**BASIC REFERENCES**

**Dr. Rouzier’s hormone basics.**

✪ *How to Achieve Healthy Aging* by Neal Rouzier, MD. A book for patients.

**A few testosterone references.**

✪ [A news report about the recent testosterone study.](http://www.upi.com/Health_News/2017/02/13/Testosterone-therapy-may-protect-against-cardiovascular-disease/2601486999183/)

✪ [Long-term Testosterone Therapy Improves Cardiometabolic Functioning](http://www.ncbi.nlm.nih.gov/pubmed/28421834)

✪ [Mayo Clinic Consensus article](http://www.mayoclinicproceedings.org/article/S0025-6196%2816%2930115-X/pdf) about testosterone for men. This is a comprehensive summary of the science. It should have shut down the critics, but it did not. Abe Morgentaler, MD (associate clinical professor of urology, Harvard), is the primary author. Testosterone protects against heart and other diseases.

✪ A [YouTube summary](http://www.youtube.com/watch?v=tGKd3OJX_TY&feature=youtu.be) of Dr. Morgentaler’s testosterone views.

✪ [The Benefits and Risks of Testosterone Therapy, a Review](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2701485/). “TRT may produce a wide range of benefits for men with hypogonadism that include improvement in libido and sexual function, bone density, muscle mass, body composition, mood, erythropoiesis, cognition, quality of life and cardiovascular disease.”

✪ [Hormonebalance.org](http://Hormonebalance.org) is Rebecca L. Glaser’s website and is the best single pellet reference. The bias here is to use only testosterone for both men and women. Medical practices offering just testosterone pellets are easier to manage and require less doctor time for explanations. From my experience and the literature, I believe the better option is to replace the other hormones also, but testosterone alone is much better than nothing. Dr. Glaser, unfortunately, likes estrogen blockers.

✪ *Testosterone, Strong Enough for a Man, Made for a Woman,* Charles Mok, DO. Overview and unique perspectives from a groundbreaking doctor.

**Other links of interest:**

✪ [BEST WEBSITE DESCRIBING THYROID THERAPY: https://stopthethyroidmadness.com](https://stopthethyroidmadness.com)

✪ [MENOPAUSE TEST FOR WOMEN](https://drive.google.com/file/d/1yre45Aht4pdcASUpluVR0TFyEO0P2cld/view?usp=sharing)

✪ [HORMONE TEST FOR MEN](https://drive.google.com/file/d/1Rc0cBC9AUzsD_L8tRxaH6njeKcs_pTu4/view)

✪ [HEALTH HISTORY QUESTIONAIRE](https://drive.google.com/file/d/14469q51z1NusTP7RwkEy-wzTb_ubllxi/view?usp=sharing)

✪ [A NEW BODY IN ONE DAY BOOK](https://drive.google.com/file/d/1Wp_jxjuehkF2XtjDxiNXrHTWkICYifN9/view?usp=sharing)

**Blood testing at Lifeextension.com:**

✪ Link: [FOR WOMEN](https://www.lifeextension.com/Vitamins-Supplements/itemLC100011/Female-Comprehensive-Hormone-Panel-Blood-Test)

✪ Link: [FOR MEN](https://drive.google.com/file/d/1Rc0cBC9AUzsD_L8tRxaH6njeKcs_pTu4/view?usp=sharing%0Ahttps://www.lifeextension.com/lab-testing/itemlc100010/male-comprehensive-hormone-panel-blood-test)

 **Weight Loss:**

See Jason Fung’s YouTubes and books, including *The Obesity Code*.

See Dr. Michael Greger’s [Nutritionfacts.org](http://Nutritionfacts.org) and his book *How Not to Diet.*

**After you follow the links here, look at my advanced** [**references**](https://docs.google.com/document/d/1CS6IhkpanjsTElwfSHE7lZXePYww3zxweVem12u70do/edit?usp=sharing)**:** see the [Sources section](https://www.dryohoauthor.com/essential-references) at DrYohoAuthor.com and click on the top right button, “Hormone References.”

**Consider taking Dr. Rouzier’s courses.** He does not limit attendance to medical professionals. Sign up at [worldlinkmedical.com](http://worldlinkmedical.com). And listen to his podcasts and read more.

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**Section 1:  Introduction to Optimal Replacement Therapy and Literature Review**

**1.        Testosterone and Depression: Systematic Review and Meta Analysis**

Published by: Journal of Psychiatric Practice

Authors: FA Zarrouf, S Artz, J Griffith, C Sirbu, and M Kommor

Link to the Study: <http://journals.lww.com/practicalpsychiatry/Abstract/2009/07000/Testosterone_and_Depression__Systematic_Review_and.5.aspx>

Summary:

The key objective of the study was to understand the effect of TT (testosterone) administration on depression using both systematic review of the literature and a meta-analysis. For the purpose of the study trails where chosen from MEDLINE, the Clinical Trials Registry, and Cochrane Central for English-language publications concerning randomized, placebo-controlled trials involving use of TT therapy in depressed patients. Only the trials that reported original data from a controlled trial comparing use of TT and placebo in patients diagnosed with a depressive disorder according to DSM criteria, and the treatment response was evaluated according to changes on the Hamilton Rating Scale for Depression (HAM-D). From the chosen seven trials, with total of 364 patients, it was concluded that testosterone replacement therapy may have an antidepressant effect in depressed patients, especially those with hypogonadism or HIV/AIDS and elderly subpopulations.

**2.        Brains, Hormones, and More Behind Women's Aging**

Journal: Biomedicina

Author: Not Available

Link to the Study: Not Available

Summary:

This particular paper discusses the most common health problems affecting the aged, the possible limitations that it throws on their daily lives and the latest solutions that the medical science can offer. Age comes with a variety of ailments and physical disabilities. Ailments like osteoarthritis and other debilitating diseases are all important factors in the weakened condition of the aged. A number of studies are being done with the intention of understanding the process of aging and finding a sustainable solution for age-related ailments. There are now "routine" medical intervention programs offering long term replacement therapy with one or more hormones in order to delay the aging process and to allow us to live for a longer period in a relatively intact state.

**3.        Effective treatments for age‐related sleep disturbances**

Journal: Geriatrics. 1999 Nov;54(11):47‐52.

Author: Vitiello MV.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/10570656>

Summary:

This article discusses sleep disorders among the older persons. Sleep disorders result from multiple factors--including pharmacologic, physiologic, biologic, and behavioral--and can be mildly debilitating or life-threatening. The paper also discusses the impact of visceral fat on the aging . Many studies indicate the link between obesity and disease of aging has been confirmed in studies. The increase in visceral fat tissue in older persons is associated with decreases in the serum levels of estrogen, testosterone, and growth hormone. Hence one of the most effective treatment discussed here is how augmenting the lower levels of these and other hormones that decrease with age may better control visceral fat deposition, thereby leading to decreased insulin resistance and to decreased risk of diabetes and atherosclerosis.

**4.        Report of the Council on Science and Public Health**

Action of the AMA House of Delegates 2009 Annual Meeting: Council on Science and Public Health Report.

Subject: "The Use of Hormones for "antiaging": A Review of Efficacy and Safety.

Presented by: Carolyn B. Robinowitz, MD

Link to Study: <https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/a09-csaph-antiaging-hormones.pdf>

Summary:

This report reviews the scientific evidence on the benefits and risks of human growth hormone (hGH), dehydroepiandrosterone (DHEA), testosterone, and estrogens with or without progestins as supplements to prevent, slow, or reverse age-related changes in otherwise healthy adults.

Four MEDLINE searches were conducted which were limited to reviews, meta-analyses, and controlled clinical trials in humans aged 45 years and older that were published in core clinical journals. A total of 26, 21, 230, and 139 articles were identified. The report discusses many of the selected trials. A number of randomized, placebo-controlled clinical trials have evaluated DHEA (Dehydroepiandrosterone) as an antiaging 24 agent and essentially all were negative. Despite the widespread promotion of hormones as antiaging agents by for-profit web sites, 19 antiaging clinics, and compounding pharmacies, the scientific evidence to support these claims is 20 lacking. In some cases, the evidence suggests long-term use of a particular hormone can present 21 more risks than benefits.

**5.        Zyprexa Case Cost Lilly $1.4Billion**

Published by: Associated Press, January 2009

Link to the News: [http://www.nytimes.com/2009/01/15/business/15drug.html#story-continues-1](http://www.nytimes.com/2009/01/15/business/15drug.html%22%20%5Cl%20%22story-continues-1)

Summary:

In January 2009, Eli Lilly, the drug company, pleaded guilty to a charge that it illegally marketed the anti-psychotic drug Zyprexa for an unapproved use, and paid $1.42 billion to settle civil suits and end the criminal investigation.. The case was prosecuted by the United States attorney's office for the Eastern District of Pennsylvania. At that time the company said it will pay $800 million to settle civil suits, including $438 million to the federal government and $362 million to states. It will pay $615 million to resolve the criminal probe, and plead guilty to a misdemeanor violation of the Food, Drug and Cosmetic Act for promoting Zyprexa as a dementia treatment. According the court documents in one marketing effort, the company urged geriatricians to use Zyprexa to sedate unruly nursing home patients so as to reduce "nursing time and effort". The company also pressed doctors to treat disruptive children with Zyprexa even though the medicine's tendency to cause severe weight gain and metabolic disorders is particularly pronounced in children. Over the a decade, Zyprexa's use in children has soared.

**6.        Pfizer to Pay $2.3 Billion for Fraudulent Marketing**

Department of Justice Office of Public Affairs

Date: 2 September, 2009

Link: [https://www.justice.gov/opa/pr/justice-department-announces-largest-health-care-fraud-settlement-its-history](https://www.just/)

Summary:

In September, 2009, American pharmaceutical giant Pfizer Inc. and its subsidiary Pharmacia & Upjohn Company Inc. agreed to pay $2.3 billion, the largest health care fraud settlement in the history of the Department of Justice, to resolve criminal and civil liability arising from the illegal promotion of certain pharmaceutical products. Pharmacia & Upjohn Company agreed to plead guilty to a felony violation of the Food, Drug and Cosmetic Act for misbranding Bextra with the intent to defraud or mislead.

**7.        A 10-Year, Prospective Study of the Metabolic Effects of Growth Hormone Replacement in Adults**

Published by: The Journal of Clinical Endocrinology & Metabolism, 2007 Apr;92(4):1442‐1445.

Link: [https://www.justice.gov/opa/pr/justice-department-announces-largest-health-care-fraud-settlement-its-history](https://www.justice.gov/opa/pr/justice-department-announces-largest-health-care-fraud-settlement-i)

Summary:

**8.        Testosterone and growth hormone improve body composition and muscle performance in older men.**

Published by J Clin Endocrinol Metab.

Authors: Sattler FR, Castaneda‐Sceppa C, Binder EF, et al.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/19293261>

Summary:

The objective of the study is to explore the hypothesis that physiological supplementation with testosterone and GH together improves body composition and muscle performance in older men. 122 community dwelling men around the age group of 66-75 were included in the study. During the study measurement of body composition by dual-energy x-ray absorptionmetry, muscle performance   and safety test were conducted. The study concluded that supplemental testosterone produced significant gains in total and appendicular lean mass, muscle strength and aerobic endurance with significant reductions in whole body and trunk fat. The outcomes appeared to be further enhanced with GH supplementation.

**9.        Beneficial effects of long-term GH replacement therapy on quality of life in adults with GH deficiency**

Journal: J Clin Endocrinol Metab.

Authors: Wirén L, Bengtsson BA, Johannsson G..

Link to the Study:

Summary:

The objective of the study was to examine changes in quality of life in a large group of GH-deficient adults receiving long term GH replacement therapy. The study was conducted in two stages. While the first stage had 71 GH deficient adults, the stage of study added 90 more patients to create a population of 161 GH deficient patients. In the first stage GH was administered for 20-50 months and in the second stage GH was administered for 12 months. The results of the study indicate that the previously reported beneficial effects of GH-deficient adults are sustained during long-term therapy. Also, the study suggest that once started, GH therapy should be continued for at least 6 months before judgments are made regarding its efficiency in improving the quality of life.

**10.      Growth Hormone Reduces Weight, Fat Mass But Not Lean Body Mass**

Published by Medscape (26 Feb 2004)

Author: Barclay L.

Link to the Study: http://www.medscape.com/viewarticle/470371?mpid=25301

Summary:

The article discusses a randomized trial published in February, 2004 in the Journal of Clinical Endocrinology & Metabolism. According to the referred study when combined with lifestyle modifications, low-dose recombinant human growth hormone (GH) reduced weight and fat mass while preserving lean body mass in obese patients.

**11.      Direct Effects of Sex Steroid Hormones on Adipose Tissues and Obesity**

Published by: Obes Rev. 2004 Nov;5(4):197‐216.

Authors: Mayes JS, Watson GH

Link to the study: http://bit.ly/2snuMKs

Summary:

This article discusses the direct effects of sex hormones on adipose tissues and obesity. In the presence of sex steroid hormones, a normal distribution of body fat exists, but with a decrease in sex steroid hormones, as occurs with ageing or gonadectomy, there is a tendency to increase central obesity, a major risk for cardiovascular disease, type 2 diabetes and certain cancers.

In fact, hormone replacement therapy in postmenopausal women and testosterone replacement therapy in older men appear to reduce the degree of central obesity.

**12.      Researchers Uncover Cause, Possible Treatment for Abdominal Fat**

Published by: Oregon Health & Science University. (2005 June 11)

Link to the Article: https://www.eurekalert.org/pub\_releases/2005-06/ohs-oru060605.php

Summary:

In this article Oregon Health & Science University informs that its researchers will unveil the research results that help explain why middle‐aged women develop central body fat. The OHSU research team has also conducted initial testing of estrogen replacement therapy as a possible method for counteracting the problem. It is also being connected to the unhealthy surge in type 2 diabetes cases, cardiovascular disease and other associated disorders. For women, a sudden increase in weight often occurs following menopause. The drop in estrogen levels commonly associated with menopause is linked to an increase in cortisol. These untreated women with higher cortisol levels also witnessed an increased in abdominal fat when compared with women receiving the therapy.

**13.      Effect of DHEA on Abdominal Fat and Insulin Action in Elderly Women and Men**

Published By: 2004 Nov 10;292(18):2243‐2248.

Authors: Dennis T Villareal, John O Holloszy

Link to the Article: http://jamanetwork.com/journals/jama/fullarticle/199765

Summary:

DHEA administration has been shown to reduce accumulation of abdominal visceral fat and protect against insulin resistance in laboratory animals. This study was conducted to determine whether DHEA replacement therapy decreases abdominal fat and improves insulin action in elderly patients. For this purpose randomized, double-blind, placebo controlled trail was conducted in a US university-based research center between June 2001 and February 2004. Participants were fifty-six elderly persons (28 women and 28 men, with age range of 65-78 years. They were randomly assigned to receive 50 mg/ d of DHEA or matching placebo for 6 months. The primary outcome was the change in visceral and subcutaneous abdominal fat after 6 months. DHEA replacement could play a role in prevention and treatment of the metabolic syndrome associated with abdominal obesity.

**14.      Testosterone and Regional Fat Distribution**

Published By: Obesity Research. 1995 Nov;3(4):609S‐612S

Author: Per Marin

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/8697064>

Summary:

The study evaluates the effects of testosterone treatment of abdominally obese men. A set of parameters are set for assessing the effects. Middle-aged men with abdominal obesity were treated with transdermal administration of testosterone (T), dihydrotestosterone (DHT) or placebo (P) during 9 months. The study was double-blind.

Treatment with T was followed by an inhibited uptake of lipid label in adipose tissue triglycerides, a decreased LPL-activity and an increased turn-over rate of lipid label in the abdominal adipose tissue region in comparisons with the DHT and P groups. These effects on adipose tissue metabolism were not detected in the femoral adipose tissue region in any of the groups. T treatment was also followed by a specific decrease of visceral fat mass (measured by CT-scan), by increased insulin sensitivity (measured with the euglycemic glucose clamp), by a decrease in fasting blood glucose, plasma cholesterol and triglycerides as well as a decrease in diastolic blood pressure.

**15.      The effect of testosterone treatment on body composition and metabolism in middle-aged obese men.**

Published By: Int J Obes Relat Metab Disord. 1992 Dec;16(12):991‐997.

Author: Marin P, Holmaag S et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/1335979

Summary:

Twenty-three middle-aged abdominally obese men were treated for eight months with testosterone or with placebo. Testosterone treatment was followed by a decrease of visceral fat mass, measured by computerized tomography, without a change in body mass, subcutaneous fat mass or lean body mass. Insulin resistance, measured by the euglycemic/hyperinsulinemic glucose clamp method, improved and blood glucose, diastolic blood pressure and serum cholesterol decreased with testosterone treatment. It is concluded that testosterone treatment of middle-aged abdominally obese men gives beneficial effects on well-being and the cardiovascular and diabetes risk profile, results similar to those observed after hormonal replacement therapy in postmenopausal women.

**16.      Relationship Between Low Levels of Anabolic Hormones and 6‐Year Mortality in Older Men**

Published by: Archives of Inter Medicine

Author: Maggio M, Lauretani F, Ceda GP, et al.

Link to the Study: http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/413465

Summary:

The study is built on the hypothesis that in older men a parallel age-associated decline in bioavailable testosterone, IGF-1, and DHEA-S secretion is associated with higher mortality independent of potential confounders. Testosterone, IGF-1, DHEA-S, and demographic features were evaluated in a representative sample of 410 men 65 years and older enrolled in the Aging in the Chianti Area (InCHIANTI) study. The study concluded that age-associated decline in anabolic hormone levels is a strong independent predictor of mortality in older men. Having multiple hormonal deficiencies rather than a deficiency in a single anabolic hormone is a robust biomarker of health status in older persons.

