Hormone Replacement Therapy

Compiled by

The American Academy of Anti-Aging Medicine (A4M)

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Reversing Estrogen Deficiency Safely and Effectively

Guidelines for maximizing the safety and efficacy of hormone replacement therapy (HRT)

Estrogen is essential for a woman to look and feel feminine and when it's deficient symptoms such as depression, moodiness, anxiety, insomnia, loss of sex drive, and hot flashes can ensue. Estrogen deficiency is easily fixed through hormone replacement therapy (HRT), but you need to follow certain guidelines to maximize its safety and efficacy.

Estrogen Replacement Therapy Risks and Side-Effects

HRT can cause: bloating, weight gain, loss of libido, acne, nausea, breast tenderness and swelling, headaches, vaginal bleeding, and mood changes. It can also increase the risk for breast cancer, blood clots, heart and liver disease; and stroke.

Estrogen Replacement Therapy Done Safely

HRT should only be done under the supervision of a healthcare professional; and sex hormones should be measured prior to, and throughout therapy. It should be taken for the minimum amount of time necessary, and the lowest effective dose should be used.

Bioidentical Hormone Replacement Therapy (BHRT)

BHRT uses hormones that are compounded by a chemist and molecularly identical to the hormones found in the human body. The formulations and dosages are tailored to each individual's requirements, which helps maximize safety and minimize side-effects.

The Importance of Adding Progesterone

Estradiol therapy should always be augmented with progesterone. This will help prevent many of the negative effects and risks (breast cancer etc.) associated with estradiol. Although most gynecologists prescribe estradiol alone after a hysterectomy, progesterone is essential for avoiding side-effects.

Estrogen Delivery Methods

The safest delivery method for BHRT is transdermal (through the skin). Avoid oral estrogen because it needs to pass through your liver before it enters your bloodstream, and the chemical makeup of it is altered in the process. Estrogen gel is superior to estrogen cream because it is more easily absorbed.

Progesterone Delivery Methods

Avoid progesterone products that are synthetic derivatives of progesterone and choose natural instead. Although natural progesterone can be delivered both orally

and vaginally, you should use the intra-vaginal method to maximize absorption and efficacy.

~Written by Nick Delgado, PhD, CHT

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Hormone Replacement Therapy - Challenging Long-Held Beliefs

There appears to be a good deal of confusion amongst both women and clinicians regarding the 'facts' surrounding HRT use.

A stunning early termination of a study in 2002 on hormone replacement therapy (HRT) which erroneously indicated that HRT caused heart attacks and breast cancer, led both doctors and their patients to abandon the treatment worldwide. The real cause of the trial termination was for other reasons not related to any serious side effects or harm from HRT. However, the damage was done and women today still tend to believe HRT is an unsafe treatment. In a new study to be published in the journal *Climacteric*, concerns about HRT are discussed and the long-held beliefs are challenged.

Described as distorted reporting by one professor, the after effects of the 2002 report has been described as a cascade of fear as women began to disavow hormone replacement therapy. As the facts trickled out, it was discovered that reputable scientists involved in that study were not mentioned in the report. Moreover, some of the claims in the report were unsubstantiated and conflicted with the scientific data and thus the study protocol had been deserted.

Preventing Hip Fractures, Heart Disease & Cancer

The aim of the 2002 study was to test the benefits of HRT on both women near menopause and those already a decade into menopause. The study was lacking in recently menopausal women thus distorting the results in an unscientific manner. The result to this date was a 15 year period of untreated patients with difficult menopausal symptoms. One in three women has severe symptoms like night sweats, hot flashes, insomnia, mood & anxiety disorders and joint pain. Women have not only been deprived of symptom relief, but they have additionally been denied the other benefits of HRT. These would include protection against bone loss and fracture.

The second half of the trial was omitted from the published study and had data that was contrary to the original report. The omitted part of the study was reported two years later and showed that HRT reduced the risk of breast cancer and heart attacks in women under 60 years of age. In recent years, hormone replacement therapy has improved with the help of subsequent clinical trials proving that HRT regimens could prevent heart disease and hip fractures.

