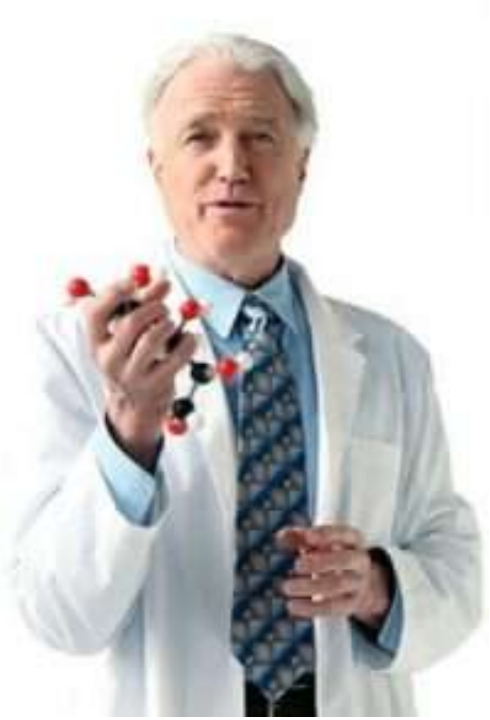
About the Presenter



Stephen Cherniske, MSc is a biochemist with more than 50 years of academic, clinical and research experience. He taught university clinical nutrition, directed the nation's first FDA-licensed clinical lab specializing in nutrition and immunology, and served on the faculty of the American College of Sports Medicine.

His book, *The DHEA Breakthrough* , was an international best-seller which helped to launch the anti-aging movement worldwide. Cherniske is considered to be the chief architect of the metabolic model of aging – now the predominant model used in research protocols throughout the world.

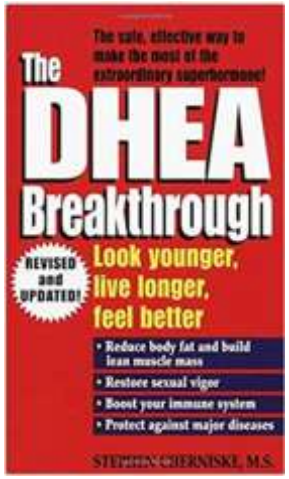
In 1998, he was chosen to direct the Bioregenics Project, an international research effort to explore the physiology of aging. In 2002, the project was completed with irrefutable evidence showing that the underlying causes of aging can be modified by nutrition, diet and lifestyle. Specifically, more than 150 repair functions – in virtually all tissues of the body and brain – were found to be driven by DHEA. This remarkable four-year research project formed the basis for his next book, *The Metabolic Plan* and his latest work, written with his wife, Dr Natalie Kather, *The Metabolic Makeover.*