**17.      Androgen Deficiency in the Aging Male: The Beginning, the Middle, and the Ongoing**

Published by  Clinical Geriatrics. 2008 April:25‐28.

Authors: Ginsberg TB, Cavalieri TA.

Link to the Study: http://www.consultant360.com/articles/androgen-deficiency-aging-male-beginning-middle-and-ongoing

Summary:

The study focuses on the male menopause and the part played by Testosterone on the whole condition. It also states the most common signs and symptoms related to male menopause. The symptoms are again divided into four: endocrine symptoms, physical, sexual symptoms and psychological symptoms. It concludes by proposing that when screening for hypogonadism, a total testosterone and, if possible, a free testosterone level should be considered in addition to the usual blood screen studies. Testosterone replacement therapy is the treatment of choice when hypogonadism has been identified; however, the systemic side effects, including hepatic sequelae, lipid abnormalities, cardiovascular effects, sleep apnea, and clotting disorders, should be monitored.

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**19.      Low Serum Testosterone and Mortality in Male Veterans**

Published from Archives of Internal Medicine 2006 Aug 14‐28;166(15):1660‐1665.

Authors: Shores MM, Matsumoto AM, Sloan KL, et al.

Link to the Study: http://www.hormonebalance.org/images/documents/Shores%2006%20Low%20Testosterone%20increase%20mortality%20AIM.pdf

Summary:

This study evaluated whether low testosterone levels are a risk factor for mortality in male veterans. The study used a clinical database to identify men older than 40 years with repeated testosterone levels obtained from October 1, 1994, to December 31, 1999, and without diagnosed prostate cancer. The study concluded that low testosterone levels were associated with increased mortality in male veterans. Further prospective studies are needed to examine the association between low testosterone levels and mortality. In a sensitivity analysis, men who died within the first year were excluded to minimize the effect of acute illness, and low testosterone levels continued to be associated with elevated mortality.

**20.      Low Serum Testosterone and Mortality in Older Men**

Published by: Journal of Clinical Endocrinology Metabolism. 2008 Jan;93(1):68‐75

Authors: Laughlin GA, Barrett‐Connor E, Bergstrom J

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/17911176

Summary:

The objective of the study was to examine the association of endogenous testosterone levels with mortality in older community-dwelling men. This was a prospective, population-based study of 794 men, aged 50-91 (median 73.6) yr who had serum testosterone measurements at baseline (1984-1987) and were followed for mortality through July 2004. The results showed that Testosterone insufficiency in older men is associated with increased risk of death over the following 20 years, independent of multiple risk factors and several preexisting health conditions. During an average 11.8-yr follow-up, 538 deaths occurred. Men whose total testosterone levels were in the lowest quartile were 40% more likely to die than those with higher levels, independent of age, adiposity, and lifestyle.

**21.      Endogenous Testosterone and Mortality Due to All Causes, Cardiovascular Disease, and Cancer in Men**

Published by: Journal of American Heart Foundation

Authors: Khaw KT, Dowsett M, Folkerd E, et al.

Link to the Study: <http://bit.ly/2spNUHL>

Summary:

The study examined the prospective relationship between endogenous testosterone concentrations and mortality due to all causes, cardiovascular disease, and cancer in a nested case-control study based on 11 606 men aged 40 to 79 years surveyed in 1993 to 1997 and followed up to 2003. Among those without prevalent cancer or cardiovascular disease, 825 men who subsequently died were compared with a control group of 1489 men still alive, matched for age and date of baseline visit. Endogenous testosterone concentrations at baseline were inversely related to mortality due to all causes (825 deaths), cardiovascular disease (369 deaths), and cancer (304 deaths). In men, endogenous testosterone concentrations are inversely related to mortality due to cardiovascular disease and all causes. Low testosterone may be a predictive marker for those at high risk of cardiovascular disease.

**22.      Relationship Between Low Levels of Anabolic Hormones and 6-Year Mortality in Older Men**

Published by: Archives of Inter Medicine

Author: Maggio M, Lauretani F, Ceda GP, et al.

Link to the Study: http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/413465

Summary:

The study is built on the hypothesis that in older men a parallel age-associated decline in bioavailable testosterone, IGF-1, and DHEA-S secretion is associated with higher mortality independent of potential confounders. Testosterone, IGF-1, DHEA-S, and demographic features were evaluated in a representative sample of 410 men 65 years and older enrolled in the Aging in the Chianti Area (InCHIANTI) study. The study concluded that age-associated decline in anabolic hormone levels is a strong independent predictor of mortality in older men. Having multiple hormonal deficiencies rather than a deficiency in a single anabolic hormone is a robust biomarker of health status in older persons.

**23.      Low levels of endogenous androgens increase the risk of atherosclerosis in elderly men**

Published by: Journal of Clinical Endocrinology Metabolism

Authors: A. Elisabeth Hak  Jacqueline C. M. Witteman  Frank H. de Jong  Mirjam I. Geerlings Albert Hofman  Huibert A. P. Pols

Link to the Study: https://academic.oup.com/jcem/article/87/8/3632/2846675/Low-Levels-of-Endogenous-Androgens-Increase-the

Summary:

In this population-based Rotterdam Study, they have investigated the association of levels of dehydroepiandrosterone sulfate (DHEAS) and total and bio available testosterone with aortic atherosclerosis among 1,032 nonsmoking men and women aged 55 yr and over. Aortic atherosclerosis was assessed by radiographic detection of calcified deposits in the abdominal aorta, which have been shown to reflect intimal atherosclerosis. Relative to men with levels of total and bioavailable testosterone in the lowest tertile, men with levels of these hormones in the highest tertile had age-adjusted relative risks or the presence of severe aortic atherosclerosis. The results of the study shows no clear association between levels of DHEAS and presence of severe aortic atherosclerosis was found, either in men or in women. As a conclusion for the study it was found that there is an independent inverse association between levels of testosterone and aortic atherosclerosis in men. In women, positive associations between levels of testosterone and aortic atherosclerosis were largely due to adverse cardiovascular disease risk factors.

**24.      The Role of Testosterone in the Management of Hypoactive Sexual Desire Disorder in Postmenopausal Women.**

Published by: Maturitas. 2009 Jul 20;63(3):213‐219.

Authors: Krapf JM, Simon JA

Link of the Study: <https://www.ncbi.nlm.nih.gov/pubmed/19487090>

Summary:

The objective of the study is to analyze the role of testosterone among the postmenopausal women suffering from hypoactive sexual desire disorder. Large randomized, double-blinded placebo-controlled studies demonstrate that transdermal testosterone improves sexual function and  activity in postmenopausal women with hypoactive sexual desire disorder (HSDD). Although some fear an increased risk of breast cancer with exogenous testosterone administration, recent studies support the idea that androgens can play a role in suppressing the proliferative effects of estrogen and progesterone.

**25.      Comparison of regimens containing oral micronized progesterone or medroxyprogesterone acetate on quality of life in postmenopausal women: a cross‐sectional survey**

Published by:

Authors: Fitzpatrick LA, Pace C, Wiita B

Link to the Study: http://www.smithrexalldrug.com/assets/study29.pdf

Summary:

A cross‐sectional survey was conducted to examine quality of life (QOL) related to physiological, somatic, and vasomotor effects of changing progestogen treatment from medroxyprogesterone acetate (MPA) to micronized progesterone in postmenopausal women. 176 eligible women who were currently using hormone replacement therapy (HRT) containing micronized progesterone for 1-6 months and had previously received HRT containing MPA. QOL was assessed via telephone interview using the Greene Climacteric Scale and the Women's Health Questionnaire. When compared with the MPA containing regimen, women using micronized progesterone containing HRT experienced significant improvement in vasomotor symptoms, somatic complaints, anxiety, and depressive symptoms.

**26.      Quality of life and cost associated with micronized progesterone and medroxyprogesterone acetate in hormone replacement therapy for nonhysterectomized, postmenopausal women.**

Published by: Clinical Therapy 2001 Jul;23(7):1099‐1115

Authors: Nancy Ryan, Andrew Rosner

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11519773

Summary:

The objective of the study is to compare the quality of life (QOL), menopausal symptoms, and costs associated with a natural micronized progesterone (MP) formulation versus medroxyprogesterone acetate (MPA) as add-on therapy to estrogen in hormone replacement for post-menopausal women. It is a prospective, multicenter, randomized, fixed-dose, open-label, parallel-group study. A total of 182 women were enrolled; 89 received MP and 93 received MPA. Improvements in climacteric symptoms were observed from baseline to month 9 for both treatments. The results of the study showed that MP is a clinically effective, well-tolerated, and cost-comparable alternative to MPA.

**27.      Advances in the management of androgen deficiency in women**

Published by: CME Feature

Authors: Andre T Guay

Link to the study: NA

Summary:

This paper discusses the fact that though androgen deficiency has been shown as the key contributor to the decrease of sexual desire in women, no guidelines have been set as for androgen replacement therapy. The situation becomes even more complex considering the possible side-effects of the therapy. Androgen deficiency in women is a topic that the medical community has been slow to address. This is partially attributed to the fact that the most common symptom is decreased sexual desire, a very common nonspecific complaint that has long been associated with the psychological issues of stress and depression or relationship problems.

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**29.      Testosterone patch for the treatment of hypoactive sexual desire disorder in naturally menopausal women: results from the INTIMATE NM1 Study**

Published by:

Authors: Shifren JL1, Davis SR et al

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16932240

Summary:

The study is to evaluate the efficacy and safety of a testosterone patch for the treatment of women with hypoactive sexual desire disorder after natural menopause. The study is a multicenter, randomized, double-blind, placebo-controlled, parallel-group trial. It was conducted in naturally menopausal women with hypoactive sexual desire disorder receiving a stable dose of oral estrogen with or without progestin. A total of 483 women (88%) were included in the primary analysis population. The results of the study showed that Testosterone patch treatment increased the frequency of satisfying sexual activity and sexual desire, decreased personal distress, and was well tolerated in naturally menopausal women with hypoactive sexual desire disorder.

**30.      Serum dehydroepiandrosterone sulfate concentration and carotid atherosclerosis in men with type 2 diabetes**

Published by: Atherosclerosis 2005 Aug;18;1(2):339‐344.

Authors: Fukui M, Kitagawa Y, Nakamura N, et al.

Link to the Study: http://www.sciencedirect.com/science/article/pii/S0021915005000821

Summary:

The study evaluated the relationships between serum DHEA sulfate (DHEA-S) concentration and carotid atherosclerosis, as well as major cardiovascular risk factors, in men with type 2 diabetes. Serum DHEA-S concentrations were measured in 206 consecutive men with type 2 diabetes. The results of the study showed that decreased serum dehydroepiandrosterone (DHEA) concentrations may be associated with an increased risk of cardiovascular disease (CVD) in men. In conclusion, serum DHEA‐S concentration is negatively associated with carotid atherosclerosis.

**31.      Testosterone replacement therapy improves insulin resistance, glycaemic control, visceral adiposity and hypercholesterolaemia in hypogonadal men with type 2 diabetes**

Published by: Centre for Diabetes and Endocrinology, 2006 Jun;154(6):899‐906.

Authors: Kapoor D, Goodwin E, Channer KS.

Link to the Study: <http://www.eje-online.org/content/154/6/899.full>

Summary:

The study is done with the objective to the effect of testosterone treatment on insulin resistance and glycaemic control in hypogonadal men with type 2 diabetes. The study was a double-blind placebo-controlled crossover study in 24 hypogonadal men (10 treated with insulin) over the age of 30 years with type 2 diabetes.

Testosterone treatment resulted in a reduction in visceral adiposity as assessed by waist circumference. Total cholesterol decreased with testosterone therapy. Testosterone replacement therapy reduces insulin resistance and improves glycaemic control in hypogonadal men with type 2 diabetes.

**32.      Male menopause is underdiagnosed and undertreated**

Published by: Medical Crossfire

Authors: Morley JE.

Link to the Study: NA

Summary:

The paper discusses menopause among men and how the condition has remained under-diagnosed and undertreated. Aging is associated with either a decrease in testosterone receptor binding or post‐receptor activation. The author further suggests that we call this well‐established syndrome androgen deficiency in aging males, or ADAM. The article ends by connecting Testosterone therapy to leading a quality life.

**33.      Men's Health, Low Testosterone, and Diabetes**

Published by: Diabetes Educator, 2008 Nov‐Dec;34(5):97S‐112S.

Authors: Rice D, Brannigan RE, Campbell RK, et al.

Link to the Study: https://www.diabeteseducator.org/docs/default-source/legacy-docs/\_resources/pdf/mens\_health\_white\_paper.pdf?sfvrsn=2

Summary:

The study discusses the role played by Testosterone in male reproductive and metabolic functioning. The primary goals of testosterone therapy are to restore physiologic testosterone levels and reduce the symptoms of hypogonadism. Data suggest that testosterone therapy may have a positive effect on bones, muscles, erythropoiesis and anemia, libido, mood and cognition, penile erection, cholesterol, fasting blood glucose, glycated hemoglobin, insulin resistance, visceral adiposity, and quality of life.

**34.      Determinants of the effect of estrogen on the progression of subclinical atherosclerosis: Estrogen in the Prevention of Atherosclerosis Trial**

Published by: Menopause. 2005 Jul‐ Aug;12(4):366‐373

Authors: Karim R, Mack WJ, Lobo RA, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16037751

Summary:

The study was conducted with the objective to understand the  beneficial effect of estrogen therapy on the progression of carotid artery intima-media thickness (IMT) in postmenopausal women.. It is a randomized, double-blind, placebo-controlled, single-center trial enrolling 222 postmenopausal women 45 years and older without cardiovascular disease and with low-density lipoprotein (LDL) cholesterol levels. The results showed that fasting glucose, insulin, and hemoglobin A1C were lowered and insulin sensitivity increased with estradiol therapy, but the changes were not related to carotid IMT progression. Unopposed 17beta-estradiol reduced carotid IMT progression in postmenopausal women in part by increasing HDL-cholesterol and decreasing LDL-cholesterol.

**35.      Menopause**

Published by: Conn's Current Therapy, 2004. Philadelphia, PA: WB Saunders

Authors: Gambrell RD

Link to the Study: NA

Summary:

The paper analyses the impact of menopause on the quality of life of a women. It also puts across estrogen as a possible remedial measure to the problems arising due to menopause. After 45 years of clinical research and practice, it is convinced that when the proper regimens and dosages are used, there are many benefits from estrogen other than alleviating symptoms

**36.      Hormone Replacement Therapy and Incidence of Alzheimer Disease in Older Women**

Published by: JAMA

Authors: Zandi PP, Carlson MC, Plassman BL, et al.

Link to the Study: http://jamanetwork.com/journals/jama/fullarticle/195464

Summary:

The study was conducted with the objective of analyzing the relationship between use of Hormone Replacement Therapy (HRT) and risk of AD among elderly women. The research included prospective study of incident dementia among 1357 men (mean age, 73.2 years) and 1889 women (mean age, 74.5 years) residing in a single county in Utah. Participants were first assessed in 1995-1997, with follow-up conducted in 1998-2000. Thirty-five men (2.6%) and 88 women (4.7%) developed AD between the initial interview and time of the follow-up (3 years). Incidence among women increased after age 80 years and exceeded the risk among men of similar age. Women who used HRT had a reduced risk of AD (26 cases among 1066 women) compared with nonHRT users (58 cases among 800 women). The results of the concluded that Prior HRT use is associated with reduced risk of AD, but there is no apparent benefit with current HRT use unless such use has exceeded 10 years.

**37.      Is Your Hypothyroidism UNDERtreated?**

Published by: Verywell.com

Authors: Shomon M.

Link to the Study: https://www.verywell.com/is-your-hypothyroidism-undertreated-3231725

Summary:

The article throws lights on the case of undertreated hypothyroidism among a number of patients around the world. The article explains the condition and helps people to understand what  hypothyroidism is and how one can help themselves by using the tool Hypothyroidism Symptoms Checklist.

**38.      Hypothyroidism: Diagnosis and Treatment,**

Published by: Verywell.com

Authors: Ted Friedman, MD

Link to the Study: https://www.verywell.com/ted-friedman-md-on-hypothyroidism-3231703

Summary:

In this article, Dr. Theodore C. Friedman shares his thoughts about hypothyroidism diagnosis and treatment.

**39.      A metabolic basis for fibromyalgia and its related disorders: the possible role of resistance to thyroid hormone.**

Published by:  Med Hypotheses. 2003 Aug;61(2):182‐189.

Authors: Garrison RL, Breeding PC.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/12888300

Summary:

The study examines fibromyalgia. Hypothyroidism may be categorized, like diabetes, into type I (hormone deficient) and type II (hormone resistant). Most cases of fibromyalgia fall into the latter category. The study tries to answer two main questions regarding the condition: First, can a simple biomarker be found to help diagnose it? Second, what other syndromes similar to Fibromyalgia may share a thyroid-resistant nature?

**40.      What Your Patients Are Reading**

Published by: Prevention, 2000

Authors: NA

Link to the Study: NA

Summary:

According to a study conducted by Hopkins University, adding testosterone to estrogen replacement therapy (ERT) may help postmenopausal women add muscle.

**41.      How Much Testosterone Needed to Enhance Women's Sexual Desire?**

Published by: Family Practice News. 2000 Nov 15.

Authors: Brunk D.

Link to the Study: NA

Summary:

The article discusses the role played by testosterone in improving sexual desire in women. Transdermal testosterone improved sexual function, depressed mood, and well-being in women who had undergone oophorectomy and hysterectomy.

**42.      The consequences of growth hormone deficiency in adulthood, and the effects of growth hormone replacement.**

Published by: Schweiz Med Wochenschr. 1997 Aug

30;127(35):1440‐1449.