HRT Benefits Outweigh Risks in Most Women

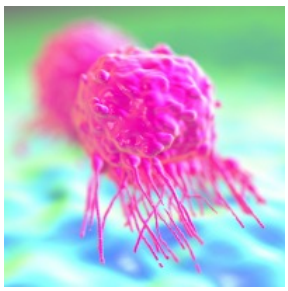
In this new study, IMS recommendations on HRT, serious questions are raised about the need for professionalism in the quality of protocol, data evaluation, and author approvals when submitting scientific reports. The new study also shows a need for a better understanding of hormone replacement therapy and its risks and benefits. It is now apparent that HRT is an effective preventative treatment if prescribed to healthy women who have been postmenopausal within 10 years, and

the benefits outweigh the risks. For most women, HRT can help alleviate many menopausal symptoms as they make this important transition in their lives.

International Menopause Society, Climacteric April 2017

Progesterone: A Key Ingredient for Optimal Health

Dr. Daniel F. Royal weighs in on the benefits of Progesterone.



There seems to be a common misconception among physicians and patients that all hormones are the same. Of course, this is not true, but it shows the pharmaceutical propaganda machine is working. The basic difference between chemical hormones and natural hormones is that one has side-effects and the other does not. This is because side-effects are a property of drugs not foods. Consequently, it follows that hormones obtained from natural food sources, also known as “bio-identical hormones,” do not have the same negative effects associated with synthetic hormone drug products.

The most common prescription hormone drugs include various forms of estrogen and progestin, a synthetic progesterone that acts more like estrogen than progesterone. Female patients are typically prescribed these synthetic hormone drugs to help with their menstrual cycle or menopause. In general, estrogen has a very broad physiological role for males as well as females. The effects of estrogen include, but are not limited to, the following: water retention, aging, stress, memory loss, hypoglycemia, increased fat, hypothyroidism, miscarriage, infertility, uterine fibroids, blood clotting, vascular spasm, increased cholesterol, gall bladder disease, and cancer.

The main cause of hormone-related health problems in women is not due to the absolute deficiency of estrogen or progesterone but rather the relative dominance of estrogen and relative deficiency of progesterone. For this reason, hormone replacement therapy (HRT) with estrogen alone without an opposing progesterone, such as the prescription drug Premarin, should be avoided. This chemicalized hormonal substitute differs from the natural estrogen in one’s body and contributes to increased estrogen. Increased estrogen, in turn, increases the risk of DNA damage, cancer (e.g., endometrial, breast cancer, etc.), and estrogen dominance. Other contributing factors to excess estrogen include adrenal fatigue, environmental estrogen, obesity, stress, poor diet, and lack of exercise.

Estrogen excess may result in such common maladies as depression, weight gain insomnia, anxiety, blood sugar imbalance, migraine headaches, and chronic fatigue due to adrenal gland exhaustion. Moreover, stress can result not only in adrenal gland exhaustion, but reduced progesterone output and increased estrogen production. A further reduction in progesterone output contributes to all the problems associated estrogen dominance (“Acute stress persistently enhances estrogen levels in the female rat,” Shors et al., Stress. 3(2):163-71, 1999

Interestingly, nature has provided us with progesterone, which acts as an antagonist to estrogen. For example, estrogen stimulates breast cysts while progesterone protects against breast cysts. Estrogen enhances salt and water retention while progesterone is a natural diuretic. Estrogen is associated with breast and endometrial cancers, while progesterone has a cancer preventive effect. In fact, studies have shown that premenopausal women deficient in progesterone had 5.4 times the risk of breast cancer compared to healthy women (“Breast cancer

incidence in women with a history of progesterone deficiency," Cowan et al., Am J Epidemiol, 114(2):209-17, Aug 1981).

Here are some answers to frequently asked questions that patients have about progesterone:

1. Is progesterone supplementation safe? Yes. No side effects have been attributed to natural progesterone in either the scientific or medical literature. While large doses of estrogen have been found to destroy certain areas of the adrenal cortex, large doses of progesterone have been shown to have anti-stress effects without harming the adrenals.