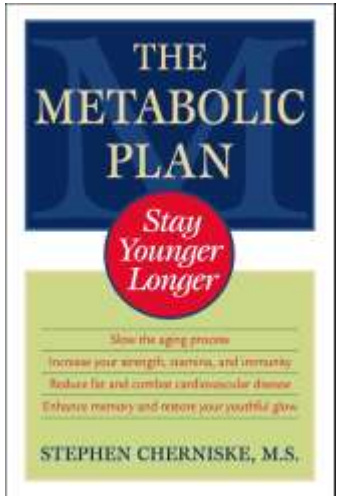
The Case for DHEA

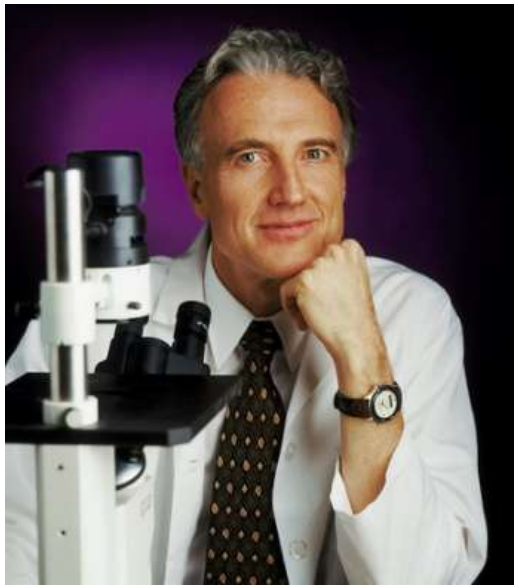
Stephen Cherniske, M.Sc

* Instructor: clinical nutrition, UCLA
* Adjunct professor, Chapman University
* Faculty: American College of Sports Medicine
* Advisor to the U.S. Track & Field Olympic team
* Director: Federally-licensed clinical laboratory specializing in nutrition & Immunology

* Million copy best-selling author:
    The DHEA Breakthrough (Random House 1996),
    The Metabolic Plan (Random House 2003),
    The Metabolic Makeover (Altea Media 2013)







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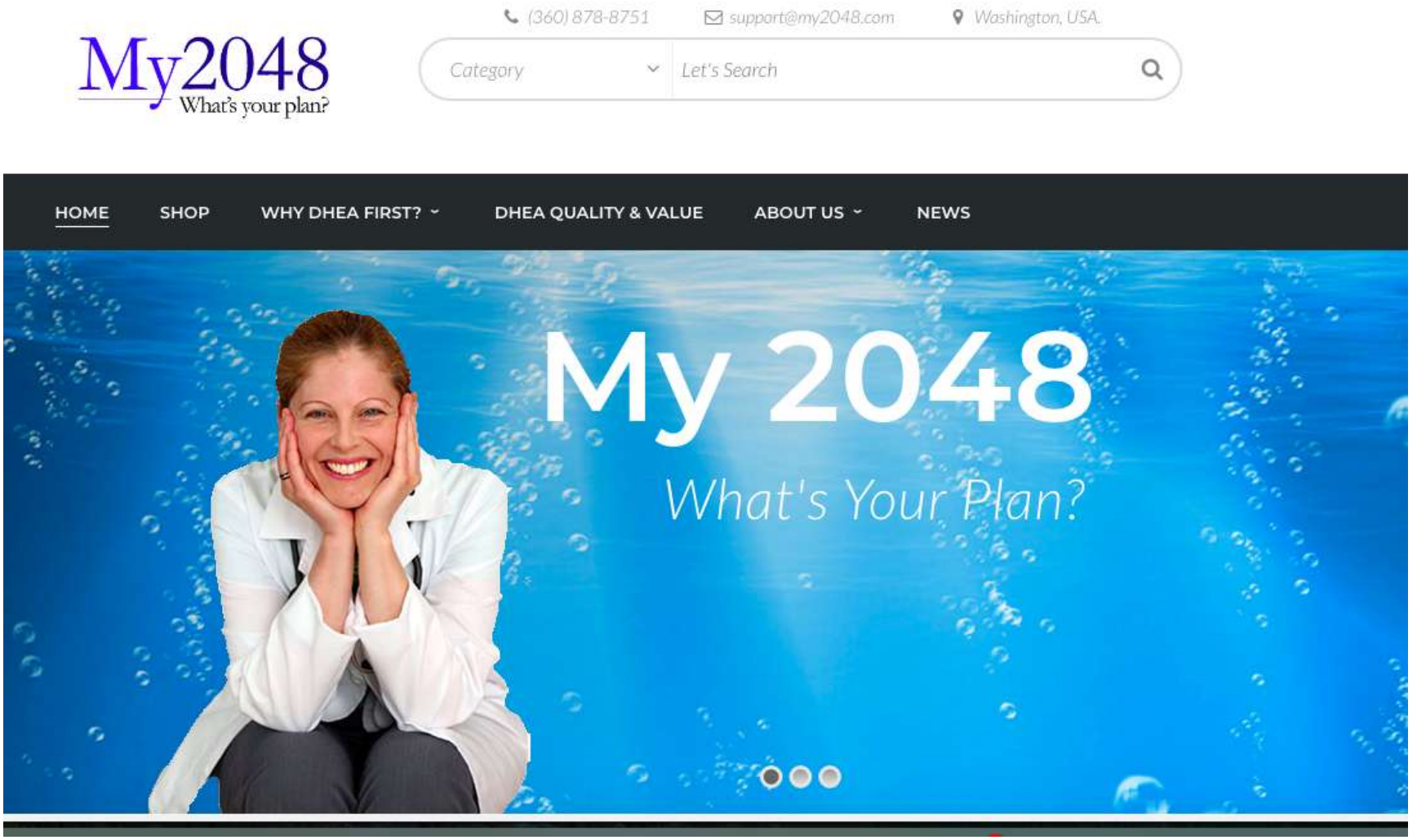