Authors: Christ ER, Carroll PV, Russell‐Jones DL, Sönksen PH

Link to the Study: NA

Summary:

The study examines the role played by Growth Hormones (GH) in adulthood and the effect of GH replacement in GH-deficient adult. These studies have led to the recognition of a specific syndrome of  H‐deficiency, characterized by symptoms and signs. The results of these studies point to the fact that GH treatment restores LBM, reduces FM, and increases bone mass.

**43.      Managing Fibromyalgia: A Comprehensive Approach**

Published by:  The Journal of Musculoskeletal Medicine. 2005 Aug 1.

Authors: Hallegua DS.

Link to the Study: NA

Summary:

The study focuses on a comprehensive method to manage Fibromyalgia. GH deficiency is present in about one third of patients with FMS or in patients that have low insulin like growth factor‐1 levels. Supplementation of growth hormone is effective in reducing pain and improving fatigue among the patients.

**44.      Androgen Insufficiency in Women**

Published by: Growth Hormone & IGF Research, 2006 Jul;16 Suppl A:S109‐S117.

Authors: Braunstein GD.

Link to the Study: http://bellavitamedicalcenter.com/wp-content/uploads/2013/01/Androgen-insufficiency-in-Women.pdf

Summary:

The study examines the case of androgen insufficiency among women. Although there is conflicting information about the relationship between serum testosterone concentrations and sexual desire, multiple randomized, double-blind, placebo-controlled treatment trials have demonstrated that testosterone improves libido significantly more than placebo.

**45.      Estrogen and Androgen Hormone Therapy and Well‐Being in Surgically Postmenopausal Women**

Published by: Journal of Women's Health, 2006 Oct;15(8):898‐908.

Authors: Kotz K, Alexander JL, Dennerstein L

Link to the Study: http://online.liebertpub.com/doi/abs/10.1089/jwh.2006.15.898

Summary:

The key focus of this study is to examine the effects of hormone therapies on well-being among surgically menopausal women. Double-blind randomized controlled trials of the effects of menopausal hormone therapies on quality of life were selected and retrieved using both Cochrane and PubMed searches. Two relevant studies were selected. The results of the study showed that Estrogen with or without testosterone may improve general well-being in some groups of surgically menopausal women.

**46.      Testosterone Gel Supplementation for Men With Refractory Depression: A Randomized, Placebo‐ Controlled Trial**

Published by:  The American Journal of Psychiatry. 2003 Jan;160(1):105‐111.

Authors: Pope HG Jr, Cohane GH, Kanayama G, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/12505808

Summary:

This study is an 8-week randomized, placebo-controlled trial conducted to examine the effect of Testosterone supplementation on men with refractory depression. Participants included 56 men aged 30 to 65 years who had refractory depression and low or borderline testosterone levels. Results show that subjects receiving testosterone gel had significantly greater improvement in scores on the Hamilton Depression Rating Scale than subjects receiving placebo. Preliminary findings suggest that testosterone gel may produce antidepressant effects in the large and probably under recognized population of depressed men with low testosterone levels.

**47.      Low Free Testosterone Concentration as a Potentially Treatable Cause of Depressive Symptoms in Older Men**

Published by: Archives of General Psychiatry, 2008 Mar;65(3):283‐289.

Authors: Osvaldo P. Almeida, et al.

Link to the Study: http://jamanetwork.com/journals/jamapsychiatry/fullarticle/482640

Summary:

It is a cross-sectional study to determine whether the association between serum testosterone concentration and mood in older men is independent of physical comorbidity. 3987 men were included in the study, out of which 203 had depression.. A free testosterone concentration in the lowest quintile is associated with a higher

prevalence of depression.

**48.      Dehydroepiandrosterone Monotherapy in Midlife‐Onset Major and Minor Depression**

Published by: Archives of General Psychiatry, 2005 Feb;62(2):154‐162..

Authors: Peter J. Schmidt, MD; Robert C. Daly, MD; Miki Bloch, MD, et al.

Link to the Study: https://pdfs.semanticscholar.org/3b0f/f9d6cd20bb38ec9efddcce6c1fe2c6ee2d58.pdf

Summary:

The study is to evaluate the efficiency of DHEA therapy to treat midlife-onset depression. For this purpose A double-blind, randomized, placebo-controlled, crossover treatment study was performed from January 4, 1996, through August 31, 2002. A total of 46 patients (men+23 and women+23) in the age range of 45 to 65 years with midlife-onset major or minor depression participated in this study. The study finds DHEA to be an effective treatment for midlife‐onset major and minor depression.

**49.      Combined Treatment With Sertraline and Liothyronine in Major Depression**

Published by: Archives of General Psychiatry, 2005 Feb;62(2):154‐162..

Authors: Peter Rena Cooper-Kazaz, MD; Jeffrey T. Apter, MD; Revital Cohen, MA; et al

Link to the Study: http://jamanetwork.com/journals/jamapsychiatry/fullarticle/482318

Summary:

The key objective of the study is to analyze the efficiency and safety of liothyronine sodium (triiodothyronine) when administered concurrently with the selective serotonin reuptake inhibitor sertraline hydrochloride to patients with major depressive disorder. It is a double-blind, randomized, 8-week, placebo-controlled trial. The study included a total of 124 adult outpatients who met the unmodified DSM-IV criteria for major depressive disorder without psychotic features. The results showed that there has been an increase in the antidepressant effect of sertraline when concurrently treated with liothyronine. There is also no significant increase in any adverse effects.

**50.      Associations of Hormones and Menopausal Status with Depressed Mood in Women With No History of Depression**

Published by: Menopause. 2010 Jul;17(4):823‐827.

Authors: Freeman EW.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16585466

Summary:

The study was conducted to identify new onset of depressive symptoms and diagnosed depressive disorders during the menopausal transition and to determine the associations of menopausal status, reproductive hormones, and other risk factors with these cases. A within-woman, longitudinal (8-year) study to identify risk factors of depressed mood. Premenopausal women with no history of depression at cohort enrollment participated in the study. The results showed that Transition to menopause and its changing hormonal milieu are strongly associated with new onset of depressed mood among women with no history of depression.

**51.      Endogenous Sex Hormone Levels and Cognitive Function in Aging Men**

Published by: Neurology. 2005 Mar 8;64(5):866‐871.

Authors: Muller M, Aleman A, Grubbed DE, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/20531231

Summary:

The study was conducted to understand whether endogenous sex hormone levels could predict cognitive function in older men. An exploratory analysis in a population-based cohort in Rancho Bernardo, California was used as the methodology for the study. The participants of the study were 547 community-dwelling men 59-89 yr of age at baseline who were not using testosterone or estrogen therapy. The results conclude that certain cognitive functions in men suggest benefit with an optimal hormone level.

**52.      Dehydroepiandrosterone Sulfate Levels Are Associated with More Favorable Cognitive Function in Women**

Published by:  The Journal of Clinical Endocrinology & Metabolism. 2008 Mar;93(3):801‐808.

Authors: Susan R. Davis Zonal M. Shah  Dean P. McKenzie  Jayashri Kulkarni  Sonia L. Davison Robin J. Bell

Link to the Study: https://academic.oup.com/jcem/article/93/3/801/2598380/Dehydroepiandrosterone-Sulfate-Levels-Are

Summary:

The study was conducted with the purpose to investigate whether circulating levels of DHEAS independently contribute to aspects of cognitive function in women in the community. It was a community-based, cross-sectional study. Two hundred ninety-five women, aged 21–77 yrs participated between September 2003 and December 2004. The results led to the conclusion that Higher endogenous DHEAS levels are independently and favorably associated with executive function, concentration, and working memory.

**53.      The analysis of dehydroepiandrosterone sulphate concentration in elderly age women depending on coexisting disease states**

Published by: Advances in Medical Sciences - Journal 2007;52(1):126‐130.

Authors: Kedziora‐Kornatowska K, Beszczyńska‐Oleś R, Kornatowski T, Szadujkis‐Szadurski L

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/18229649

Summary:

The objective of the study was to analyze and evaluate dehydroepiandrosterone sulphate (DHEA-S) serum concentration in elderly women and determining interdependence between DHEA-S levels and occurrence of diseases typical for this period of life. The study was conducted on 103 elderly women (mean age 70.7 +/- 7.3 years). The control group consisted of 25 young and healthy women (mean age 33.5 +/- 1.7 years). The results led to the conclusion that in elderly women DHEA-S concentration can turn out to be useful aging biomarker. Concentration of this hormone significantly decreases together with age, especially with coexisting diseases typical for this period of life.

**54.      Long‐term low‐dose oral administration of DHEA modulates adrenal response to adrenocorticotropic hormone in early and late postmenopausal women**

Published by: Gynecol Endocrinology. 2006 Nov;22(11):627‐635..

Authors: Genazzani AR, Pluchino N, Begliuomini S, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/20531231

Summary:

This study was conducted with the objective of valuating the effects of a long-term (12 months) oral DHEA administration (25 mg/day) on adrenal function, before and after 3, 6 and 12 months of treatment. Postmenopausal women belonging to two age groups, 50-55 years (n = 10) and 60-65 years (n = 10), participated in the study. The results of the study lead us to the conclusion that chronic DHEA administration is capable of modifying circulating levels of androgens and progestins in both early and late postmenopausal women by modulating the age-related changes in adrenal function.

**55.      Fatigue in progressive multiple sclerosis is associated with low levels of dehydroepiandrosterone**

Published by: Multiple sclerosis Journal, 2006 Aug;12(4):487‐494.

Authors: Téllez N, Comabella M, Julià E, et al..

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16900763

Summary:

Fatigue is seen as one of the most limiting symptoms in the cases of multiple sclerosis. The study examines whether the main cause of fatigue in MS cases is endocrine markers. The results suggest that these hormones should be considered a biological markers of fatigue in MS patients and that hormone replacement may thus be tested as an option to treat fatigue in MS patients.

**56.      Effect of DHEA on Abdominal Fat and Insulin Action in Elderly Women and Men**

Published By: 2004 Nov 10;292(18):2243‐2248.

Authors: Dennis T Villareal, John O Holloszy

Link to the Article: http://jamanetwork.com/journals/jama/fullarticle/199765

Summary:

DHEA administration has been shown to reduce accumulation of abdominal visceral fat and protect against insulin resistance in laboratory animals. This study was conducted to determine whether DHEA replacement therapy decreases abdominal fat and improves insulin action in elderly patients. For this purpose randomized, double-blind, placebo controlled trail was conducted in a US university-based research center between June 2001 and February 2004. Participants were fifty-six elderly persons (28 women and 28 men, with age range of 65-78 years. They were randomly assigned to receive 50 mg/ d of DHEA or matching placebo for 6 months. The primary outcome was the change in visceral and subcutaneous abdominal fat after 6 months. DHEA replacement could play a role in prevention and treatment of the metabolic syndrome associated with abdominal obesity.

**57.      Effects of dehydroepiandrosterone supplement on health related quality of life in glucocorticoid treated female patients with systemic lupus erythematosus**

Published by: Autoimmunity. 2005 Nov;38(7):531‐540.

Authors: Nordmark G, Bengtsson C, Larsson A, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16373258

Summary:

The objective of the study was to evaluate the efficiency of low dose DHEA on health-related quality of life in glucocorticoid treated female patients with SLE. The results show that DHEA treatment improves HRQOL with regard to mental wellbeing and sexuality.

**58.      Effects of DHEA administration on episodic memory, cortisol and mood in healthy young men: a double blind, placebo‐controlled study.**

Published by: Psychopharmacology (Berl). 2006 Nov;188(4):541‐551..

Authors: Alhaj HA, Massey AE, McAllister‐Williams RH

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16231168

Summary:

The aim of this study was to investigate the effects of DHEA administration in healthy young men on episodic memory and its neural correlates utilising an event-related potential (ERP) technique. Twenty-four healthy young men were treated with a 7-day course of oral DHEA (150 mg b.d.) or placebo in a double blind, random, crossover and balanced order design. The results showed that DHEA treatment improved memory recollection and mood and decreased trough cortisol levels. The effect of DHEA appears to be via neuronal recruitment of the steroid sensitive ACC that may be involved in pre-hippocampal memory processing. These findings are distinctive, being the first to show such beneficial effects of DHEA on memory in healthy young men.

**59.      Positive effects of DHEA therapy on insulin resistance and lipids in men with angiographically verified coronary heart disease – preliminary study**

Published by: Psychopharmacology (Berl). 2006 Nov;188(4):541‐551..

Authors: Rabijewski M, Zgliczyński W.

Link to the Study: http://www.endokrynologia.polska.viamedica.pl/darmowy\_pdf.phtml?indeks=8&indeks\_art=144.

Summary:

The aim of this study was to analyze the influence of DHEA therapy on insulin resistance (FIRI, FG/FI) and serum lipids in men with angiographically verified coronary heart disease (CHD). The study included thirty men aged 41-60 years. It is a randomized into a double-blind, placebo-controlled, cross-over trial. The results conclude that therapy may be a beneficial against CHD risk factors.

**60.      Risks of testosterone‐replacement therapy and recommendations for monitoring.**

Published by:  The New England Journal of Medicine, 2004; 350:482-492

Authors: Ernani Luis Rhoden, M.D., and Abraham Morgentaler, M.D.

Link to the Study: <http://www.nejm.org/doi/pdf/10.1056/NEJMra022251>

**Summary:**

Though many reports suggest testosterone-replacement therapy as a beneficial for aging men,, it has also been accompanied by a number of controversies.  This article discusses what is known (and not known) about the risks of testosterone-replacement therapy and provides recommendations for monitoring men who are receiving testosterone.

**Section 2: Literature Review of Human Growth Hormone**

**61.      Effects of human growth hormone in men over 60 years old.**

Published by:  The New England Journal of Medicine 1990 Jul 5;323(1):1-6.

Authors: Rudman D, Feller AG, Nagraj HS, et al.

Link to the Study: http://www.nejm.org/doi/full/10.1056/NEJM199007053230101#t=article

Summary:

The study was conducted to analyze the hypothesis that the declining activity of the growth hormone--insulin-like growth factor I (IGF-I) axis with advancing age may contribute to the decrease in lean body mass and the increase in mass of adipose tissue that occur with aging. People selected were 21 healthy men from 61 to 81 years old who had plasma IGF-I concentrations of less than 350 U per liter during a six-month base-line period and a six-month treatment period that followed. The results showed that diminished secretion of growth hormone is responsible in part for the decrease of lean body mass, the expansion of adipose-tissue mass, and the thinning of the skin that occur in old age.

**62.      Growth Hormone Therapy in Adults and Children**

Published by: The New England Journal of Medicine,1999 Oct; 341:1206-1216.

Authors: Vance ML, Mauras N.

Link to the Study: http://www.nejm.org/doi/full/10.1056/NEJM200002033420516#t=article

Summary:

In adults the goals are to restore normal body composition, improve muscle and cardiac function, normalize serum lipid concentrations, and improve the quality of life. Food and Drug Administration (FDA) has approved growth hormone therapy for adults only if there is evidence of hypothalamic or pituitary disease and subnormal serum growth hormone response to ITT stimulation test. There is evidence that growth hormone deficiency in adults is deleterious, increasing the risk of death from cardiovascular disease.

**63.      A Preliminary Study of Growth Hormone in The Treatment of Dilated Cardiomyopathy**

Published by:  The New England Journal of Medicine, 1996 Mar 28;334(13):809-814.

Authors: Fazio S, Sabatini D, Capaldo B, et al.

Link to the Study: http://www.nejm.org/doi/full/10.1056/NEJM199603283341301#t=article

Summary:

This study provides insights into the way growth hormone affects cardiac performance. The study is to analyze the hypothesis that inducing cardiac hypertrophy with recombinant human growth hormone might be an effective approach to the treatment of idiopathic dilated cardiomyopathy. Seven patients with idiopathic dilated cardiomyopathy and moderate-to-severe heart failure were studied at base line, after three months of therapy with human growth hormone, and three months after the discontinuation of growth hormone. The results showed that administration of recombinant human growth hormone to patients with dilated cardiomyopathy and heart failure activated myocardial growth, enhanced contractile performance, reduced the myocardial oxygen requirement, and improved exercise capacity.

**64.      Growth Hormone Reduces Weight, Fat Mass But Not Lean Body Mass**

Published by Medscape (26 Feb 2004)

Author: Barclay L.

Link to the Study: http://www.medscape.com/viewarticle/470371?mpid=25301

Summary:

The article discusses a randomized trial published in February, 2004 in the Journal of Clinical Endocrinology & Metabolism. According to the referred study when combined with lifestyle modifications, low-dose recombinant human growth hormone (GH) reduced weight and fat mass while preserving lean body mass in obese patients.

**65.      Growth hormone replacement therapy for adults: into the new millennium.**

Published by Growth Hormone and IGF Research, 2002

Author: Simpson H, Savine R, Sönksen P, et al..

Link to the Study: http://www.sciencedirect.com/sdfe/pdf/download/eid/1-s2.0-S1096637401902631/first-page-pdf

Summary:

The paper discusses about adult growth hormone deficiency (GHDA) and how for a long time it was assumed that GH had no role in Adulthood. Subsequent placebo-controlled and open label studies have consistently shown the benefits of rhGH replacement therapy in adults and that they are sustained for up to 10 years

**66.      Low-dose recombinant human growth hormone as adjuvant therapy to lifestyle modifications in the management of obesity.**

Published by The Journal of Clinical Endocrinology & Metabolism

Author: Albert SG, Mooradian AD.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/14764783>

Summary:

For the study fifty-nine obese men and premenopausal menstruating women were randomized to a double-blind, placebo-controlled trial of low dose recombinant human GH (rhGH). During the 6-month intervention, subjects self-administered daily rhGH or equivalent volume of placebo at 200 micro g , after 1 month, the dose was increased to 400 in men and 600 microg in women. rhGH was then discontinued, and subjects were followed up after 3 months. Forty completed the intervention, and 39 completed the follow-up. The study concluded that in obesity, rhGH normalized IGF-I levels, induced loss of BW from BF, and improved lipid profile without untoward effects on insulin sensitivity.