2. Should I take progesterone if I'm pregnant? A "Medical News" item in a 1976 issue of JAMA reports a study showing that progesterone probably plays a critical role in preventing rejection of the fetus by the mother. Its use before and during pregnancy is also associated with a reduced incidence of birth defects. Studies in animals have also shown that prenatal progesterone increases brain size, which is associated with a long life. Conversely, excess estrogen reduces brain size and damages behavior, which may, in turn, adversely affect a subsequent generation ("The Epigenetics of Sex Differences in the Brain," McCarthy et al.J Neurosci. 2009 Oct 14; 29 (41):12815–12823).

3. Can I use progesterone for weight loss? Yes. The primary reasons for using progesterone for weight loss purposes are to decrease the effects of insulin and adrenaline. This is because insulin transports sugar into the fat tissue for storage which, in turn, stimulates the release of adrenaline to raise sugar levels again creating a positive feedback loop. Consequently, as the episodes of hypoglycemia decrease the production of adrenaline to counteract hypoglycemia also decreases. Decreased adrenaline means that less sugar is produced, less insulin is needed for storing sugar as fat, and thus, more weight can be lost.

4. Does progesterone help with insomnia? Yes. Progesterone, which is most highly concentrated in the brain tissue, increases GABA production in the brain which, in turn, promotes sleep.

5. What is the recommended daily dosage of progesterone? The physiologic dose of progesterone for the non- pregnant female is 10-50 mg/day and 10 mg/day in the post-menopausal female. Pregnenolone, a precursor to progesterone, may be taken as anywhere from 30-150 mg/day for women whereas the physiologic of pregnenolone for a man is 5-10 mg/day. In general, the best time to use progesterone for weight loss is 1-3 minutes before eating.

~by Daniel F. Royal, DO, HMD, JD
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Testosterone Therapy Beneficial to Men with Heart Disease

New study finds that testosterone supplementation enables a reduction in the risks of major cardiovascular events, such as strokes, heart attacks, and death.

In a recent study, a research team from the Intermountain Medical Center Heart Institute studied 755 male patients, ranging from 58-78 years, who all had severe coronary artery disease, the most common type of heart disease. They were separated into three different groups, receiving varied doses of testosterone, administered intravenously or by gel. At the end of the first year, 64 patients who weren't taking any testosterone supplements had serious adverse cardiovascular events, whereas only 12 who were taking medium doses of testosterone and 9 who were taking high doses did. At the end of 3 years, 125 patients who had not received testosterone therapy suffered severe cardiovascular events, whereas only 38 medium-dose and 22 high-patients did. Patients who were given testosterone as part of their follow-up treatment did much better than patients who had not been given testosterone supplementation. The non-testosterone-therapy patients were 80 percent more likely to suffer an adverse event. "Although this study indicates that hypo-androgenic men with coronary artery disease might actually be protected by testosterone replacement, this is an observational study that doesn't provide enough evidence to justify changing treatment recommendations," said Dr. Muhlestein, co-director of cardiovascular research at the Intermountain Medical Center Heart Institute. "It does, however, substantiate the need for a randomized clinical trial that can confirm or refute the results of this study." This new study confirms the findings of a previous study from the Intermountain Medical Center Heart Institute, which found that testosterone therapy did not increase the risk of experiencing a heart attack or stroke for men with low testosterone levels and no prior history of heart disease.

The Intermountain Medical Center research team will presented their study at the American College of Cardiology's 65th Annual Scientific Session on Sunday, April 3 at 12:15 p.m., CDT. The Intermountain Medical Center Heart Institute is made up of clinical and research professionals who aim to advance cardiovascular treatment. Intermountain Medical Center is the flagship facility for the Intermountain Healthcare system, which is based in Salt Lake City.

Bone-Building Benefits of Growth Hormone

Long-term study shows benefits of growth hormone therapy for bone density persist for years, among postmenopausal women.