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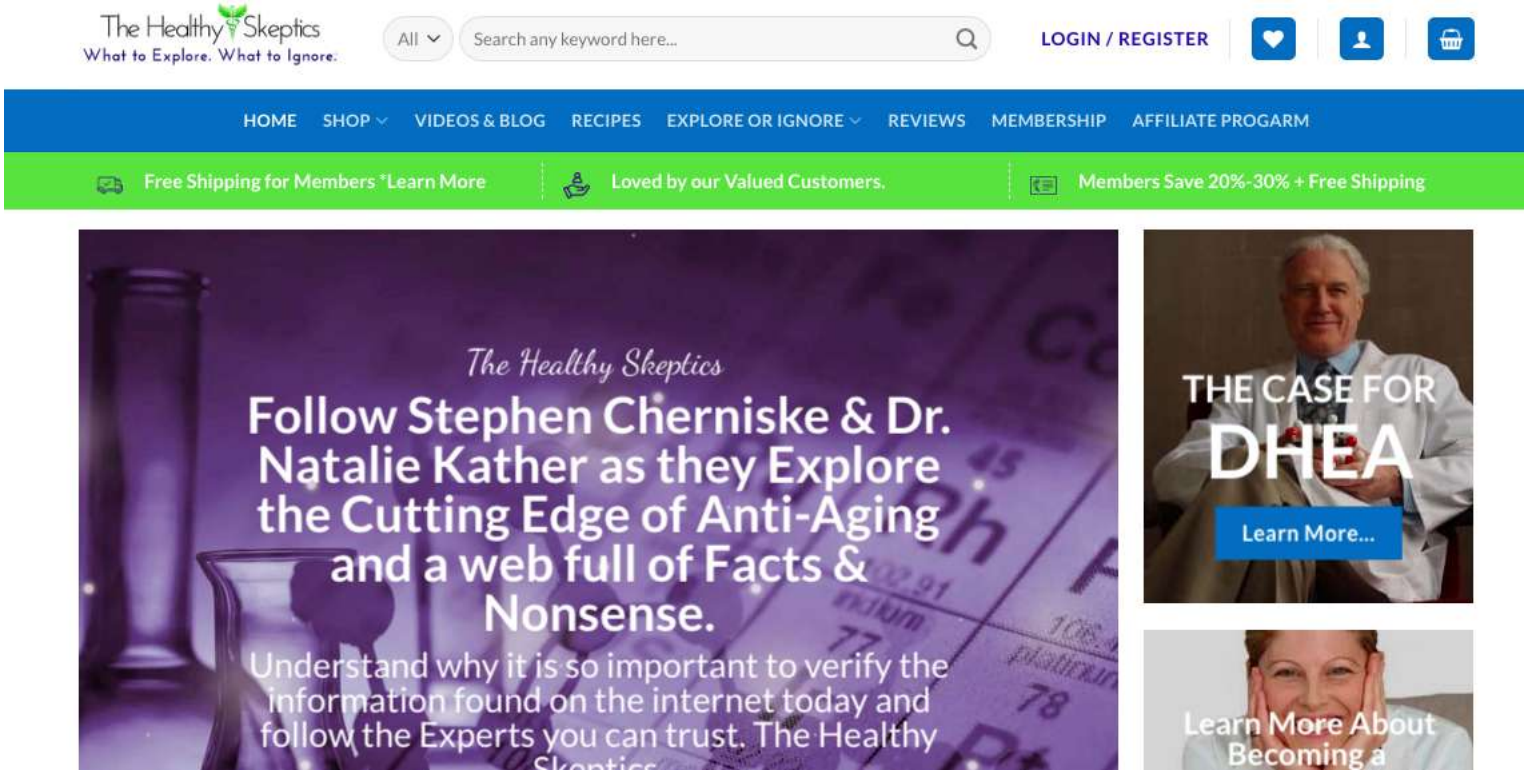
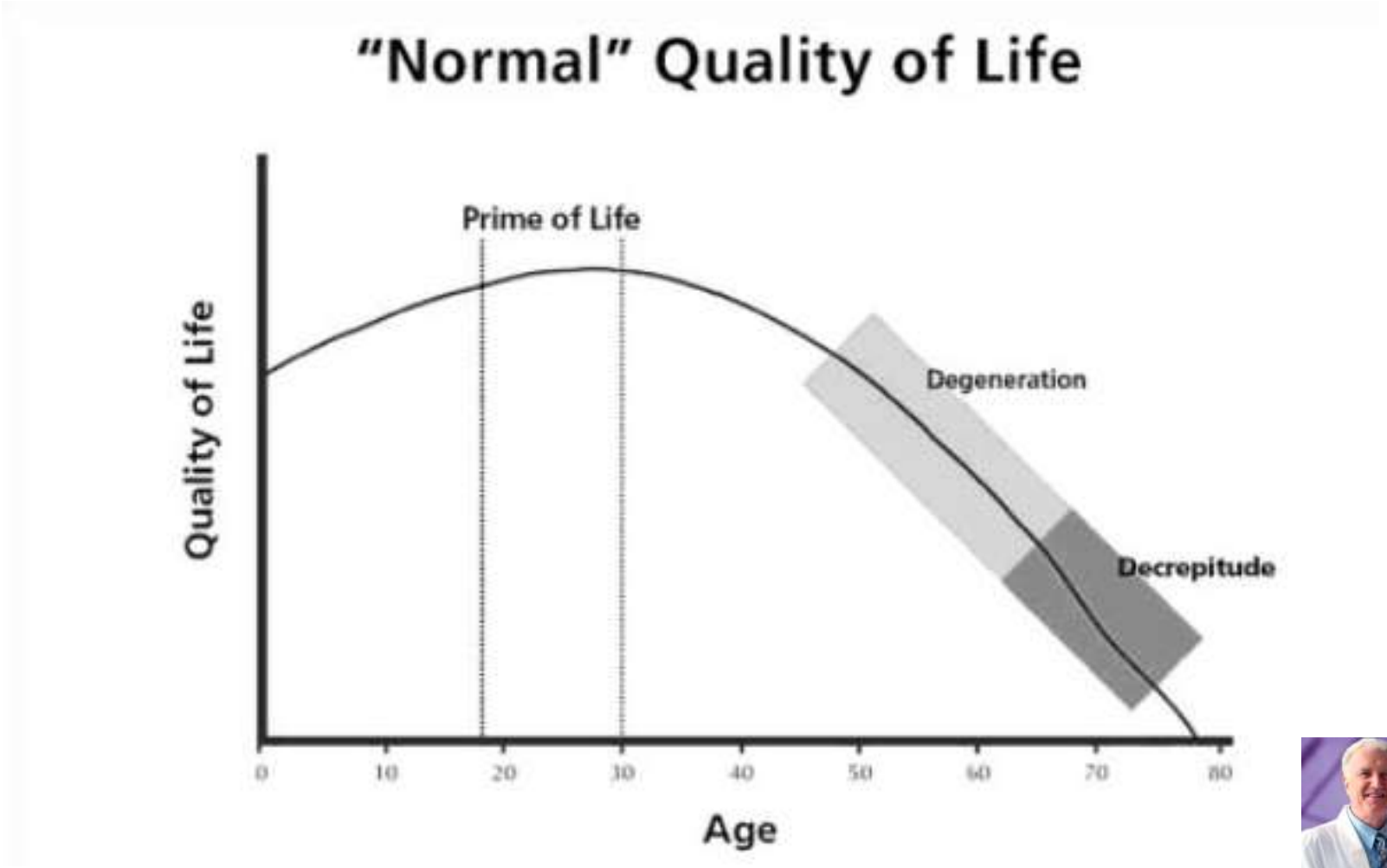