**67.      Age-related changes in slow wave sleep and REM sleep and relationship with growth hormone and cortisol levels in healthy men**

Published by: JAMA. 2000;284(7):861-868. doi:10.1001/jama.284.7.861

Authors: Eve Van Cauter, PhD; Rachel Leproult, MS; Laurence Plat, MD

Link to the Study: http://jamanetwork.com/journals/jama/fullarticle/192981

Summary:

The study is to determine the chronology of age-related changes in sleep duration and quality (sleep stages) in healthy men and whether concomitant alterations occur in GH and cortisol levels. The data has been taken from a series of studies conducted between 1985 and 1999 at 4 laboratories. A total of 149 healthy men, aged 16 to 83 years participated in the study. In men, age-related changes in slow wave sleep and REM sleep occur with markedly different chronologies and are each associated with specific hormonal alterations.

**68.      An insulin-like growth factor-I promoter polymorphism is associated with increased mortality in subjects with myocardial infarction in an elderly Caucasian population.**

Published by: JAMA. 2000;284(7):861-868. doi:10.1001/jama.284.7.861

Authors: Eve Van Cauter, PhD; Rachel Leproult, MS; Laurence Plat, MD

Link to the Study: http://jamanetwork.com/journals/jama/fullarticle/192981

Summary:

The study was conducted with the objective of understanding the relationship between age-related changes in sleep duration and quality (sleep stages) in healthy men and whether concomitant alterations occur in GH and cortisol levels. The data was collected from a number of studies that were conducted between 1985 and 1999 at 4 laboratories. A total of 149 healthy men, aged 16 to 83 years, with a mean (SD) body mass index of 24.1 (2.3) kg/m2, without sleep complaints or histories of endocrine, psychiatric, or sleep disorders.

Decreased subjective sleep quality is one of the most common health complaints of older adults.1 The most consistent alterations associated with normal aging include increased number and duration of awakenings and decreased amounts of deep slow wave (SW) sleep. Sleep is a major modulator of endocrine function, particularly of pituitary-dependent hormonal release. Growth hormone (GH) secretion is stimulated during sleep and, in men, 60% to 70% of daily GH secretion occurs during early sleep.

**69.      The effects of 10 years of recombinant human growth hormone (GH) in adult GH-deficient patients**

Published by:  The Journal of Clinical Endocrinology & Metabolism, 1999 Aug;84(8):2596-2602.

Authors: Gibney J, Wallace JD, Spinks T, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10443645

Summary:

The study analyzes the effects of GH replacement in adult GH-deficient (GHD) patients. It studied 21 GHD adults who originally took part in a randomized, double blind, placebo-controlled trial of GH treatment in 1987. A group of 11 age- and sex-matched normal controls were also studied in 1987 and 1997. The results showed that GH treatment for 10 yr in GHD adults resulted in increased lean body and muscle mass, a less atherogenic lipid profile, reduced carotid intima media thickness, and improved psychological well-being.

**70.      A 10-year, prospective study of the metabolic effects of growth hormone replacement in adults**

Published by:  The Journal of Clinical Endocrinology & Metabolism, 2007 Apr;92(4):1442-1445.

Authors: Götherström G, Bengtsson BA, Bosaeus I, et al.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10443645

Summary:

The study analyses the long term effects of GH replacement in adult GH-deficient (GHD) patients have not yet been clarified. It studied 21 GHD adults who originally took part in a randomized, double blind, placebo-controlled trial of GH treatment in 1987. After completion of that trial, 10 patients received continuous GH replacement for the subsequent 10 yr, whereas 11 did not. In conclusion, GH treatment for 10 yr in GHD adults resulted in increased lean body and muscle mass, a less atherogenic lipid profile, reduced carotid intima media thickness, and improved psychological well-being.

**71.      Beneficial effects of long-term GH replacement therapy on quality of life in adults with GH deficiency**

Journal: J Clin Endocrinol Metab.

Authors: Wirén L, Bengtsson BA, Johannsson G..

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/9666873

Summary:

The objective of the study was to examine changes in quality of life in a large group of GH-deficient adults receiving long term GH replacement therapy. The study was conducted in two stages. While the first stage had 71 GH deficient adults, the stage of study added 90 more patients to create a population of 161 GH deficient patients. In the first stage GH was administered for 20-50 months and in the second stage GH was administered for 12 months. The results of the study indicate that the previously reported beneficial effects of GH-deficient adults are sustained during long-term therapy. Also, the study suggest that once started, GH therapy should be continued for at least 6 months before judgments are made regarding its efficiency in improving the quality of life.

**72.      Beneficial Effects of Growth Hormone Replacement in Growth Hormone-Deficient Adults**

Journal: Endocrinol. 2002 Sept/Oct;12(5):405-411.

Authors: Blevins LS.

Link to the Study: http://journals.lww.com/theendocrinologist/Abstract/2002/09000/Beneficial\_Effects\_of\_Growth\_Hormone\_Replacement.8.aspx?trendmd-shared=0

Summary:

The paper discusses about  Adult growth hormone deficiency (AGHD). The condition is associated with a reduction in lean body and muscle mass, an increased risk for cardiovascular morbidity and mortality, reduced muscle strength and impaired physical fitness, and decreased bone mass. Growth hormone (GH) replacement therapy has proven to be beneficial in increasing lean body and muscle mass. Importantly, GH replacement therapy has significant positive effects on lipid profiles and central adiposity, two major cardiovascular risk factors. Improvements in bone mineral density are also often seen with replacement therapy.

**73.      The consequences of growth hormone deficiency in adulthood, and the effects of growth hormone replacement.**

Published by: Schweiz Med Wochenschr. 1997 Aug 30;127(35):1440‐1449.

Authors: Christ ER, Carroll PV, Russell‐Jones DL, Sönksen PH

Link to the Study: NA

Summary:

The study examines the role played by Growth Hormones (GH) in adulthood and the effect of GH replacement in GH-deficient adult. These studies have led to the recognition of a specific syndrome of  H‐deficiency, characterized by symptoms and signs. The results of these studies point to the fact that GH treatment restores LBM, reduces FM, and increases bone mass.

**SECTION 3: TESTOSTERONE FOR MEN**

**74.      Current Status of Testosterone Replacement Therapy in Men**

Published by: Archives of Family Medicine, 1999 May-Jun;8(3):257-263

Authors: Winters SJ

Link to the Study: <http://www.anabolicsteroidcalculator.com/resources/articles/review/article2.pdf>

Summary:

The paper discusses about the Androgen deficiency that results in subnormal production of testosterone by the testes. It also discusses about testosterone replacement.

**75.      Longitudinal Evaluation of Serum Androgen Levels in Men With and Without Prostate Cancer.**

Published by: Prostate. 1995 Jul;27(1):25-31.

Authors: Carter HB, Pearson JD, Metter EJ, et al.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/7541528>

Summary:

The study analyzes the role of androgen levels in men with and without prostate cancer. It evaluated androgen levels in 3 age-matched groups of men who were part of the Baltimore Longitudinal Study of Aging:

1) 16 men with no prostatic disease by urologic history and exam (control group);

2) 20 men with a histologic diagnosis of benign prostatic hyperplasia (BPH) who had undergone simple prostatectomy; and

3) 20 men with a histologic diagnosis of prostate cancer (16 with local/regional cancer, and 4 with metastatic cancer).

The results of the study does not show measurable differences in serum testosterone levels among men who are destined to develop prostate cancer and those without the disease.

**76.      Concerns About Testosterone Replacement Safety Evolve.**

Published by: Schweiz Med Wochenschr. 1997 Aug 30;127(35):1440‐1449.

Authors: Boshert S.

Link to the Study: NA

Summary:

The article throws light on the concerns about Testosterone replace treatment. Though there are no evidence to prove that it can cause prostate cancer, still many other concerns remain. However on the other side Adding testosterone replacement therapy to treatment with sildenafil provided short-term improvements in erectile dysfunction in men who did not respond to sildenafil alone.

**77.      PSA Testing: Update on Diagnostic Tools.**

Published by: Consultant. 2000 April 1.

Authors: Cookson MS, Smith J.

Link to the Study: NA

Summary:

The article states that patients with PSA levels between 2.51 to 4.0 ng/mL and are generally not recommended for prostate biopsy. The lower the %FPSA, the higher the risk and the more aggressive the cancer.

**78.      Testosterone patch increases BMD in elderly men**

Published by: Practice News. 1999 Oct 15.Authors: Baker B.

Link to the Study: NA

Summary:

The article discusses the fact that three years of testosterone replacement therapy resulted in significant increases in bone mineral density in elderly men who initially had relatively low serum testosterone concentrations. In younger men they experienced decreased fat mass and increased lean body mass.

**79.      Testosterone and risk factors for cardiovascular disease in men**

Published by: Diabete Metab. 1995 Jun;21(3):156-161.

Authors: Barrett-Connor EL

Link to the Study: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3720171/>

Summary:

The article reviews the current evidence regarding the cardiovascular effects of testosterone in men including an examination of the age-related decline in testosterone, the relationship between testosterone levels and coronary disease, coronary risk factors and mortality.

**80.      A new, independent risk factor for heart disease**

Published by: 2004 Aug.

Authors: Faloon W.

Link to the Study: [http://www.lifeextension.com/magazine/2004/8/awsi/Page-01](http://www.lifeextension.com/magazine/2004/8)

Summary:

The paper states that blood pressure, cholesterol, diabetes, smoking, and body mass index may not be the real or the only indicators of the degree of coronary artery blockage.  Instead, the three independent risk factors that predicted the severity of coronary artery occlusion were age, high-density lipoprotein (HDL), and free testosterone. In this study, aged men with low free testosterone and low HDL showed more severe coronary blockage.

**81.      Association between serum testosterone concentration and carotid atherosclerosis in men with type 2 diabetes**

Published by: Diabetes Care. 2003 Jun;26(6):1869-1873.

Authors: Fukui M, Kitagawa Y, Nakamura N, et al..

Link to the Study: <http://care.diabetesjournals.org/content/diacare/26/6/1869.full.pdf>

Summary:

The aim of this study was to evaluate the relationship between serum testosterone concentration and carotid atherosclerosis as well as major cardiovascular risk factors in men with type 2 diabetes. Serum free and total testosterone concentrations were measured in 253 consecutive men with type 2 diabetes. The results of the study suggest that serum testosterone concentrations are not significantly different between patients with or without CVD. Endogenous Sex Hormone Levels and Cognitive Function in Aging Men

Published by: Neurology. 2005 Mar 8;64(5):866‐871.

Authors: Muller M, Aleman A, Grobbee DE, et al.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/20531231>

Summary:

The study was conducted to understand whether endogenous sex hormone levels could predict cognitive function in older men. An exploratory analysis in a population-based cohort in Rancho Bernardo, California was used as the methodology for the study. The participants of the study were 547 community-dwelling men 59-89 yr of age at baseline who were not using testosterone or estrogen therapy. The results conclude that certain cognitive functions in men suggest benefit with an optimal hormone level

**82.      52-Week Treatment with Diet and Exercise Plus Transdermal Testosterone Reverses the Metabolic Syndrome and Improves Glycaemic Control in Men with Newly Diagnosed Type 2 Diabetes and Subnormal Plasma Testosterone**

Published by: Journal of Andrology, 2009 Nov-Dec;30(6):726-733.

Authors: Heufelder AE, Saad F, Bunck MC, Gooren L.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/19578132>

Summary:

The study was conducted to evaluate the effectiveness of elevated testosterone levels to improve features of the MetS and glycemic control. In a single blind, 52-week randomized clinical trial, the effects of supervised diet and exercise (D&E) with or without transdermal testosterone administration were accessed. A total of 32 hypogonadal men with newly diagnosed T2D and with the MetS participated in the study. Testosterone treatment improved insulin sensitivity, adiponectin and CRP.

**83.      Testosterone Replacement Curbs Inflammatory Cytokines**

Published by: Clinical Psychiatry News. 2004 May.

Authors: Brice Jansin

Link to the Study: <https://www.questia.com/magazine/1G1-118109945/testosterone-replacement-curbs-inflammatory-cytokines>

Summary:

The article discusses Dr. Chris J. Malkin remark at the annual meeting of the American College of Cardiology that testosterone replacement therapy may be of cardiovascular benefit in a sizable proportion of men with coronary heart disease. In the study mentioned testosterone replacement reduced elevated levels of inflammatory cytokines in a group of men with CHD and symptomatic androgen deficiency in a randomized, placebo-controlled trial.

**84.      Androgens and Diabetes in Men**

Published by: Diabetes Care. 2007 Feb;30(2):234-238.

Authors: Selvin E, Feinleib M, Zhang L, et al.

Link to the Study: <http://care.diabetesjournals.org/content/diacare/30/2/234.full.pdf>

Summary:

The objective of this study is to test the hypothesis that low normal levels of total, free, and bioavailable testosterone are associated with prevalent diabetes in men. The study sample included 1,413 adult men aged > or =20 years. It was a cross-sectional survey of the civilian, noninstitutionalized population of the U.S. Bioavailable and free testosterone levels were calculated from serum total testosterone, sex hormone-binding globulin, and albumin concentrations. The study showed that Low free and bioavailable testosterone concentrations in the normal range were associated with diabetes. These data suggest that low androgen levels may be a risk factor for diabetes in men.

**85.      Low-Dose Transdermal Testosterone Therapy Improves Angina Threshold in Men With Chronic Stable Angina: A randomized, double-blind, placebo-controlled study**

Published by: Circulation. 2000 Oct 17;102(16):1906-1911.

Authors: English KM, Steeds RP, Jones TH, et al. Low

Link to the Study: [https://www.questia.com/magazine/1G1-118109945/testosterone-replacement-curbs-inflammatory-cytokines](https://www.questia.com/magazine/1G1-118109945/testosterone-replacement-curbs-inf)

Summary:

The study was conducted to evaluate the effect of long-term low-dose androgens in men with angina. It is being considered as a pilot project. Forty-six men with stable angina completed a 2-week, single-blind placebo run-in, followed by double-blind randomization to 5 mg testosterone daily by transdermal patch or matching placebo for 12 weeks, in addition to their current medication. The study results show that low dose supplemental testosterone treatment in men with chronic stable angina reduces exercise induced myocardial ischemia.

**86.      Testosterone and Prostate CA**

Published by: Clinical Geriatrics. 2008 April;16(4):25–28

Authors: Ginsberg TB, Cavalieri TA.

Link to the Study: <https://www.questia.com/magazine/1G1-118109945/testosterone-replacement-curbs-inflammatory-cytokines>

Summary:

This part of the study points to the fact that there are no data to confirm that testosterone therapy causes prostate cancer. There are also high chances that testosterone may result in liver toxicity. The methylated oral forms of testosterone have been identified as specifically toxic to the liver; however, the transdermal forms are primarily free of toxic hepatic effects.

**TESTOSTERONE FOR WOMEN**

**87.      Transdermal Testosterone Treatment in Women with Impaired Sexual Function after Oophorectomy**

Published by:  The New England Journal of Medicine, 2000 Sep 7;343(10):682-688.

Authors: Shifren JL, Braunstein GD, Simon JA, et al.

Link to the Study: http://www.nejm.org/doi/full/10.1056/NEJM200009073431002#t=article

Summary:

The study evaluates the effects of transdermal testosterone in women who had impaired sexual function after surgically induced menopause. Seventy-five women between the age of  31 to 56 years old and have undergone oophorectomy and hysterectomy received conjugated equine estrogens and, in random order, placebo, 150 microg of testosterone, and 300 microg of testosterone per day transdermally for 12 weeks each. The higher testosterone dose resulted in further increases in scores for frequency of sexual activity and pleasure & orgasm. The positive well-being, depressed mood, and composite scores of the Psychological General Well-Being Index also improved at the higher dose. Transdermal testosterone improves sexual function and psychological wellbeing.

**88.      Sex, Hormones, and Hysterectomies**

Published by:  The New England Journal of Medicine, 2000 Sep 7;343(10):682-688.

Authors: Guzick DS, Hoeger K

Link to the Study: <http://www.nejm.org/doi/pdf/10.1056/NEJM200009073431010>

Summary:

The study evaluates transdermal testosterone treatment in women with impaired sexual function after oophorectomy. The use of transdermal

testosterone had the advantage of producing steady-state serum testosterone concentrations that did not raise serum lipid concentrations - a recognized problem with orally administered testosterone. Those receiving an estrogen–androgen combination had significantly higher vertebral bone density than those receiving estrogen alone. Testosterone can reverse

sexual impairment and improve psychological wellbeing without exerting

unwanted androgenic effects on a long-term basis. Transdermal testosterone may prove to be a useful treatment.

**89.      When to Consider Hormone Replacement ... With Androgens**

Published by: Consultations & Comments

Authors: NA

Link to the Study: [NA](http://www.nejm.org/doi/full/10.1056/NEJM200009073431002%22%20%5Cl%20%22t%3Darticle)

Summary:

The article talks about the potential benefits of androgens. The addition of testosterone also increased the frequency and intensity of orgasm, relieves menopausal symptoms, and may also increase sexual desire and improve overall well-being.

**90.      Can Male Hormones Really Help Women?**

Published by: AMA. 2000 May;283(20):2643-2644.

Authors: M J Friedrich

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/10819929>

Summary:

The article analyses how androgens play physiological roles in women, some of which are only beginning to be understood and the importance of these hormones to human health.