A progressive condition that causes bones to weaken, osteoporosis is a common experience-among postmenopausal women. Emily Krantz, from Sodra Alvsborgs Hospital (Sweden), and colleagues completed a decade-long study of growth hormone therapy for osteoporosis. During an 18-month-long randomized, double-blind trial, 80 postmenopausal women with osteoporosis received daily injections of either placebo, a single unit of growth hormone or a 2.5-unit dose of growth hormone. The women were between the ages of 50 and 70 when they were recruited at the study's start. After 18 months, the women who received the placebo halted the injections. Women who received growth hormone continued to receive injections for another 18 months. The researchers continued to follow up with the women for seven years after the growth hormone treatment was halted to monitor their bone density, fractures and perception of their quality of life. The researchers compared the participants' bone density and rate of fractures to those of a group of 120 women who did not have osteoporosis (controls). A decade after the study began, the women who received the larger growth hormone dose still had higher bone mineral density levels than the participants who received the lower dose or the placebo. The rate of fractures in the treated women who had osteoporosis declined by 50% during the 10-year-long study. More than half of the participants had fractured bones prior to the start of the study. In contrast, the rate of fractures rose four-fold in the control group as some of those women were diagnosed with osteoporosis. The lead investigator observes that: "Our study is the largest and longest controlled study of growth hormone treatment for osteoporosis in postmenopausal women to date. Years after treatment stopped, women who were treated with growth hormone still experienced improved bone density and reduced fracture risk."

Krantz E, Trimpou P, Landin-Wilhelmsen K. "Effect of Growth Hormone Treatment on Fractures and Quality of Life in Postmenopausal Osteoporosis: A 10-Year Follow-Up Study." J Clin Endocrinol Metab. 2015 Sep;100 (9):3251-9.

Testosterone & Cardiovascular Safety

3-year long study reports that testosterone replacement therapy "did not result in significant difference in the rates of change" in markers of atherosclerosis

Testosterone is not only the primary male reproductive hormone, but is key for muscle growth and bone mass. Shalender Bhasin, from Brigham and Women's Hospital (Massachusetts, USA), and colleagues completed the Testosterone's Effects on Atherosclerosis Progression in Aging Men (TEAAM) trial – a 3-year long, double-blind study of testosterone replacement therapy, in 308 men, ages 60 years and older, with low or low-normal testosterone levels. Each subject received either 7.5 g of 1% testosterone; pr placebo gel packets daily (dose was adjusted to achieve testosterone levels between 500 and 900 ng/dL), for 3 years. The researchers tracked two indicators of atherosclerosis: calcium deposits in the arteries of the heart (coronary artery calcification) and the thickness of inner lining of the carotid arteries that supply blood to the brain (common carotid artery intima-media thickness). As well, the team measured secondary outcomes of sexual function and health-related quality of life. The study authors report that: "Among older men with low or low-normal testosterone levels, testosterone administration for 3 years vs placebo did not result in a significant difference in the rates of change in either common carotid artery intima-media thickness or coronary artery calcium."

Basaria S, Harman SM, Travison TG, Hodis H, Tsitouras P, Budoff M, Pencina KM, Vita J, Dzekov C, Mazer NA, Coviello AD, Knapp PE, Hally K, Pinjic E, Yan M, Storer TW, Bhasin S. "Effects of Testosterone Administration for 3 Years on Subclinical Atherosclerosis Progression in Older Men With Low or Low-Normal Testosterone Levels: A Randomized Clinical Trial." JAMA. 2015 Aug 11;314(6):570-81

Testosterone Therapy: "Significant Reduction" in Heart Attack, Stroke Risks

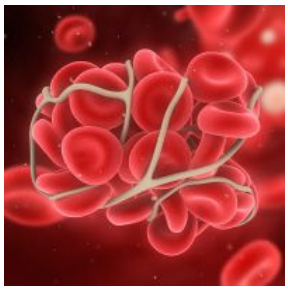
Large-scale Veterans Affairs database study reaffirms safety and benefits of testosterone replacement, in men.