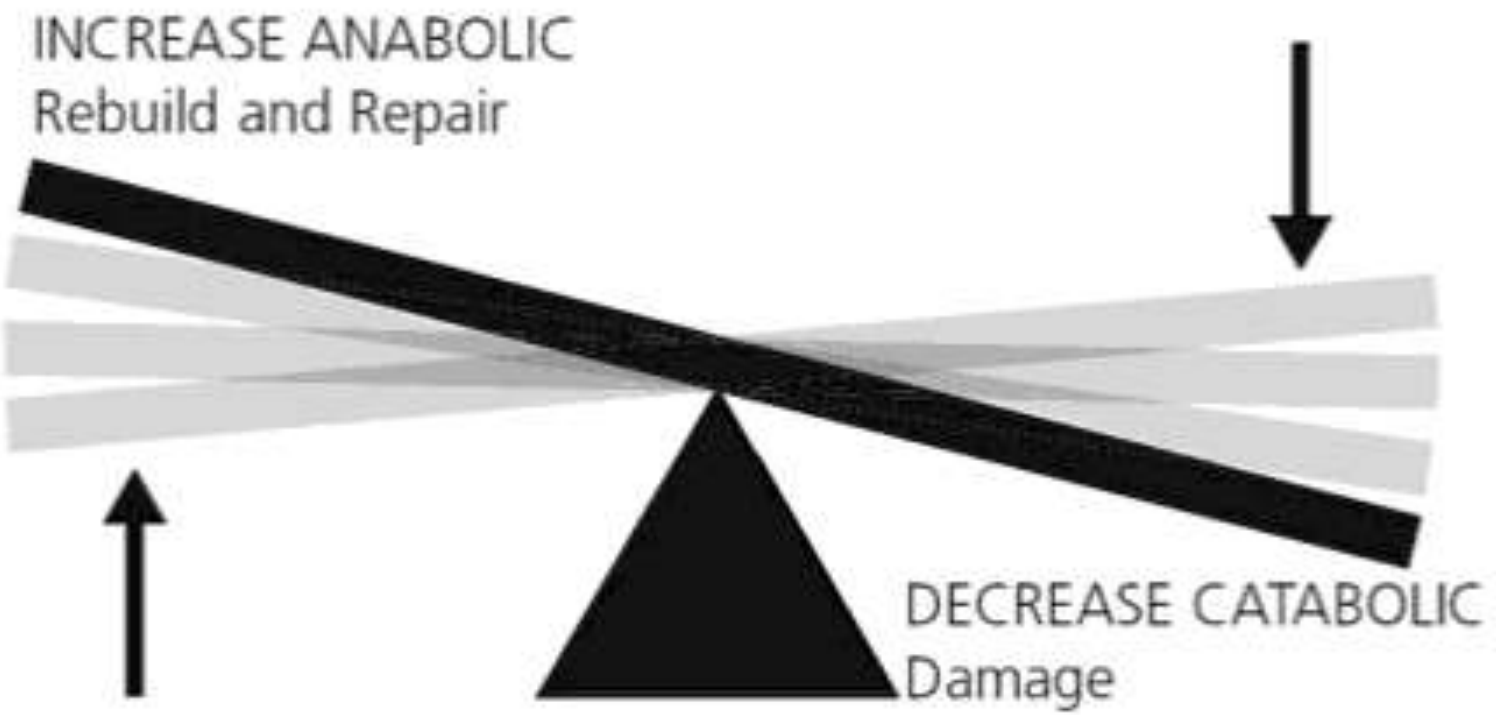