**91.      Postmenopausal Androgen Therapy**

Published by:  The Female Patient. 2004 Nov;29:40-45.

Authors: Braunstein GD, Cameron DR.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/10819929>

Summary:

The articles discusses about the significant effects from use of testosterone on sexual function, bone health, mood, energy/fatigue, and well-being. AT in women also carries the potential for adverse effects including hirsutism, acne, deepening of the voice, alopecia, hepatic insult, polycythemia, sleep apnea, breast stimulation, and weight gain. These side effects observed are from very high doses of androgens and anabolic steroids. However such effects have not been observed in women who receive substantially lower doses of androgens.

**92.      Testosterone patch for the treatment of hypoactive sexual desire disorder in naturally menopausal women: results from the INTIMATE NM1 Study**

Published by:

Authors: Shifren JL1, Davis SR et al

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/16932240>

Summary:

The study is to evaluate the efficacy and safety of a testosterone patch for the treatment of women with hypoactive sexual desire disorder after natural menopause. The study is a multicenter, randomized, double-blind, placebo-controlled, parallel-group trial. It was conducted in naturally menopausal women with hypoactive sexual desire disorder receiving a stable dose of oral estrogen with or without progestin. A total of 483 women (88%) were included in the primary analysis population. The results of the study showed that Testosterone patch treatment increased the frequency of satisfying sexual activity and sexual desire, decreased personal distress, and was well tolerated in naturally menopausal women with hypoactive sexual desire disorder.

**93.      Safety and Efficacy of a Testosterone Patch for the Treatment of Hypoactive Sexual Desire Disorder in Surgically Menopausal Women**

Published by: Archives of Internal Medicine

Authors: Braunstein GD, Sundwall DA, Katz M, et al.

Link to the Study: [http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/486664](http://jamanetwork.com/jour)

Summary:

A 24-week, randomized, double-blind, placebo-controlled, parallel-group, multicenter trial was conducted in women (aged 24-70 years) who developed distressful low sexual desire after bilateral salpingo-oophorectomy and hysterectomy and who were receiving oral estrogen therapy. Women were randomized to receive placebo (n = 119) twice weekly for 24 weeks. Sexual desire and frequency of satisfying sexual activity were primary efficacy outcome measures. Of the 447 women randomized, 318 (71%) completed the trial. The 300-μg/d testosterone patch increased sexual desire and frequency of satisfying sexual activity and was well tolerated in women who developed hypoactive sexual desire disorder after surgical menopause.

**SECTION 5: MELATONIN**

**94.      Melatonin: Can a Dose Make You Doze?**

Published by: Consultant & Comments 1998; 38(12):2833.

Authors: Lewy AJ.

Link to the Study: NA

Summary:

The article discusses the possibility of becoming sleepy after having a dose of melatonin. It is analyzed that there is no particular dosage level that can trigger sleepiness. Some persons become sleepy after taking doses as low as .5 mg; others cannot distinguish 50 mg from placebo. At present there is no way to predict who will become sleepy from a given dose. Some studies indicate that melatonin is better able to promote sleep after daily use for several weeks, which suggests that its mechanism of action is stabilization of the endogenous circadian pacemaker.

**95.      Insomnia**

Published by: Patient Care. 2000 June 15.

Authors: NA

Link to the Study: NA

Summary:

The article discusses about the condition of insomnia in detail. It also refers to the most probable solution to the condition. A crossover study using controlled-release melatonin in 12 elderly patients with insomnia  demonstrated improvement in sleep quality.

**96.      Weaning Elderly Patients From Benzodiazepines: A New Strategy Offers Help and Hope**

Published by: Archives of Internal Medicine, 1999 Nov

Authors: Garfinkel D, Zisapel N, Wainstein J, Laudon ME, Bursztajn H

Link to the Study: NA

Summary:

In this study, patients were successfully weaned from benzodiazepines with a sleep regulating hormone melatonin. It was noted during the 6-month follow-up assessment 19 of 24 patients who discontinued benzodiazepines but continued to take melatonin reported good sleep quality. Melatonin has not been associated with either adverse effects or tolerance. On the other hand , in the case of benzodiazepines it may initially restore sleep, the underlying causes of insomnia – such as depressive and stress disorders – are left untreated and patients may become dependent on the drugs.

**97.      Melatonin In The Treatment of Cancer: A Systematic Review of Randomized Controlled Trials and Meta-Analysis.**

Published by: Journal of Pineal Research, 2005 Nov;39(4):360-366.

Authors: Mills E, Wu P, Seely D, Guyatt G

Link to the Study: http://www.medicinacomplementar.com.br/biblioteca/pdfs/Cancer/ca-4907.pdf

Summary:

The study is a systematic review of randomized controlled trials (RCTs) of melatonin in solid tumor cancer patients and its effect on survival at 1 yr. The study included review of 10 RCTs published between 1992 and 2003 and included 643 patients. The results showed a substantial reduction in risk of death. Also, low adverse events were reported and low costs related to this intervention suggest great potential for melatonin in treating cancer.

**98.      Studies link melatonin to periodontal health**

Published by: The Press Enterprise. 2007 December 19.

Authors: Susman C.

Link to the Study: NA

Summary:

The news report starts with explaining what hormone melatonin is used for and how useful it has been proved for the patients of a variety of diseases. It also mentions the reports released by the American Academy of Periodontology that suggest that melatonin may also be effective against periodontal disease.

**99.      Melatonin Pharmacotherapy For Nocturia In Men With Benign Prostatic Enlargement**

Published by: The Journal of Urology, 2004 Mar;171(3):1199-1202.

Authors: Drake MJ, Mills IW, Noble JG.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/14767300

Summary:

This study is to evaluate melatonin as a potential treatment for nocturia associated with bladder outflow obstruction in older men. Total of 20 men with urodynamically confirmed bladder outflow obstruction and nocturia were entered into a randomized, double blind, placebo controlled crossover study assessing the effect of 2 mg controlled release melatonin at night on nocturia. The results of the study showed that there was an improvement in nocturia among the patients.

**100.    A Tablet of Melatonin may Keep Migraines Away**

Published by: Migraine. 2004 Dec 15.

Authors: Graedon J, Graedon T

Link to the Study: NA

Summary:

The article discusses about how taking Melatonin can decrease incidence of migraines.

**101.    Breakthrough for High Blood Pressure Sufferers**

Published by: NA

Authors: NA

Link to the Study: NA

Summary:

The article discusses about the study that analyzes the role played by hormone treatment in lowering or regulating hypertension among men while they are asleep. Melatonin decreases nocturnal HTN.

**102.    Prophylaxis a Must for Patients with Cluster Headaches**

Published by: Internal Medicine News, 2005 April:65

Authors: Finn R.

Link to the Study: [http://www.mdedge.com/clinicalneurologynews/article/48351/pain/prophylaxis-must-cluster-headache-patients-transitional](http://www.mdedge.com/clinicalneurologynews/article)

Summary:

At a symposium sponsored by the American Headache Society, Todd D. Rozen, M.D said that eery cluster headache patient needs to be on a prophylactic drug. For Dr. Rozen, Melatonin is his first-line choice because it is easy to get over the counter and there are no side effects.

**103.    Indications for Using Migraine Prophylactic Medications**

Published by: Emergency Medicine. 2003 Oct;35(10):39-45.

Authors: Unger J, Cady RK, Farmer-Cady K.

Link to the Study: NA

Summary:

The article discusses about the possible treatments for patients who suffer from migraine. According to the article prophylactic medications needs to be used. Among others is melatonin. Using melatonin at a dose of 10 to 15 mg taken at bedtime to prevent migraine headaches. It also have couple of side effects. Bad dreams and difficulty sleeping for the first two or three nights of use are common.

**SECTION  6: DHEA**

**104.    DHEA: The Hormone That "Does it All"**

Published by: Holistic Medicine. 1993 Spring:19-23.

Authors: Gaby AR.

Link to the Study: <http://www.crowndiamond.net/techpack/0258.pdf>

Summary:

The paper discusses the current research findings that suggests that DHEA may be of value in preventing and treating a number of diseases like cardiovascular disease, high cholesterol, diabetes, obesity, cancer, Alzheimer's disease, other memory disturbances. DHEA may also enhance the body's immune response to viral and bacterial infections. It is also currently being investigated as an anti-aging hormone. DHEA may also be  of value in preventing and treating osteoporosis.

**105.    Treatment of Systemic Lupus Erythematosus With Dehydroepiandrosterone: 50 Patients Treated Up to 12 Months**

Published by: The Journal of Rheumatology, 1998 Feb;25(2):285-289.

Authors: Van Vollenhoven RF, Morabito LM, Engleman EG, McGuire JL..

Link to the Study: <http://www.crowndiamond.net/techpack/0258.pdf>

Summary:

The study was conducted to determine whether long-term therapy (up to 1 year) with the weakly androgenic adrenal steroid DHEA is feasible and beneficial in patients with mild to moderate SLE. The study is a prospective, open label, uncontrolled longitudinal study with 50 female patients (37 premenopausal, 13 postmenopausal) with mild to moderate SLE were treated with oral DHEA 50-200 mg/day. The results of the study show that DHEA was well tolerated and appeared clinically beneficial, with the benefits sustained for at least one year in those patients who maintained therapy.

**106.    Dehydroepiandrosterone (DHEA) treatment of depression.**

Published by: Biol Psychiatry. 1997 Feb 1;41(3):311-318..

Authors: Wolkowitz OM, Reus VI, Roberts E, et al...

Link to the Study: [http://www.sciencedirect.com/science/article/pii/S0006322396000431](http://www.sciencedirect.com/science/)

Summary:

The study focuses on using DHEA and DHEA-S  as a treatment for depression among elderly patients. In this study, six middle-aged and elderly patients with major depression and low basal plasma DHEA and/or DHEA-S levels were openly administered DHEA (30–90 mg/d × 4 weeks). In both studies, improvements in depression ratings and memory performance were directly related to increases in plasma levels of DHEA and DHEA-S and to increases in their ratios with plasma cortisol levels.

**107.    Dehydroepiandrosterone and Coronary Atherosclerosis**

Published by: Annals of the New York Academy of Sciences, 1995 Dec 29;774:271-280.

Authors: Herrington DM..

Link to the Study: http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.1995.tb17387.x-i1/full

Summary:

The study was conducted to analyze the relation between DHEA and a direct measure of coronary atherosclerosis. 206 middle-aged patients undergoing coronary angiography participated in the study. The data suggest that low plasma levels of DHEA may facilitate, and high levels may retard, the development of coronary atherosclerosis and coronary allograft vasculopathy.

**108.    A Prospective Study of Dehydroepiandrosterone Sulfate, Mortality, and Cardiovascular Disease**

Published by: The New England Journal of Medicine, 1986 Dec 11;315(24):1519-1524.

Authors: Barrett-Connor E, Khaw KT, Yen SS.

Link to the Study: <http://www.nejm.org/doi/full/10.1056/NEJM198612113152405?keytype2=tf_ipsecsha&ijkey=ad44bd2cbd9f350f10c30280496d1eaf89fd8d2f>

Summary:

The study has been conducted to evaluate using DHEA and DHEA-S  as a discriminators of life expectancy and aging. The study included 242 men aged 50-79 years. The data suggest that the DHEA concentration is independently and inversely related to death from any cause and death from cardiovascular disease in men over age 50.

**109.    Reduction of Atherosclerosis By Administration of  hydroepiandrosterone.**

Published by: Journal of Clinical Investigation, 1988 Aug;82(2):712-720.

Authors: Gordon GB, Bush DE, Weisman HF

Link to the Study: <http://pubmedcentralcanada.ca/pmcc/articles/PMC303568/pdf/jcinvest00080-0342.pdf>

Summary:

The article starts the discussion by defining DHEA as an endogenous steroid that blocks carcinogenesis, retards aging, and exerts anti-proliferative properties. Low levels of DHEA or its sulfate conjugate are linked to an increased risk of developing cancer or of death from cardiovascular disease.

**110.    Effects of Replacement Dose of Dehydroepiandrosterone in Men and Women of Advancing Age**

Published by: The Journal of Clinical Endocrinology & Metabolism, 1994 Jun;78(6):1360-1367.

Authors: Morales AJ, Nolan JJ, Nelson JC, Yen SS.

Link to the Study: <http://www.side-effects-site.com/support-files/effects-of-replacement-dhea-in-older-men-and-women.pdf>

Summary:

The study tries to test the hypothesis that that the decline in DHEA may contribute to the shift from anabolism to catabolism associated with aging. For this purpose, effect of a replacement dose of DHEA in 13 men and 17 women, 40-70 yr of age was recorded and analyzed. A randomized placebo-controlled cross-over trial of nightly oral DHEA administration (50 mg) of 6-month duration was conducted. The results of the study showed that serum levels were restored to those found in young adults.  A 2-fold increase in serum levels of testosterone was observed in women. These observations together with improvement of physical and psychological well-being in both genders and the absence of side-effects constitute the first demonstration of novel effects of DHEA replacement in age-advanced men and women.

**111.    Prasterone Improves Lupus in Phase III Trial**

Published by: The Journal of Clinical Endocrinology & Metabolism, 1994 Jun;78(6):1360-1367.

Authors: Bruce Jancin

Link to the Study: <http://www.side-effects-site.com/support-files/effects-of-replacement-dhea-in-older-men-and-women.pdf>

Summary:

The study analyzes the effectiveness of Prasterone, a pure preparation of DHEA as a treatment for Lupus. The study included 346 Lupus patients who were given 200 mg/day of prasterone. As a results of the treatment improvement or stabilization was 66% better in patients with SLE.

**112.    Androgenic Hormone Improves Symptoms, Improves Bone Density in Lupus**

Published by: Reuters Health, Feb  2000

Authors: Email sent by Alan Muir (Medquest Pharmacy) to Caroline Rouzier (Earthlink.net)

Link to the Study: NA

Summary:

The email mentions the results of Phase III study. Mildly androgenic hormone, GL701, can improve symptoms of arthritis and fatigue along with the quality of life and decreases disease flares in patients with systemic lupus erythematosus. GL701 is the pharmaceutical grade of dehydroepiandrosterone (DHEA). As s result of the study patients reported relief in arthritis symptoms, a decrease in level of fatigue and an increase in quality of life.

**113.    Effect of 12-Month Dehydroepiandrosterone Replacement Therapy on Bone, Vagina, and Endometrium in Postmenopausal Women**

Published by: The Journal of Clinical Endocrinology & Metabolism, Oct;82(10):3498-3505.

Authors: Labrie F, Diamond P, Cusan L, et al.

Link to the Study:<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.335.9730&rep=rep1&type=pdf>

Summary:

The study analyzes the effect of 12-month DHEA replacement therapy on 14 60- to 70-yr-old women who received daily applications of a 10% DHEA cream. The results of the study suggest that DHEA replacement therapy could not only correct, but also prevent, the multiple problems associated with menopause, a phenomenon preceded and accompanied by the decreased formation of both androgens and estrogens during aging in women.

**SECTION 7: PREGNENOLONE**

**114.    Pregnenolone:Overview and Original Research; Focus on Allergy Research Group**

Published by: Focus on Allergy Research Group, Oct 1997

Authors: Peter Himmel

Link to the Study: [NA](http://www.side-effects-site.com/support-files/effects-of-replacement-dhea-in-older-men-and-women.pdf)

Summary:

This paper can be seen as an attempt to continue the research work that was being conducted in the field of steroids in early 1940s and 1950s. This study particularly focuses on the benefits of Pregnenolone on relieving fatigue among the patients.

**115.    Key role for pregnenolone in combination therapy that promotes recovery after spinal cord injury.**

Published by: Proceedings of the National Academy of Sciences, 1994 Dec

6;91(25):12308-12312.

Authors: Guth L, Zhang Z, Roberts E.

Link to the Study: [http://www.jstor.org/stable/2366327?seq=1#page\_scan\_tab\_contents](http://www.jstor.org/stable/2366327?seq=1%22%20%5Cl%20%22page_scan_tab_contents)

Summary:

This study focuses on finding a solution to cure spinal cord injury through a treatment based on a combination of medicines that include an anti-inflammatory substance, indomethacin; a stimulator of cytokine secretion, bacterial lipopolysaccharide; and the parent steroid, from which all other steroids arise, pregnenolone..

This treatment reduced histopathological changes, spared tissue from secondary injury, and increased restoration of motor function among 11 out of 16 rats suffering within a span of 21 days after injury.

**SECTION 8: ESTROGEN**

**116.    The sexy years: Discover the hormone connection: The secret to fabulous sex, great health, and vitality for women and men**

Published by: Random House

Authors: Somers S. Greene RA.

Link to the Study: <https://www.amazon.com/Sexy-Years-Discover-Connection-Fabulous/dp/1400081572>

Summary:

In the book, Somers advocates the use of natural, bioidentical hormonal replacement as an alternative treatment for menopause. To support her case, Somers includes interviews with several physicians who specialize in natural hormones, sexual dysfunction and menopause.

**117.    The "Change" In How Women View Menopause**

Published by: NA

Authors: NA

Link to the Study: [NA](https://www.amazon.com/Sexy-Years-Discover-Connection-Fabulous/dp/1400081572)

Summary:

This report analyzes the issue of menopause among the women and how the attitude towards the same has changed in the recent years. Women want to improve their quality of life. They want to lessen or even avoid the health issues that come along with it like the hot flashes, night sweats and depression etc.

**118.    Older Women Still Unconvinced of The Benefits of ERT: Here's Why**

Published by: Geriatrics. 1996 Aug;51(8):16.