A US Veterans Affairs database study of more than 83,000 male subjects found that men whose low testosterone was restored to normal through gels, patches, or injections had a lower risk of heart attack, stroke, or death from any cause, versus similar men who were not treated. Rajat Barua and colleagues analyzed data collected on 83,010 male veterans with documented low total testosterone levels, dividing them into three clinical groups: those who were treated to the point where their total testosterone levels returned to normal (Group 1); those who were treated but without reaching normal (Group 2); and those who were untreated and remained at low levels (Group 3). Importantly, all three groups were "propensity matched" so the comparisons would be between men with similar health profiles. The researchers took into account a wide array of factors that might affect cardiovascular and overall risk. The average follow-up across the groups ranged from 4.6 to 6.2 years. The sharpest contrast emerged between Group 1 (those who were treated and attained normal levels) and Group 3 (those whose low testosterone went untreated). The treated men were 56% less likely to die during the follow-up period, 24%less likely to suffer a heart attack, and 36%less likely to have a stroke. The differences between Group 1 and Group 2 (those who were treated but did not attain normal levels) were similar but less pronounced. The study authors conclude that: “normalization of [total testosterone] levels after [testosterone replacement therapy] was associated with a significant reduction in all-cause mortality, [myocardial infarction], and stroke.”

Sharma R, Oni OA, Gupta K, Chen G, Sharma M, Dawn B, Sharma R, Parashara D, Savin VJ, Ambrose JA, Barua RS. “Normalization of testosterone level is associated with reduced incidence of myocardial infarction and mortality in men.” Eur Heart J. 2015 Aug 6. pii: ehv346.

Testosterone Therapy: No Link with Blood Clot Disorders

"Prescription for testosterone therapy was not associated with an increased risk of [venous thromboembolism]" write investigators led by The University of Texas



Venous thromboembolism (VTE) is a disease where blood clots form in the veins and cause blockages. The most common forms of VTE are deep vein thrombosis, which occurs often in the legs and pulmonary embolism, which is a clot in the lungs. VTE is the third most common cardiovascular illness, after heart attack and stroke. Jacques Baillargeon, from The University of Texas Medical Branch at Galveston (Texas, USA), and colleagues completed a case-control study of 30,572 men, ages 40 years and older, who were enrolled in one of the nation's largest commercial insurance programs between Jan. 1, 2007 and Dec. 31, 2012. Cases were defined as men who had a primary diagnosis of VTE and received an anticoagulant drug or an intravascular vena cava filter in the 60 days following their diagnoses. Cases were matched with three control subjects on age, geographic region, diagnosis of low testosterone and diagnosis of any underlying pro-clotting condition. The researchers found that having a prescription for testosterone therapy was not associated with an increased risk of VTE. In addition, none of the specific routes of administration examined -- topical creams, transdermal patches or i to ntramuscular injections -- were associated with an increased risk. There were no differences between men who received the therapy 15, 30 or 60 days before being diagnosed with VTE. Writing that: "Having filled a prescription for testosterone therapy was not associated with an increased risk of VTE in commercially insured middle-aged and older men," the study authors submit that: "These findings may provide clinically relevant information about the benefit-risk assessment for men with testosterone deficiency considering treatment."

Baillargeon J, Urban RJ, Morgentaler A, Glueck CJ, Baillargeon G, Sharma G, Kuo YF. "Risk of Venous Thromboembolism in Men Receiving Testosterone Therapy." Mayo Clin Proc. 2015 Jul 15. pii: S0025-6196 (15)00428-0.

No Link: Testosterone Therapy & Heart Attack Risk

Study involving over 25,000 older men shows that testosterone therapy does not increase men's risk for heart attack.

Previous research on the effects of testosterone therapy on cardiovascular outcomes has yielded inconsistent results. Jacques Baillargeon, from the University of Texas Medical Branch at Galveston (Texas, USA), and colleagues examined enrollment and claims Medicare data 25,420 Medicare beneficiaries 66 years or older treated with testosterone for up to eight years.. Men of the same age, race, Medicaid eligibility, and health status who did not receive testosterone therapy were used as a control group for comparison. The analyses showed that testosterone therapy did not associate with an increased risk of heart attack. Further, testosterone users with a higher probability of cardiovascular problems had a lower rate of heart attacks in comparison to equivalent patients who did not receive testosterone therapy. Observing that: "Older men who were treated with intramuscular testosterone did not appear to have an increased risk of [heart attack]," the study authors submit that: "For men with high [heart attack] risk, testosterone use was modestly protective."

Jacques Baillargeon, Randall J. Urban, Yong-Fang Kuo, Kenneth J. Ottenbacher, Mukaila A. Raji, Fei Du, et al. "Risk of Myocardial Infarction in Older Men Receiving Testosterone Therapy." Ann Pharmacother July 2, 2014.