The Problem is Aging



Anti-Aging 101



Horm, V. (2018). The Role of Dehydroepiandrosterone (DHEA) in Skeletal Muscle. Koji Sato, Motoyuki Iemitsu, 108:205-221.

Abstract

Recent studies reveal that androgens and estrogens are synthesized by peripheral tissues such as brain, skin, liver, kidney, bone, etc. We found skeletal muscles are also capable of synthesizing androgens and estrogens from DHEA. Sex steroid hormone administration has important roles: one is the enhancement of protein synthesis and anabolism, resulting in muscle growth and increased muscle strength. The other is improvement of hyperglycemia through the activation of glucose signaling pathway in skeletal muscle as well as acceleration of muscle lipid metabolism that increase peroxisome proliferator-activated receptor alpha (PPARα) and PPAR delta (PPARδ). We evaluate the effect of DHEA and sex steroid hormone administration on muscle glucose and lipid metabolisms as well as the effect of sex steroid hormone on muscle hypertrophy.

An-Chun Hwang , et al. (2013). Association of androgen with skeletal muscle mass and muscle function among men and women aged 50 years and older in Taiwan: results from the I-Lan longitudinal aging study. Rejuvenation Res., 16(6):453-9.

Purpose

The main aim of this study was to explore the association between skeletal muscle mass and muscle function by three different measures of bioactive testosterone, as well as dehydroepiandrosterone sulfate (DHEA-S) among men and women aged 50 years and older in Taiwan to facilitate further investigations of sarcopenia and androgen profile.

Results

Serum levels of DHEA-S were correlated positively with skeletal muscle mass in men ($p=0.013$) and women aged 65 years and older ($p=0.004$) and handgrip strength in both genders ($p<0.001$ in men and $p=0.009$ in women). None of the bioactive testosterone measurements was associated with walking speed, whereas DHEA-S was significantly positively correlated with gait speed in both genders (p both=0.001).

Conclusion

DHEA-S was positively associated with muscle mass in men and older women and muscle strength in both sexes, and was also associated with aging and gait speed in both genders.

MORE RESEARCH

- Villareal, D.T., Holloszy, J.O. (2004). Effect of DHEA on Abdominal Fat and Insulin Action in Elderly Women and Men: A Randomized Controlled Trial. JAMA, 292(18), 2243-2248. doi:10.1001/jama.292.18.2243.

- Villareal, D.T., Holloszy, J.O., and Kohrt, W.M. (2000). Effects of DHEA Replacement on Bone Mineral Density and Body Composition in Elderly Women and Men. Clinical Endocrinology, 53(5), 561-568.

- Villareal, D.T., Holloszy, J.O.(2006). DHEA enhances effects of weight training on muscle mass and strength in elderly women and men. Am J Physiol Endocrinol Metab., 291, E1003–E1008. doi:10.1152/ajpendo.00100.2006.

10 anti-aging effects of DHEA

- Antioxidant
- Anti-obesity
- Immunity
- Strong bones
- Anti-cancer
- Anti-inflammatory
- Blood sugar balance
- Muscle Mass
- Activates stem cells
- Prevents brain atrophy

Synergy with Diindolylmethane (DIM)

- Cruciferous vegetables contain a compound known as indole-3-carbinol or I3C. When ingested, I3C is converted to the active metabolite known as diindolylmethane or DIM.

- Synergy with DHEA is based on:

1. DIM's ability to enhance DNA repair. I3C and DIM have been found to up-regulate DNA repair enzymes, including P53.
2. The ability of DIM to stimulate anti-tumor defense mechanisms.
3. DIM's positive influence on sex hormones. In women, DIM has been shown to restore estrogen metabolism to a more youthful (healthy) metabolic pathway. In men, DIM has been shown to inhibit the conversion of Testosterone to Estrogens via the aromatase pathway.

References for DIM

- Weng JR, et al (2012). The dietary phytochemical 3,3'-diindolylmethane induces G2/M arrest and apoptosis in oral squamous cell carcinoma by modulating Akt-NF-κB, MAPK, and p53 signaling. Chem Biol Interact. Feb 5;195(3):224-30.