Authors: NA

Link to the Study: [NA](https://www.amazon.com/Sexy-Years-Discover-Connection-Fabulous/dp/1400081572)

Summary:

This paper throws light on the skepticism that the older women hold against the estrogen replacement therapy (ERT) for menopause. The main reasons stated include fear of side-effects and the thought that the treatment is harmful. There is a need for the educating the patients regularly regarding the hormone treatments  to take away any kind of misunderstanding against it.

**119.    USPSTF Recommends Against Routine Use of Hormone Therapy for Chronic Disease Prevention**

Published by: Medscape Medical News. 2005 May 17..

Authors: Barclay L.

Link to the Study: http://www.medscape.org/viewarticle/505019

Summary:

In the article The U.S. Preventive Services Task Force (USPSTF) recommends against routine use of hormone therapy (HT) for prevention of chronic conditions, according to new guidelines published in the May 17 issue of the Annals of Internal Medicine. This a grade D recommendation.

**120.    Report of the Council on Science and Public Health**

Action of the AMA House of Delegates 2009 Annual Meeting: Council on Science and Public Health Report.

Subject: "The Use of Hormones for "antiaging": A Review of Efficacy and Safety.

Presented by: Carolyn B. Robinowitz, MD

Link to Study: <https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/a09-csaph-antiaging-hormones.pdf>

**Summary:**

This report reviews the scientific evidence on the benefits and risks of human growth hormone (hGH), dehydroepiandrosterone (DHEA), testosterone, and estrogens with or without progestins as supplements to prevent, slow, or reverse age-related changes in otherwise healthy adults.

Four MEDLINE searches were conducted which were limited to reviews, meta-analyses, and controlled clinical trials in humans aged 45 years and older that were published in core clinical journals. A total of 26, 21, 230, and 139 articles were identified. The report discusses many of the selected trials. A number of randomized, placebo-controlled clinical trials have evaluated DHEA (Dehydroepiandrosterone) as an antiaging 24 agent and essentially all were negative. Despite the widespread promotion of hormones as antiaging agents by for-profit web sites, 19 antiaging clinics, and compounding pharmacies, the scientific evidence to support these claims is 20 lacking. In some cases, the evidence suggests long-term use of a particular hormone can present 21 more risks than benefits.

**121.    Bioidentical Hormone Therapy: A Review**

Published by: Menopause. 2004 May/June;11(3):356-367

Authors: Boothby LA, Doering P, Kipersztok S

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/15167316

Summary:

This study analyzes whether the concept of natural hormone therapy (NHT) and to determine whether there is sufficient scientific evidence to support its use. A literature search was performed in Medline using the following MeSH terms and key words. The results and evidences suggests that, although individualized hormonal products may decrease some symptoms of menopause, it seems they have no proven advantage over conventional hormone therapies and their use is not supported by evidence regarding pharmacokinetics, safety, and efficacy.

**122.    Study Shows Hormone Replacement Therapy Decreases Mortality in Younger Postmenopausal Woman**

Published by: The American Journal of Medicine, 2009 Nov;122(11):1016-1022

Authors: Boothby LA, Doering P, Kipersztok S

Link to the Study: <https://www.elsevier.com/about/press-releases/research-and-journals/study-shows-hormone-replacement-therapy-decreases-mortality-in-younger-postmenopausal-woman>

Summary:

In an article is on the meta-analysis  conducted by researchers of the available data using Bayesian methods and concluded that HRT almost certainly decreased mortality in younger postmenopausal women. According to the study Hormone therapy (HRT)in younger postmenopausal women increases the risk of breast cancer and pulmonary embolism and reduces the risk of cardiovascular events, colon cancer, and hip fracture.

**123.    An Alternative Method of Hormone Replacement Therapy Using The Natural Sex Steroids**

Published by: Infertility and Reproductive Medicine Clinics of North America. 1995;6:653-674.

Authors: Hargrove JT, Osteen KG.

Link to the Study: <http://www.hormonebalance.org/images/documents/Hargrove%2095%20An%20alt%20method%20HRT%20natural%20Menopause.pdf>

Summary:

The article presents a protocol for hormone replacement therapy in postmenopausal patients with measured deficiencies of E2, testosterone, and DHEA. Menopause is treated like a true deficiency state by correcting the measured hormone deficiencies.

**124.    Hormone Replacement Therapy**

Published by: Hospital Practice, 1999 Aug 15;34(8):97-103, 107-8, 113-114.

Authors: Shoupe D.

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/10459365>

Summary:

The study reassess the association between postmenopausal hormone use and breast cancer. Even though the connection between the both has been clarified, there is nothing indefinite about the survival advantage conferred by hormone replacement therapy. The crucial nature of the ailment makes the hormone treatment one of the most beneficial one even among the women with family histories with breast cancer. Not just breast cancer but the therapy have benefits to offer for a number of other ailments like Colorectal Cancer.

**125.    Nothing like the real thing**

Published by: Cortlandt Forum. 1999;12(10):50.

Authors: Hutchins FJ.

Link to the Study: <https://elibrary.ru/item.asp?id=3754231>

Summary:

The article examines effects of an estrogen replacement therapy (ERT) in a 62-year-old woman. It analyzes the effect of ERT as treatment for breast cancer, occurrence of several episodes of abnormal bleeding, impact of the absence of estrogen on bladder and vagina. It also analyzes the causes of menopause-induced symptomatic pelvic relaxation and the pros and cons in using selective estrogen receptor modulators raloxifene.

**126.    Genital Atrophy Common, Rapid After HT Stopped**

Published by: Family Practice News. 2005 March 1.

Authors: Sullivan MG..

Link to the Study: <http://trove.nla.gov.au/work/49862547?q&versionId=62790911>

Summary:

The article analyzes the changes that are felt by post menopausal woman after discontinuing hormone therapy. Within just 6-12 months of discontinuing hormone therapy, more than 96% of postmenopausal women will show altered vaginal pH, a marker for tissue change and its associated genital atrophy.

**127.    The role of local vaginal estrogen for treatment of vaginal atrophy in postmenopausal women: 2007 position statement of The North American Menopause Society.**

Published by: Menopause. 2007 May-Jun;14(3 Pt 1):355-369. (North American Menopause Society.)

Authors: NA

Link to the Study: <http://www.menopause.org/docs/default-source/2013/2007-position-statement-vaginal-estrogen-retired.pdf?sfvrsn=2>.

Summary:

The key aim of the paper is to create an evidence-based position statement published by The North American Menopause Society (NAMS) on the role of local vaginal estrogen therapy (ET) for the treatment of vaginal atrophy in postmenopausal women. For this purpose a panel of experts in the field of genitourinary disease was enlisted to review, synthesize, and interpret the current evidence on vaginal ET for vaginal atrophy, develop conclusions, and make recommendations. Randomized controlled trials, albeit limited, have shown that low-dose, local vaginal estrogen delivery is effective and well tolerated for treating vaginal atrophy. The study concludes that the choice of therapy should be guided by clinical experience and patient preference.

**128.    Benefits of Estrogen**

Published by: Biomedicina, 2003, 3(1)

Authors: NA

Link to the Study: [NA](http://trove.nla.gov.au/work/49862547?q&versionId=62790911)

Summary:

The paper summarizes the benefits of estrogen therapy on a variety of ailments like Cardiovascular disease, Osteoporosis, Alzheimer's Disease, Colorectal cancer etc.

**129.    Hormone Replacement Therapy Report**

Published by: Life Extension, Dec, 2000 (Letters to the Editor)

Authors: Peggy Moore

Link to the Study: [NA](http://trove.nla.gov.au/work/49862547?q&versionId=62790911)

Summary:

The letter supports the dangers and implications that Premarin, Provera and PremPro have on the patients. The writer is of the view that if possible these artificial hormones should be taken of the market.

**130.    Menopausal Hormone Replacement Therapy With Continuous Daily OralMicronized Estradiol and Progesterone**

Published by: Obstetrics & Gynecology, 1989 Apr;73(4):606-612.

Authors: Hargrove JT, Maxson WS, Wentz AC, Burnett LS

Link to the Study: http://journals.lww.com/greenjournal/Abstract/1989/04000/Menopausal\_Hormone\_Replacement\_Therapy\_With.14.aspx

**Summary**: This study demonstrates that the daily administration of a combination of micronized E2 and progesterone results in symptomatic improvements, minimal side effects, an improved lipid profile, and amenorrhea without endometrial proliferation or hyperplasia in menopausal women.

**131.    Effect of treatment with low doses of hydrocortisone and fludrocortisone on mortality in patients with septic shock.**

Published by: JAMA. 2002;288(7):862-871

Authors: Annane D, Sébille V, Charpentier C

Link to the Study: http://jamanetwork.com/journals/jama/fullarticle/195197

**Summary**: The study conducted by the authors state that a 7-day treatment with low doses of hydrocortisone and fludrocortisone significantly reduced the risk of death in patients with septic shock and relative adrenal insufficiency without increasing adverse events.

**132.    Current concepts in postmenopausal hormone replacement therapy**

Published by: The Journal of Family Practice, 1996 Jul;43(1):69-75

Authors: Mayeaux EJ, Johnson C.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/8691183

**Summary**: The article says that benefits of estrogen include prevention of osteoporosis, CAD, urogenital atrophy, depression, RA, skin atrophy, loss of memory and verbal skills, colon CA.

**133.    HRT and cardiovascular health**

Published by: Consultant. 2000 December 1

Authors: Schmidt LS.

Link to the Study: NA

**Summary**: The article is a response to a comment written by Dr. Schimdt who stated that HRT does not have the desired benefits as stated everywhere. To this, Dr. Pepi Granat says that (HERS) failed to show the benefit after 4 years of taking 1 HRT regimen for the secondary prevention of coronary diseases.

**134.    HRT: The debate continues. (Hormone replacement therapy as a prevention of heart disease).**

Published by: Consultant. 2001 July 1.

Authors: Dr. Pepi Granat

Link to the Study: NA

**Summary**: The article is a response to the comment by Dr. Jerome Adams on the article by Dr. Pepi Granat. Dr. Adams points that the study by Dr. Granat was funded by Estrogen makers and hence biased. However, Dr. Granat responds by saying that the benefits of the estrogen therapy is not disputed anywhere. Dr. Granat also observes that Medroxyprogesterone used with estrogen in HERS is known to blunt somewhat estrogen's favorable endothelial and lipid effects.

**135.    Coronary heart disease in women--an ounce of prevention**

Published by: The New England Journal of Medicine, 2000 Aug 24;343(8):572-574

Authors: Elizabeth G. Nabel, M.D

Link to the Study: http://www.nejm.org/doi/full/10.1056/NEJM200008243430809

**Summary**: The article elaborates the role played by HRT in preventing coronary heart disease. The author states that the data from multiple lipid lowering trials make it clear that lesions area as detected by angiography is not a valuable endpoint when evaluating the course of CHD.

**136.    Trends in the incidence of coronary heart disease and changes in diet and lifestyle in women**

Published by: The New England Journal of Medicine, 2000 Aug 24;343(8):530-537

Authors: Hu FB, Stampfer MJ, Manson JE, et al

Link to the Study: www.drperlmutter.com/wp.../Coronary-Heart-Disease-Red-Meat-High-Fat-Dairy.pdf

**Summary**: The study individually shows that a reduction in smoking caused a 13 percent decline in the incidence of coronary disease; improvement in diet explained a 16 percent decline; and increase in postmenopausal hormone use explained a 9 percent decline. The experiment followed 85,941 women who were 34 to 59 years old and had no previously diagnosed cardiovascular disease or cancer from 1980 to 1994 in the Nurses' Health Study.

**137.    Young, health HRT users at low risk for CV event**

Published by: Family Practice News. 2003 June 1.

Authors: Worcester S.

Link to the Study: NA

**Summary:** The article states that the risk of cardiovascular events is extremely low in healthy women in early menopause who rely on hormone therapy to treat their menopausal symptoms.

**138.    Study links estrogen use to improved cognition**

Published by: Family Practice News. 2004 February 1.

Authors: Sullivan MG.

Link to the Study: NA

Summary: Postmenopausal estrogen users performed significantly better on computerized cognitive tests than nonusers, suggesting that the hormone may have a beneficial effect on cognition in some women.

**SECTION 9: PROGESTRONE**

**139.    Micronized progesterone: Clinical indications and comparison with current treatments.**

Published by: Fertility & Sterility. 1999 Sept;72(3): 389-39

Authors: Fitzpatrick LA, Good A.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10519605

**Summary:**

The study was conducted to evaluate the effectiveness of elevated testosterone levels to improve features of the MetS and glycemic control. In a single blind, 52-week randomized clinical trial, the effects of supervised diet and exercise (D&E) with or without transdermal testosterone administration were accessed. A total of 32 hypogonadal men with newly diagnosed T2D and with the MetS participated in the study. Testosterone treatment improved insulin sensitivity, adiponectin and CRP.

**140.    Breast Cancer in Postmenopausal Women After Hormone Therapy**

Published by: JAMA. 2011;305(5):466-467.

Authors: Baber R.

Link to the Study: <http://jamanetwork.com/journals/jama/article-abstract/645401>

**Summary:**

The study by Baber R, emphasizes that only 1 hormone dose and schedule was evaluated in the WHI (Women's Health Initiative) randomized clinical trial and that lower dosage and different estrogen and progestins are now in wider use.

**141.    Endometrial hyperplasia. Risk, Recognition and The Search for a Safe Hormone Replacement Regimen**

Published by:  The Journal of Reproductive Medicine 1999 Feb;44(2):191-196.

Authors: De Lignieres B

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11392031

**Summary:**

Adding a synthetic progestin or natural progesterone to estrogen therapy has been shown to decrease or eliminate the endometrial risk associated with ERT. However, the addition of synthetic progestins has been associated with uncomfortable side effects, reversal of some of the cardiovascular and metabolic benefits of estrogen, and unwanted bleeding. The use of natural micronized progesterone in lieu of synthetic progestins alleviates the former two drawbacks, while careful scheduling of estrogen and progesterone dosing can eliminate the latter.

**142.    Natural progesterone: Clinical indications in women**

Published by:  The Female Patient. 2001April;26:32, 37-38, 41.

Authors: Hudson T

Link to the Study: http://www.encognitive.com/node/12913

**Summary:**

A recent study demonstrated that progesterone cream applied once a day for 2 weeks (60 mg/day) raised serum progesterone concentrations with a mean ranging from 1.6 to 3.3 ng/mL.( 6) After 2 weeks of dosing, progesterone concentrations were sustained for at least 8 hours. Serum progesterone levels from 5 to 30 ng/mL are generally considered representative of luteal phase progesterone levels. This new research about transdermal progesterone's ability to raise serum levels is an exciting step in the history of natural progesterone.

**143.    Progesterone Abolishes Estrogen and/or Atorvastatin Endothelium Dependent Vasodilatory Effects**

Published by: Atherosclerosis. 2004Nov;177(1):89-96 Authors: Faludi AA, Aldrighi JM, Bertolami MC

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/15488870

**Summary:**

In this research, Atorvastatin has promoted more beneficial effects on TC and LDL-c, whereas estradiol was responsible for an increase in HDL-c. For this study, Ninety-four women aged 50-65 were selected. All have received dietary counseling (4 weeks), placebo (4 weeks), and drug therapy (12 weeks): 17-beta estradiol 2mg/day (E) (n=17); E + norethisterone acetate 1mg/day (P) (n=18); Atorvastatin 10mg/day (A) (n=20); E + A (n=21) and E + P + A (n=18).

**144.    Estradiol therapy combined with progesterone and endothlium-dependent vasodilation in postmenopausal women**

**145.**

Published by: Circulation. 1998 Sep 22;98(12):1158-1163

Authors: Gerhard M, Walsh BW, Tawakol A

Link to the Study: http://circ.ahajournals.org/content/98/12/1158

**Summary**:

The study was conducted on 17 postmenopausal women with mild hypercholesterolemia were enrolled in a placebo-controlled, crossover trial to evaluate the effect of transdermal estradiol, with and without vaginal micronized progesterone, on endothelium-dependent vasodilation in a peripheral conduit artery. The results showed that the addition of micronized progesterone does not attenuate the favorable effect of estradiol on endothelium-dependent vasodilation. The vasoprotective effect of hormone replacement therapy may extend beyond its beneficial actions on lipids.

**146.    Comparison of regimens containing oral micronized progestrone or medroxyprogesterone acetate on quality of life in postmenopausal women: A cross-sectional survey**

Published by: Journal of Women’s Health & Gender-Based Medicine2000 May;9(4):381-387.

Authors: Fitzpatrick LA, Pace C, Wiita B.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10868610

**Summary:**

The study showed that a micronized progesterone-containing HRT regimen offers the potential for improved QOL as measured by improvement of menopause-associated symptoms. A sample size of 176 women were taken for the study. A cross-sectional survey was conducted to examine quality of life (QOL) related to physiological, somatic, and vasomotor effects of changing progestogen treatment from medroxyprogesterone acetate (MPA) to micronized progesterone in postmenopausal women.

**147.    Estrogen and progesterone reduce lipid accumulation in human monocyte-derived macrphages: A sex-specific effect**

Published by: Circulation. 1999 Dec 7;100(23):2319-2325

Authors: McCrohon JA, Nakhla S, Jessup W

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10587335

**Summary:**

The study concluded that physiological levels of estrogen and progesterone are associated with a female-sex-specific reduction in human macrophage lipid loading, which is consistent with an atheroprotective effect. Physiological and supraphysiological levels of progesterone (2, 10, and 200 nmol/L) produced an even more dramatic reduction in CE content (74+/-9%, 56+/-10%, and 65+/-8%, respectively; P<0.002 compared with control). This effect could be abrogated by coincubation with the progesterone receptor antagonist RU486. Neither estrogen nor progesterone produced a reduction in lipid loading in male-donor-derived MDMs. Detailed lipid trafficking studies demonstrated that both estrogen and progesterone altered macrophage uptake and/or processing of modified LDL.