A4M on Testosterone Therapy

A recent statistical study fails to represent an actual causal relationship between Testosterone therapy and myocardial infarction.

In response to William Finkle, et al. in PLOS One (29 Jan. 2014) the A4M finds the statistical study fails to represent an actual causal relationship between Testosterone therapy (TT) and myocardial infarction (MI).

Dr. Abraham Morgentaler, Associate Clinical Professor in the Department of Urology at Harvard University, writes the following regarding the statistical results of the study: "It is possible that the men's heart attacks in this study were caused by their underlying medical problems not testosterone…most heart attacks occurred in the first 90 days after a prescription was written. It is unlikely that heart attacks could develop in such a short period of time." (Featured interview: USA Today Jan 29, 2014).

This statistical study is a manipulation of data, and does not represent an actual causal relationship between testosterone therapy and myocardial infarctions. These researchers' statistical findings are extremely flawed as they don't accurately account for any phenotypical variability or the fact that multi-factorial variables were not examined in their research project. There was not any form of analysis of various serum parameters, ekg, exercise tolerance, muscle to fat ratio, the particular nature of testosterone therapy as well as dosing and administration of other drug interactions. It is possible for any researcher to a manipulate a particular database and exhibit a correlational relationship between testosterone therapy and non-fatal myocardial infarctions. It is also likely that the succinct population used in this study may have a greater disposition to cardiovascular events as compared to another cohort population of males over 65.

William Finkle et. al. writes in their discussion that there are difficulties with this study. The homogeneous database employed in this study is definitely not representative of other global heterogeneous databases, and most likely in terms of the correlational outcome of this study cannot be generalized to a larger population configuration. This study should not have ever been published due to its methodological limitations, and Finkle et. al., did not review any of the other variables which needed to be analyzed in order to make an accurate assessment in terms of the relationship between exogenous testosterone normalization and cardiovascular morbidities. The comparison that was employed in this study using the PDE5I group clearly makes this study invalid. PDE5I induces vasodilation and therefore is not a valid control group. What this study does point out is that actual research investigations should be conducted, in the rodent model as well as humans, about how higher levels of testosterone in the older phenotype impacts transcriptional and translation activities which eventuates in modifications in the cardiovascular system. Furthermore, William Finkle et. al. did not consider any kind of epigenetic factors in his insufficient data analysis. He is raising certain issues as to criteria which needs to be considered prior to a clinician prescribing testosterone for older males, such as certain phenotypes that should be excluded, based on their pathophysiology from receiving exogenous testosterone replacement.

Finkle et. al. states the following regarding the shortcomings of his study: "Further study is needed to examine the risk of a variety of specific serious adverse cardiovascular events in relation to TT dose and duration, and to assess if the risks of TT vary by level of serum testosterone and presence or absence of hypogonadal disease". Paradoxically, these researchers discuss elsewhere "low endogenous testosterone levels may also be positively associated with cardiovascular events." This article makes salient many issues regarding this therapeutic protocol for the treatment of andropause in men. Finkle et. al. does state that this therapy is pathophysiological, however, his correlational analysis as mentioned is flawed. Clinicians should consider when prescribing testosterone to the older phenotype whether his overall health status or way of living should warrant this therapeutic protocol.
Finkle et. al. did discuss some of the recognized side effects of testosterone therapy "increase of blood pressure, polycythemia, reduction in HDL cholesterol and hyper viscosity of blood and platelet aggregation." These pathophysiological parameters can be readily alleviated by a competent clinician with the employment of medicinal protocols. It is not likely that polycythemia if regulated by a physician could engender cardiovascular events in the older phenotypes who have been placed on testosterone therapy. There have been a plethora of studies which have demonstrated that exogenous testosterone replacement to physiological levels does, in fact, mitigate the risk of cardiovascular morbidities.