- Shin JH, et al. (2013) Modulation of natural killer cell antitumor activity by the aryl hydrocarbon receptor. Proc Natl Acad Sci U S A. Jul 23;110(30):12391-6.

- Jing-Ru Weng, et al. (2008) Indole-3-carbinol as a chemopreventive and anti-cancer agent. Cancer Lett Apr 18;262(2):153-63.

- M Gupta , A McDougal, S Safe (1998) Estrogenic and antiestrogenic activities of 16alpha- and 2-hydroxy metabolites of 17beta-estradiol in MCF-7 and T47D human breast cancer cells. J Steroid Biochem Mol Biol Dec;67(5-6):413-9.

- BE Licznerska, et al. (2013) Modulation of CYP19 expression by cabbage juices and their active components: indole-3-carbinol and 3,3'-diindolylmethene in human breast epithelial cell lines. Eur J Nutr Aug;52(5):1483-92. doi: 10.1007/s00394-012-0455-9.

Synergy with Alpha Lipoic Acid

- Alpha lipoic acid is a vitamin-like compound produced within mitochondria, where it acts as a regulating coenzyme and primary antioxidant.

- Alpha lipoic acid enhances energy production by stimulating **AMPK**, and improves glucose disposal, making it a remarkably effective nutrient for anyone with prediabetes, type 2 diabetes or Metabolic Syndrome.

- ALA has anti-obesity effects by stimulating beta oxidation of fatty acids in liver and muscle. ALA supplementation can also produce benefits in immunity, strength, endurance and cardiovascular health.

"Lipoic acid supplementation improved body composition, glucose tolerance, and energy expenditure. Lipoic acid increased skeletal muscle mitochondrial biogenesis with increased phosphorylation of AMPK and messenger RNA expression of PGC-1alpha and glucose transporter-4."

• Wang, Y., Li, X., Guo, Y., Chan, L., Guan, X. (2010). Alpha-Lipoic acid increases energy expenditure by enhancing AMPK-peroxisome proliferator-activated receptor-gamma coactivator-1alpha signaling in the skeletal muscle of aged mice. Metabolism, 59(7):967-76.

• Lee, W.J., Song, K.H., Koh, E.H., Won, J.C. (2005). Alpha-lipoic acid increases insulin sensitivity by activating AMPK in skeletal muscle. Biochem Biophys Res Commun, 332(3):885-91.

• Gorąca, A., Huk-Kolega, H., Piechota, A., Kleniewska, P., Ciejka, E., Skibska, B. (2011). Lipoic acid - biological activity and therapeutic potential. Pharmacol Rep., 63(4):849-58.

For More Information

- Download the e-book, *The Case for DHEA*, Free at My2048.com.
- 12 educational videos at My2048.com
- Evaluate Synergized DHEA for Men and Synergized DHEA for women, combining DHEA, DIM, Alpha Lipoic Acid and (in women's formula) Chaste tree berry extract.
- Consider other Altea / Healthy Skeptics products including Joint Venture™, providing two clinically-proven [in published RCT's] plant based anti-inflammatories, with curcumin, hydrolyzed collagen and cranberry seed extract.

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Upcoming Webinar

Posture: The Undiagnosed Cause of Chronic Musculoskeletal Pain

Presented by Jessica Kisiel, MS

Coach and Author; Certified Exercise Physiologist and Medical Exercise Specialist

Postural Restoration Trained (PRT), Postural Restoration Institute® (PRI)

LIVE PRESENTATION: Tuesday, August 25, 10:00am PDT

Registration available on medfitclassroom.org.

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Upcoming Webinar

Healing is a Skill

Presented by Dr. Donald Richardson

Sports Medicine Specialist; Strength and Conditioning Specialist

LIVE PRESENTATION: Tuesday, September 1, 10:00am PDT

Registration available on medfitclassroom.org.

MedFit Network members: access **free** registration via your account dashboard

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Thank you!

Question and Answer Segment

Please type your question in the questions box to be answered by the presenter.

For More Info or Questions
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