**148.    Progestins and progesterone in hormone replacement therapy and the risk of breast cancer**

Published by: The Journal of Steroid Biochemistry and Molecular Biology2005 Jul;96(2):95-108

Authors: Campagnoli C, Clavel-Chapelon F, Kaaks R,

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/15908197

**Summary:**

The study suggests that the addition of natural progesterone in cyclic regimens does not affect BC risk. This finding is consistent with in vivo data suggesting that progesterone does not have a detrimental effect on breast tissue. The increased BC risk found with the addition of synthetic progestins to estrogen could be due to the regimen and/or the kind of progestin used. Particularly relevant seem to be the metabolic and hepatocellular effects (decreased insulin sensitivity, increased levels and activity of insulin-like growth factor-I, and decreased levels of SHBG), which contrast the opposite effects induced by oral estrogen.

**149.    Progestogens: New approaches**

Published by: The Female Patient. 2001 October;19

Authors: Lobo RA,

Link to the Study: https://link.springer.com/chapter/10.1007%2F978-1-4615-1061-1\_20

**Summary:**

This is one of the chapters in the book Women's Health and Menopause. The chapter details that though the benefits of HRT are numerous, and despite the established and potential benefits of HRT, less than one-half of eligible women in the United States are currently using it.

**150.    Physiology of Sexual Function**

Published by: Physiology of sexual function

Authors: Cullen L.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/16391543

**Summary:**

This paper addresses anatomy and physiology of normal female sexual function as well as the pathophysiology of female sexual dysfunction. Although the female sexual response is inherently difficult to evaluate in the clinical setting, a variety of instruments have been developed for assessing subjective measures of sexual arousal and function.

**151.    An alternative method of hormone replacement therapy using the natural sex steroids**

Published by: Infert Repro Med Clin N Am. 1995;6:653-674.

Authors: Hargrove JT, Osteen KG.

Link to the Study: http://www.hormonebalance.org/images/documents/Hargrove%2095%20An%20alt%20method%20HRT%20natural%20Menopause.pdf

**Summary:**

This article elucidates the method of hormone replacement  therapy that is based on sound physiologic principles and represents an objective method of ensuring the establishment of premenopausal levels of circulating sex steroids.

**152.    Using progestins in clinical practice**

Published by: American Family Physician. 2000 Oct;62(8):1839-1846.

Authors: Apgar BS,

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11057840

**Summary:**

The book highlights that Progestin-only emergency contraception offers a regimen that is more effective than combination oral contraceptive pills, with fewer reported side effects. Because of the reported side effects of synthetic analogs called "progestins," there has been interest in replicating the natural hormone for clinical use.

**Women May Prefer Natural Progesterone Over Synthetic**

Published by: Mayo Clinic Women's HealthSource. 1999 August.

Authors: NA

Link to the Study: http://mbbsdost.com/Women-may-prefer-natural-progesterone-over-synthetic-Mayo-Clinic-women-s-healthsource-Riccabona-G--1999-Aug/pubmed/12853052

**Summary:** In this article, the benefits of natural micronized progesterone compared to the synthetic progesterone is stressed. Researchers believe that any drugs will lead to side effects whereas a natural progesterone treatment is the same as the one in the body itself, leading to no side effects.

**153.    Do Female Hormones Affect Atherosclerosis Development?**

Published by: Circulation 1999 Dec 7.

Authors: Jane A. McCrohon

Link to the Study: http://www.jwatch.org/wh200002010000019/2000/02/01/do-female-hormones-affect-atherosclerosis

**Summary:**

The article highlights that Physiologic levels of both estrogen and progesterone are associated with reduced foam-cell formation, consistent with a protective effect against early atherogenesis. In female-donor MDMs, estrogen exposure was associated with significantly lower lipid loading, both at physiologic and supraphysiologic levels. Progesterone exposure yielded even more significant reduction of MDM lipid content.

**154.    Divergent impact of progesterone and medroxyprogesterone acetate(Provera) on nuclear mitogen-activated protein kinase signaling**

Published by: Proceedings of the National Academy of Sciences.2003 Sep 2;100(18):10506-10511.

Authors: Nielsen J, Brinton RD

Link to the Study: http://www.pnas.org/content/100/18/10506.full

**Summary:**

In this study, the impact of progestins on estrogen-inducible mechanisms of neuroprotection was investigated. The study demonstrates that 17β-estradiol (E2) and progesterone (P4) treatment of hippocampal neurons attenuated the excitotoxic glutamate-induced rise in intracellular calcium concentration.

**155.    Natural progesterone, but not medroxyprogesterone acetate, enhances the beneficial effect of estrogen on exercise induced myocardial ischemia in postmenopausal women**

Published by: Journal of the American College of Cardiology, 2000

Dec;36(7):2154-2159.

Authors: Rosano GM, Webb CM, Chierchia S,

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11127455**Summary:**

Combination of estrogen/transvaginal progesterone gel increases exercise time to myocardial ischemia, as compared with estrogen/MPA. These results imply that the choice of progestin in women at higher cardiovascular risk requires careful consideration.

**156.    HT and breast cancer: does the type of progestin matter?**

Published by: OBGManagement. 2007 June;19(6):31-35.

Authors: Kaunitz AM

Link to the Study: http://www.mdedge.com/obgmanagement/article/62738/breast-cancer/qht-and-breast-cancer-does-type-progestin-matter

**Summary:**

In this study from France, the association between estrogen–progestin regimens and breast cancer varied significantly, depending on the progestin. The relative risk of invasive breast cancer was 1.08 for progesterone (95% confidence interval 0.89–1.31), 1.16 for dydrogesterone (0.94–1.43), and 1.69 for other progestins (1.50–1.91).

**157.    More data on hormone therapy risks arrive to reshape practice.**

Published by: OBG Management. 2008 Aug;20(8):10, 13-14.

Authors: Barbieri RL.

Link to the Study: http://www.mdedge.com/obgmanagement/article/63255/more-data-hormone-therapy-risks-arrive-reshape-practice

**Summary:**

Estrogen only HT was associated with a slightly increased risk of breast cancer compared with what was seen in women who had never used hormone.

**158.    Novel perspectives for progesterone in hormone replacement therapy, with special reference to the nervous system.**

Published by: Endocrine Reviews,2007 Jun;28(4):387-439.

Authors: Schumacher M, Guennoun R, Ghoumari A,

Link to the Study: https://academic.oup.com/edrv/article-pdf/28/4/387/10334433/edrv0387.pdf

**Summary:**

There is indeed strong evidence that the aging nervous system remains at least to some extent sensitive to these beneficial effects of progesterone. The actions of progesterone in peripheral target tissues including breast, blood vessels, and bones are less well understood, but there is evidence for the beneficial effects of progesterone.

**159.    Comparison of regimens containing oral micronized progesterone or medroxyprogesterone acetate on quality of life in postmenopausal women: a cross‐sectional survey**

Published by:

Authors: Fitzpatrick LA, Pace C, Wiita B

Link to the Study: http://www.smithrexalldrug.com/assets/study29.pdf

Summary:

A cross-sectional survey was conducted to examine quality of life (QOL) related to physiological, somatic, and vasomotor effects of changing progestogen treatment from medroxyprogesterone acetate (MPA) to micronized progesterone in postmenopausal women. 176 eligible women who were currently using hormone replacement therapy (HRT) containing micronized progesterone for 1-6 months and had previously received HRT containing MPA. QOL was assessed via telephone interview using the Greene Climacteric Scale and the Women's Health Questionnaire. When compared with the MPA containing regimen, women using micronized progesterone containing HRT experienced significant improvement in vasomotor symptoms, somatic complaints, anxiety, and depressive symptoms.

**160.    Micronized progesterone: Clinical indications and comparison with current treatments.**

Published by: Fertility & Sterility. 1999 Sept;72(3): 389-39

Authors: Fitzpatrick LA, Good A.

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/10519605

**Summary:**

The study was conducted to evaluate the effectiveness of elevated testosterone levels to improve features of the MetS and glycemic control. In a single blind, 52-week randomized clinical trial, the effects of supervised diet and exercise (D&E) with or without transdermal testosterone administration were accessed. A total of 32 hypogonadal men with newly diagnosed T2D and with the MetS participated in the study. Testosterone treatment improved insulin sensitivity, adiponectin and CRP.

**161.    Natural progesterone, but not medroxyprogesterone acetate, enhances the beneficial effect of estrogen on exercise induced myocardial ischemia in postmenopausal women**

Published by: Journal of the American College of Cardiology, 2000

Dec;36(7):2154-2159.

Authors: Rosano GM, Webb CM, Chierchia S,

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11127455**Summary:**

Combination of estrogen/transvaginal progesterone gel increases exercise time to myocardial ischemia, as compared with estrogen/MPA. These results imply that the choice of progestin in women at higher cardiovascular risk requires careful consideration.

**162.    Progesterone inhibits human infragenicular arterial smooth muscle cell proliferation induced by high glucose and insulin concentrations**

Published by: Journal of Vascular Surgery, 2002 Oct;36(4):833-838

Authors: Carmody BJ, Arora S, Wakefield MC

Link to the Study: https://www.semanticscholar.org/paper/Progesterone-inhibits-human-infragenicular-arteria-Carmody-Arora/95e62153ef78c0cc329729a431213ea0e0a0cd5a

**Summary:**

Significant reductions in cell proliferation as determined with both cell count and thymidine incorporation suggest that progesterone is an inhibitor of VSMC proliferation induced by our in vitro models of hyperglycemia and hyperinsulinemia. Therefore, progesterone may have a protective role against the atherosclerotic changes associated with type II diabetes.

**163.    Bleeding profiles and effects on the endometrium for women using a novel combination of transdermal oestradiol and natural progesterone cream as part of a continuous combined hormone replacement regime.**

Published by: BJOG. 2005 Oct;112(10):1402-1406

Authors: Vashisht A, Wadsworth F, Carey A

Link to the Study: http://onlinelibrary.wiley.com/doi/10.1111/j.1471-0528.2005.00689.x/pdf

**Summary:**

The dose of progesterone cream was insufficient to attenuate the mitogenic effect of estrogen on the endometrium. The authors do not recommend progesterone cream for menopause.

**164.    Salivary, but not serum or urinary levels of progesterone are elevated after topical application of progesterone cream to pre- and postmenopausal women.**

Published by: Clinical Endocrinology, 2000 Nov;53(5):615-620.

Authors: O'Leary P, Feddema P, Chan K,

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/11106923

**Summary:**

Salivary progesterone measurements confirm that topically applied progesterone is absorbed, despite the lack of change in serum progesterone concentrations. However, at the dose administered, serum progesterone levels do not reach those observed after oral or vaginally delivered progesterone preparations. Higher doses may be required to induce biological responses within the endometrium.

**SECTION 10: THYROID**

**165.    Ask the Professor: Thyroid Disease when to screen? - How to avoid pitfalls.**

Published by: Consultant. 2000 December 1.

Authors: Gardner DF

Link to the Study: NA

**Summary:** This paper talks on the symptoms and the effects of thyroid on a particular patient. Subclinical hypothyroidism may have adverse effects increased risk for heart disease with SCH. Patients may have subtle symptoms, such as fatigue, decreased energy, mild depression, or mild memory loss. Some data show that this condition is associated with an atherogenic, lipid profile.

**166.    Thyroid hormones: positive relationships with cognition in healthy, euthyroid older men.**

Published by: The journals of gerontology. Series A, Biological sciences and medical sciences, 1999, Mar;54(3):M111-116.

Authors: Prinz PN, Scanlan JM, Vitaliano PP

Link to the Study: https://pdfs.semanticscholar.org/8d3f/d074b80681a66c401955b9ee9b31ef42b06c.pdf

**Summary:**

Regression analyses controlling age and education showed TI4 and Ff41 to have significant positive relationships with measures of overall cognition; TI4 accounted for 8% to 12% of the variance in omnibus cognitive measures such as WAlS Performance, WAlS Verbal score, and GLOBAL cognitive scores.

**167.    Combined therapy with levothyroxine and liothyronine in two ratios, compared with levothyroxine monotherapy in primary hypothyroidism: a double-blind, randomized, controlled clinical trial**

Published by: The Journal of Clinical Endocrinology & Metabolism, 2005 May;90(5):2666-2674

Authors: Appelhof BC, Fliers E, Wekking EM

Link to the Study: https://academic.oup.com/jcem/article/90/5/2666/2836785/Combined-Therapy-with-Levothyroxine-and

**Summary:**

The paper compares combined treatment with LT4 and LT3 in a ratio of 5:1 or 10:1 with LT4 monotherapy. They conducted a double-blind, randomized, controlled trial in 141 patients (18-70 yr old) with primary autoimmune hypothyroidism, recruited via general practitioners. Inclusion criteria included: LT4 treatment for 6 months or more, a stable dose for 6 wk or more, and serum TSH levels between 0.11 and 4.0 microU/ml (mU/liter).

**168.    Causes and effects of the low T3 syndrome during caloric deprivation and non-thyroidal illness: an overview**

Published by: Acta Med Austriaca. 1988;15(1):42-45.

Authors: Hennemann G, Docter R, Krenning EP

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/3051835

**Summary:**

The increased serum reverse T3 and decreased T3 during caloric deprivation and non-thyroidal illness is caused by decreased T3 production (with intact degradation) and reversed T3 degradation (with intact production) respectively. These changes can ensue from two mechanisms i.e. decreased 5'D of T4 and of reverse T3 (possibly caused by a decrease in naturally occurring reducing agents) or by decreased transport of T4 and reverse T3 into the liver (possibly caused by decreased ATP concentrations in the liver).

**169.    Effects of Thyroxine as Compared with Thyroxine plus Triiodothyronine in Patients with Hypothyroidism**

Published by: The New England Journal of Medicine, 1999; 340:424-429.

Authors: Bunevicius R, Kazanavicius G, Zalinkevicius R

Link to the Study: https://www.ncbi.nlm.nih.gov/pubmed/9971866

**Summary:**

In patients with hypothyroidism, partial substitution of triiodothyronine for thyroxine may improve mood and neuropsychological function; this finding suggests a specific effect of the triiodothyronine normally secreted by the thyroid gland. The authors compared the effects of thyroxine alone with those of thyroxine plus triiodothyronine (liothyronine) in 33 patients with hypothyroidism. Each patient was studied for two five-week periods.

**170.    Effects of hormone replacement therapy on homeostatic cardiovascular risk factors**

Published by: American Journal of Obstetrics & Gynecology, 1999;180:283-289.

Authors: Andersen LF, Gram J, Skouby SO, Jespersen J

Link to the Study:

**Summary:**

The paper analyzes two different treatment methods for hypothyroidism. The first one with thyroxine and the second one with thyroxine along with triiodothyronine. 33 patients with hypothyroidism participated in the research during a span of two-five weeks. Combined therapy with thyroxine and triiodothyronine may be an improvement over standard thyroxine treatment for patients with hypothyroidism.

**171.    Safety and Hemodynamic Effects of Intravenous Triiodothyronine in Advanced Congestive Heart Failure**

Published by: American Journal of Cardiology. 1998 Feb 15;81(4)443-447

Authors: Hamilton MA, Stevenson LW, Fonarow GC

Link to the Study: http://www.ajconline.org/article/S0002-9149(97)00950-8/pdf

**Summary:**

This study sought to evaluate safety and hemodynamic effects of short-term intravenous administration of triiodothyronine in patients with advanced heart failure. An intravenous bolus dose of triiodothyronine, with or without a 6- to 12-hour infusion (cumulative dose 0.15 to 2.7 μg/kg), was administered to 23 patients with advanced heart failure (mean left ventricular ejection fraction 0.22 ± 0.01).

**172.    Thyroid hormone treatment of congestive heart failure**

Published by: American Journal of Cardiology. 1998 Feb 15;81(4):490-491

Authors: Klein I, Ojamaa K

Link to the Studyhttps://www.infona.pl/resource/bwmeta1.element.elsevier-f70d0520-75c5-32d1-ac0a-d543d284a4cc

**Summary:**

The article elaborates the coupling of the potential benefits of thyroid hormone to enhance cardiac performance with the inherently low serum levels of T3, a heart failure treatment regimen that includes thyroid hormone replacement in a carefully monitored setting seems rational.

**173.    Subclinical hypothyroidism is an independent risk factor for atherosclerosis and in elderly women: The Rotterdam Study**

Published by: Annals of Internal Medicine, 2000;132:270-278**myocardial infarction**

Authors: Hak EA, Pols H, Visser TJ

Link to the Studyhttps://repub.eur.nl/pub/9259/10681281.pdf

**Summary:**

Subclinical hypothyroidism is a strong indicator of risk for atherosclerosis and myocardial infarction in elderly women. Subclinical hypothyroidism was present in 10.8% of participants and was associated with a greater age-adjusted prevalence of aortic atherosclerosis (odds ratio, 1.7 [95% CI, 1.1 to 2.6]) and myocardial infarction (odds ratio, 2.3 [CI, 1.3 to 4.0]). Additional adjustment for body mass index, total and high-density lipoprotein cholesterol level, blood pressure, and smoking status, as well as exclusion of women who took Î²-blockers, did not affect these estimates.

**174.    Reviewing thyroid treatment**

Published by: People’s Pharmacy

Authors: Graedon J, Graedon T.

Link to the Studyhttps://www.peoplespharmacy.com/store/health-guides/thyroid-hormones/

**Summary:**

Some people need the mixture of T4 & T3 to feel better. The article illustrates how doctors often rely on TSH tests and not patient's symptoms.

**175.    This diet supplement could be hazardous**

Published by: People’s Pharmacy. Los Angeles Times. 1999 July 19.

Authors: Graedon J, Graedon T.