Should a lethargic, obese, and hypertensive patient who is a borderline type 2 diabetic over 70 be prescribed exogenous testosterone therapy? The physiological parameters of a male patient that is highly educated and involved in cardiovascular exercise programs, and who has an optimal fat to muscle ratio with an exquisite BMI is very different from an obese, hypertensive, pathogenic 65 year old male phenotype. There is certainly more risk associated with the prophylaxis of a pathophysiological male compared to those optimally conditioned older cohorts. In the hands of a highly qualified Anti-Aging physician, practicing preventative endocrinological therapies aka Anti-Aging Medicine (see www.worldheath.net), testosterone replacement therapy can be used in conjunction with exercise, dietary manipulation and other cardiovascular risk factor reductions including the routine monitoring of hematocrit, blood viscosity, platelet counts and other indicators of polycythemia. It is also common practice to remove 100-200cc of whole blood in individuals who are on long-term testosterone therapy to maintain optimal indices.

This article has caused unwarranted and exaggerated fears in the media and in the non-medically trained public. It has already induced unwanted trepidation regarding this medicinal therapy which has for the preceding 50 years improved the quality of life in millions of males and females. The popular media will interpret the results of this skewed correlational study, which is unrepresentative of the overall older male population, as causing myocardial infarctions in patients being titrated with this therapeutic strategy. However, physicians have the responsibility to judiciously manage patients in older phenotypes with multiple co morbidities.

At the most recent ENDO 2013 Annual Meeting (sponsored by The Endocrine Society), many of the speakers from the international endocrinology community lauded Testosterone therapy as an extremely viable prophylaxis for the mitigation of the symptomology associated with aging-related declines in male hormones. There

was no discussion of increased risk of cardiovascular morbidity with properly administered and monitored Testosterone therapy. The speakers at the Winter 2013 Session of the 22nd Annual Congress on Anti-Aging Medicine, sponsored by the American Academy of Anti-Aging Medicine (A4M; www.worldhealth.net & www.a4m.com), held December 2013, also lectured on this topic. These speakers cited overwhelming evidence of benefits of Testosterone therapy; and this protocol for the treatment of Testosterone decline reduced the risk of myocardial infarction.

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A4M responds to Finkle W, et al "Increased risk of nonfatal myocardial infarction following testosterone therapy prescription in men" PLOS One 2014; DOI: 10.1371/journal.pone.0085805.

A4M Position Paper on Physician-Prescribed HRT

The non-science witch hunt against hormone replacement therapies for deficiency syndromes must end.

Hormone replacement therapy (HRT) is an essential and extensively documented protocol for clinical intervention in the disorders of aging. HRT maintains an unblemished safety and efficacy profile that has been documented by over 20 years of clinical application. The A4M does not endorse or condone the use of any illicit substances for sports cheating. However, the A4M does support the continued availability of such substances to adult patients with objectively assessed hormone deficiencies.

A perfect storm of misguided media combined with biased parties whose livelihoods hinge on disparaging the anti-aging medical movement has grossly compromised access to HRT, placing the lives of hundreds of thousands of patients worldwide in potential jeopardy.

In this Position Paper, the A4M outlines how media sensationalization, combined with federal and state actions aiming to criminalize the practice of innovative medicine, impacts the anti-aging physician and their patients, putting healthcare freedoms in dire risk.

Click here to download the full paper. *(Adobe Reader Required)*

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Testosterone Raises Insulin Sensitivity

Treating hypogonadal men who have type 2 diabetes with testosterone decreases insulin resistance.

Giving testosterone to men with type 2 diabetes who are deficient in the hormone improved their insulin sensitivity, reports researchers from the University of Buffalo (New York, USA). Paresh Dandona and colleagues conducted a randomized controlled trial of 81 men with type 2 diabetes. Men were randomized to treatment with testosterone or placebo for 6 months. At baseline, those with hypogonadism had a higher body mass index (BMI) and a higher fat mass than those who didn't have low testosterone. The team found that hypogonadal men with type 2 diabetes had significantly lower insulin sensitivity than those who did not have hypogonadism; further, that association remained even when controlling for weight and age (P=0.017). As well, free testosterone rose dramatically (4.1 nmol/L to 12.4 nmol/L), while placebo subjects had no significant changes in this parameter. Commenting that there was a "dramatic" 25% increase in insulin sensitivity … after these men took testosterone for 6 months," the study authors note total lean body mass increased significantly for testosterone patients while fat mass significantly diminished in this group.