Link to the Studyhttps://www.peoplespharmacy.com/2012/08/27/beware-dangerous-dietary-supplement/

**Summary:**

Use of Armour thyroid has been increasing ever since an article in the New England Journal of Medicine showed that many patients do better on combination of T3 and T4 than on Synthroid (T4)alone.

**176.    No BMD loss with thyroxine replacement**

Published biro Gyn News. 2000 September 1

Authors: Baker B.

Link to the Studyhttps://www.highbeam.com/doc/1G1-65538262.html

**Summary:**

Exogenous thyroid replacement does not reduce bone mineral density in women. Bone mineral density (BMD) screening was performed in 10,364 postmenopausal women, 7% of whom reported taking exogenous thyroxine for at least 3 months. Thyroxine is one of the drugs most widely prescribed for chronic use in postmenopausal women. The hormone influences bone turnover, directly stimulating osteoclast activity and bone reabsorption.

**177.    155.    Effects on bone mineral density by treatment of benign nodular goiter with mildly suppressive doses of L-thyroxine in a cohort women study**

Published by: Hormone Research, 2005;64(6):293-298.

Authors: Appetecchia M.

Link to the Study <https://www.karger.com/Article/Abstract/89489>

**Summary:**

Thyroid diseases and their treatment may influence the osseous system. Data showed no significant difference between BMD values for treated and untreated patients in both pre and postmenopausal status. In all patients serum markers of bone turnover were in the normal range.

**178.    Suppressive levothyroxine therapy has no significant influence on bone degradation in women with thyroid carcinoma: a comparison with other disorders affecting bone metabolism.**

Published by: Thyroid. 2001Mar;11(3):257-63.

Authors: Mikosch P, Jauk B, Gallowitsch HJ, et al

Link to the Study: http://online.liebertpub.com/doi/abs/10.1089/105072501750159679

**Summary:**

A suppressive LT4 therapy, as used for patients with DTC, led to no significant increases of S-CTx and U-NTx.

**179.    High cathepsin Klevels in men with differentiated thyroid cancer on suppressive Lthyroxinetherapy**

Published by: Thyroid. 2008 Jan;18(1):27-33.

Authors: Mikosch P, Jauk B, Gallowitsch HJ, et al

Link to the Study: <http://online.liebertpub.com/doi/abs/10.1089/thy.2007.0186>

**Summary:**

Cathepsin K is increased by a suppressive L-thyroxine therapy and decreases with increasing age. The increased cathepsin K levels seen in DTC-patients on suppressive L-thyroxine therapy are likely to contribute to accelerated bone degradation in these patients.

**180.    CHD risk doubles with subclinical hypothyroidism**

Published by: Internal MedNews. 2004 December 15.

Authors: Jancin B

Link to the Study: [https://www.thefreelibrary.com/CHD+risk+doubles+with+subclinical+hypothyroidism.-a0127205014](https://www.thefreelibrary.com/)

**Summary:**

Subclinical hypothyroidism is an independent risk factor for coronary heart disease. The author notes that none of the other types of thyroid abnormalities were associated with increased mortality in the longitudinal study. But subclinical hypothyroidism was associated with a 1.7-fold increased risk of having a first coronary heart disease event during the 20-year follow-up period. This risk was of comparable magnitude in individuals with a TSH level above 10 mIU/L and those with a TSH of 4-10 mIU/L.

**181.    T3 therapy called not ready for prime time.**

Published by: Family Practice News. 2005 January 1

Authors: Jancin B

Link to the Study: http://www.mdedge.com/familypracticenews/article/24980/endocrinology/t3-therapy-called-not-ready-prime-time

**Summary:**

Triiodothyronine therapy is most definitely not a treatment whose time has come, a panel of experts agreed from the American Thyroid Association.

**182.    Thyroid neoplasia, autoimmune thyroiditis, and hypothyroidism in persons exposed to iodine 131 from the Hanford nuclear site.**

Published by: JAMA. 2004 Dec 1;292(21):2600-2613

Authors: Davis S, Kopecky KJ, Hamilton TE, et al.

Link to the Study: http://jamanetwork.com/journals/jama/fullarticle/199905

**Summary:**

Decreasing levels of free T3 were associated with poor outcomes on virtually all domains of functional performance at baseline. Decreasing levels of free T3 were associated with increased mortality.

**183.    low albumin T3 may mark increased vertebral fracture risk**

Published by: Family Practice News, January 15, 2005

Authors: Diana Mahoney

Link to the Study: http://www.mdedge.com/familypracticenews/article/24865/geriatrics/low-albumin-t3-may-mark-increased-vertebral-fracture

**Summary:**

Serum albumin and thyroid hormone measurements are recommended as part of a routine evaluation for osteoporosis in postmenopausal women. Patients with deficiencies in these may be candidates for antiresorptive treatment to reduce their risk of vertebral fractures.

**184.    The Beneficial Effect of L-Thyroxine on Cardiovascular Risk Factors, Endothelial Function, and Quality of Life in Subclinical Hypothyroidism: Randomized, Crossover Trial**

Published by: The Journal of Clinical Endocrinology & Metabolism, (2007) 92 (5): 1715-1723

Authors: Salman Razvi Lorna Ingoe  Gill Keeka  Crispian Oates  Carolyn McMillan Jolanta U. Weaver

Link to the Study: https://academic.oup.com/jcem/article/92/5/1715/2598379/The-Beneficial-Effect-of-l-Thyroxine-on

**Summary:**

SCH treated by L-thyroxine leads to a significant improvement in CV risk factors and symptoms of tiredness. The CV risk factor reduction is related to the increased level of achieved free T4 concentration.

**185.    Thyroid Dysfunction and the depressed child**

Published by: Cortlandt forum, February 2002

Authors: David C Swearingten

Link to the Study:

**Summary:**

The paper discusses the relationship between thyroid dysfunction and depressed child. The high risk group includes any patient who had a history of bipolar disorder, strong family history of thyroid disease etc. The paper also discusses the treatment options. The advantages of using triiodothyronine (T3) over throxine (T4) in depressed patients with subclinical hypothyroidism have yet to be determined, but the psychiatric community tends to believe that T3 yields better results.

**186.    Triiodothyronine Enhances Response to Sertraline**

Published by: Family Practice News, November 1, 2006

Authors: Jane Salodof MacNeil

Link to the Study: http://www.mdedge.com/familypracticenews/article/29151/mental-health/triiodothyronine-enhances-response-sertraline

**Summary:**

Researchers suspect patients with thyroid dysfunction are less able to respond to antidepressants. Prevalence of depression is higher in patients with hypothyroidism, he noted, whereas thyroid dysfunction is also more prevalent in patients with depression.

**187.    Serum thyroid stimulating hormone in assessment of severity of tissue hypothyroidism in patients with overt primary thyroid failure: cross sectional survey**

Published by: British Medical Journal, 2003 Feb8;326(7384):311-312.

Authors: Meier C, Trittibach P, Guglielmetti M, et al.

Link to the Study: http://www.bmj.com/content/326/7384/311

**Summary:**

TSH is a poor measure for estimating the clinical and metabolic severity of primary overt thyroid failure. This is in sharp contrast to the high diagnostic accuracy of TSH measurement for early diagnosis of hypothyroidism. The biological effects of thyroid hormones at the peripheral tissues--and not TSH concentrations--reflect the clinical severity of hypothyroidism.

**Section 12 : Literature Review to Understand The Complexity of Estrogen Administration**

**188.    Late-Onset Male Hypogonadism and Testosterone Replacement Therapy**

Published by: Journal of Family Practice. 2010 July;59(7):S1-S8.

Authors: Brunton SA, Sadovsky R

Link to the Study: http://www.pcmgus.org/UserFiles/JFP%20testosterone.pdf

Summary:

This study reveals that LOMH is frequently observed in primary care, with an increasing prevalence in older men. The diagnosis is based on a combination of mostly nonspecific signs and symptoms and measurement of testosterone and other hormones. Of 18 prospective studies involving 3866 men with incident prostate cancer and 6438 control subjects, researchers found no association between the risk of prostate cancer and serum concentrations of testosterone free testosterone.

**189.    Hormone replacement therapy and risk for coronary heart disease. Data from the CORA-study--a case-control study on women with incident coronary heart disease**

Published by: Maturitas. 2007. 57;239-245.

Authors: Windler E, Zyriax BC, Eidenmüller B, Boeing H

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/17292571>

Summary:

This research investigates the association of hormone replacement therapy, risk factors and lifestyle characteristics with the manifestation of coronary heart disease in current HRT users versus never users. The study showed that significantly more controls than cases used currently HRT for a median of 9.5 years (32.9% versus 20.2%), while 50.0% of cases and 42.5% of controls had never used HRT (p<0.02). Compared to women who never used HRT, current users ate less meat and sausage, had a significantly lower BMI and waist-to-hip ratio and a lower prevalence of hypertension, insulin resistance and diabetes.

**190.    Uses of progesterone throughout a woman's life**

Published by: Journal of Family Practice. 2007 Feb;7(2).v

Authors: Simon JA, Cedars MI, Langer RD

Link to the Study: NA

Summary:

The key findings from this subset of the WHI findings is that estrogen therapy begun within the first 10 years of menopause may reduce coronary risk. One of the other key findings is that women who were 50 to 59 years old when they started on the estrogen-only regimen had a statically significant 34% reduction in coronary events.

**191.    Unconventional Estrogens**

Published by: NA

Authors: NA

Link to the Study: NA

Summary:

In this chapter named "Unconventional Estrogens", it is mentioned that Estrogen and Progesterone receptors in the cytosol and estrogen receptors in the nuclear compartment were measured in the endometrium, myometrium and vagina of 29 postmenopausal women.  Researchers compared the effects of vaginal estriol to 17Beta estradiol. They found no clear difference between vaginal estriol and estriol with regard to the effects of receptor levels in vaginal and uterine tissues.

**192.    Testosterone inhibits estrogen/progestogen-induced breast cell proliferation in postmenopausal women**

Published by: Menopause. 2007;14(2):1-8

Authors: Hofling M, Hirschberg AL, Skoog L

Link to the Study: <https://www.ncbi.nlm.nih.gov/pubmed/17108847>

Or <http://insights.ovid.com/pubmed?pmid=17108847>

Summary:

The study found that addition of testosterone may counteract breast cell proliferation as induced by estrogen/progestogen therapy in postmenopausal women. In this study, a total of 99 postmenopausal women were given continuous combined estradiol 2 mg/norethisterone acetate 1 mg and were equally randomly assigned to receive additional treatment with either a testosterone patch releasing 300 microg/24 hours or a placebo patch.

**193.    Endogenous Postmenopausal Hormones and Carotid Atherosclerosis: A Case-Control Study of the Atherosclerosis Risk in Communities Cohort**

Published by: American Journal of Epidemiology, 2002;155(5):437-445

Authors: Golden SH, Maguire A, Ding J

Link to the Study: https://academic.oup.com/aje/article-pdf/155/5/437/409338/437.pdf

Summary:

In this study, the authors found higher total testosterone and SHBG to be inversely related to carotid atherosclerosis, suggesting their potential importance in reducing atherosclerotic risk in postmenopausal women not using HRT. In this study, 182 postmenopausal women with average IMT measurements greater-than-or-equal the 95th percentile were studied.

**194.    Combined hormone replacement therapy and risk of breast cancer in a French cohort study of 3175 women**

Published by: Climacteric. 2002;5:332-340

Authors: de Lignieres B, de Vathaire F, Fournier S

Link to the Study: www.phulicohanmd.com/articles/Lignieres\_Combined-Hormone.pdf

Summary:

The largest-to-date randomized trial comparing the effects of hormone replacement therapy (HRT) and a placebo. This study concluded that the continuous use of an oral combination of conjugated equine estrogens (CEE) and medroxy-progesterone acetate (MPA) increases the risk of breast cancer. The study covered 3175 postmenopausal women with a mean of 8.9 years.

**195.    Putting the American Heart Association's Guidelines on HRT and CVD Into Perspective**

Published by: NA

Authors: NA

Link to the Study: NA

Summary:

The article mentions that Estrogen augments the endothelialcells' ability to synthesize nitric oxide and cause vascular dilatation. The article goes on to say that many vascular biologists are therefore convinced that estrogen plays an essential role in the maintenance of vascular health.

**Section 13: N.E.J.M. Meta-Analysis of Testosterone**

**196.    Risks of testosterone-replacement therapy recommendations for monitoring**

Published by: The New England Journal of Medicine, 2004January. 350(5):482-492

Authors: Rhoden EL, Morgentaler A.

Link to the Study:

http://www.nejm.org/doi/pdf/10.1056/NEJMra022251

Summary:

The article highlights about Hypogonadism. When Hypogonadism occurs in older men, it is called Andropause. The article says that hypogonadism affects around 2-4 million men in the United States. The main problem is that only 5% of affected men receive treatment. The article points to the benefits of testosterone administration for men with hypogonadism which include improvement in libido, bone density, muscle mass, body composition, mood, erythropoiesis, and cognition. Disadvantages include the pain of injection and the need for frequent medical visits for administration of injections.

**Section 14: Review of The NAMS Opinion of Bioidentical HRT**

**197.    Clinician's Forum**

Published by: Menopause Management. 2007 July/August;16(4):38-44.

Authors: George Gorodesky, MD, PhD

Link to the Study: NA

Summary:

The article says that a woman with an intact uterus needs adequate endometrial protection with FDA approved oral or vaginal progestogen. Wren et al conducted a double-blind, randomized controlled trial of transdermal progesterone cream, finding no clinical beneficial effect.

**198.    Menopause medicine: The bottom line on bioidentical hormone therapy**

Published by: Geriatrics. 2008 Sept;63(9):28.

Authors: JoAnn Pinkerton, MD

Link to the Study: www.menopause.org/docs/professional/tfpbio\_0812.pdf

Summary:

The article says that the FDA analyzed 29 BHT product samples and found that 34% of them failed, 90% of them contained less of the active ingredient than expected. It was also found that there is no scientific evidence to support claims that individualized estrogen or progesterone regimens prepared by compounding pharmacies are safer and more effective.

**199.    "Bioidentical" hormones: What you (and your patient)need to know**

Published by: OBG Management. 2009 January;21(1):42-52

Authors: Pinkerton JV

Link to the Study: http://www.mdedge.com/obgmanagement/article/63439/menopause/bioidentical-hormones-what-you-and-your-patient-need-know

Summary:

The article published in OBG Management says that 70% women who were taking HRT discontinued it whereas 26% women lost confidence in medical recommendations in general.

**200.    Regulatory issues of compounding drugs. . Proceedings from the postgraduate course presented prior to the 17th annual meeting of the North American Menopause Society**

Published by: North American Menopause Society. 2006 October 11;8-11

Authors: Pastner B.

Link to the Study: https://www.menopause.org/docs/default.../pg06monogrpahC2AF519C07F6.pdf

Summary:

The article mentions that ACOG issued an opinion stating that there is no scientific evidence to support claims of superior safety or efficacy for bioidentical estrogen or progesterone regimens prepared by compounding pharmacies.

**201.    Validation of hormone testing. Proceedings from the postgraduate course presented prior to the 17th annual meeting of the North American Menopause Society.**

Published by: North American Menopause Society. 2006 October 11:20-22.

Authors: Chatterton RT.

Link to the Study: NA

Summary:

This is a study conducted on Chinese women who were about to conceive. The study accessed the variability between estrogen and progesterone. Studies of urinary assays demonstrated that estrogen concentrations vary significantly from cycle to cycle and differences from one individual to another are also substantial.

**202.    Bioidentical versus non-bioidentical hormones. Proceedings from the postgraduate course presented prior to the 17th annual meeting of the North American Menopause Society**

Published by: North American Menopause Society. 2006 October 11;8-11

Authors: Nachtigall LE

Link to the Study: NA

Summary:

The article says that binding affinity of various estrogens is particularly relevant to the discussion of BHT. 17β-estradiol had 100%binding affinity for both receptors, but estrone, estrone sulfate and estriol have lower and varied binding affinity profiles.

**SECTION 14: Real Concerns and False Alarms of HRT**

**203.    Hormone replacement therapy: real concerns and false alarms.**

Published by: Cancer Journal, 2009 Mar-Apr;15(2):93-104.

Authors: BlumingAZ, TavrisC

Link to the Study: [https://www.ncbi.nlm.nih.gov/pubmed/19390302](https://www.ncbi.nlm.nih.gov/pubmed/1)

**Summary:** During the period 2002 to 2008, there have been a number of reports from Women's Health Initiative (WHI) that indicated that the hormone replacement therapy (HRT) significantly increased the risk of breast cancer, heart ailments Alzheimer disease, and stroke.. These reports did alarm the public and health professionals to the extent that there was a sharp and immediate decrease in the number of people opting for HRT. However, the actual data in the published WHI articles reveal that the findings reported in press releases and interviews of the principal investigators were often distorted, oversimplified, or wrong. This review highlights the history of research on HRT, including a timeline of studies that have or have not found a link between HRT and breast cancer; discusses how to distinguish important, robust findings from those that are trivial.

**204.    Cancer prevention breakthrough?**

Published by: Redbook. 2001 Mar;196(3):32

Authors: James-Enger K.

Link to the Study: [NA](https://www.ncbi.nlm.nih.gov/pubmed/19390302)

**Summary:** This article discusses the possibility of treating conditions like endometriosis, fibroids, anemia, reproductive cancers and migraine by opting to have longer cycles. This can be achieved by taking oral contraceptive pills which contain a variety of hormone formulations. There's no reason one can't opt for longer cycles and thus fewer periods by extending your use of active BC pills. For instance continuous BCP is used for endometriosis because it suppresses the buildup of the uterine lining and thus relieves the symptoms of the disease.