Dhindsa SS, et al. "Testosterone replacement decreases insulin resistance in hypogonadal men with type 2 diabetes" [Abstract OR22-1.] Presented at ENDO 2013 (Annual Meeting of The Endocrine Society), June 19, 2013.

Testosterone Promotes Cognitive Acuity

Testosterone gel improves performance on a specific cognitive task, among postmenopausal women with normal cognitive function.

A testosterone gel applied daily may improve cognitive performance in postmenopausal women, suggests research completed by a team at Monash University (Australia). Susan Davis and colleagues studied 92 healthy postmenopausal women, ages 55 to 65 years, who were not taking any systemic sex hormone therapy and had normal cognitive function at baseline. Subjects were randomized to daily administration of a transdermal gel containing 0.22 grams of testosterone or to placebo for 26 weeks. The average testosterone level among the women was near the lower limit of normal at baseline, and it increased by a median of 1.7 nmol/L in the treatment group, bringing levels into the mid-normal range. Whereas the women in the two groups had similar cognitive function at baseline, scores at 26 weeks on a standardized cognitive assessment and health inventory were significantly better in the testosterone group, as compared with the placebo group. The lead author comments that the study "suggests that the women are performing suboptimally even though it's normal for their age group and that we can really have women performing more optimally in terms of cognitive performance if they have a small dose of testosterone therapy."

Davis S, et al. "Transdermal testosterone improves verbal learning and memory in postmenopausal women not on estrogen therapy: a randomized placebo-controlled trial over 26 weeks" [Abstract FP26-5.] Presented at ENDO 2013 (Annual Meeting of The Endocrine Society), June 18, 2013.

Hormone Therapy Helps to Improve Cognition

In both healthy adults and those with mild cognitive impairment, daily injections of growth hormone-releasing hormone (GHRH) improved cognition.

Growth hormone-releasing hormone (GHRH), growth hormone (GH), and insulin-like growth factor 1 (IGF-1) exert potent effects on brain function, but their levels decrease with advancing age. Growth hormone-releasing hormone (GHRH) is key to the production of both GH and IGF-1. Previously, a number of studies suggest that elevating levels of these hormones in people at risk for cognitive impairment might prevent mental decline or improve function. Laura Baker, from the University of Washington School of Medicine (Washington, USA), and colleagues enrolled 152 adults, ages 55 to 87 years, including 66 with mild cognitive impairment (MCI). Subjects were randomly assigned to receive either daily subcutaneous injections of GHRH, or placebo. The primary outcome was cognitive change measured by a battery of standard tests at baseline and weeks 10, 20, and 30 (following a 10-week washout period). The researchers also conducted blood tests at those intervals to measure circulating levels of the three hormones, finding that GHRH increased insulin-like growth factor 1 levels by an average factor of 2.17 – within the normal physiological range. Those taking GHRH exhibit a significant improvement in overall cognition that was comparable among both healthy participants and those with MCI. Importantly, GHRH significantly improved executive function, and appeared to improve verbal memory as well. Further, GHRH also reduced body fat by 7.4% . Reporting that adverse events were mild, the study authors conclude that: "Twenty weeks of [growth hormone-releasing hormone] administration had favorable effects on cognition in both adults with [mild cognitive impairment] and healthy older adults. “

Laura D. Baker, Suzanne M. Barsness, Soo Borson, George R. Merriam, Seth D. Friedman, Suzanne Craft, Michael V. Vitiello. “Effects of Growth Hormone-Releasing Hormone on Cognitive Function in Adults With Mild Cognitive Impairment and Healthy Older Adults: Results of a Controlled Trial.” Arch Neurol, August 6, 2012.

Testosterone Therapy Helps Trim Men's Waistlines

Long-term testosterone replacement therapy helped obese hypogonadal men lose an average of 36 pounds, and shed 3.5 inches from their waistline.

Previous studies of testosterone replacement therapy (TRT) have shown changes in body composition, usually in the form of increased lean mass and decreased fat mass. Farid Saad, from Bayer Pharma (Germany), and colleagues reviewed data in a prospective registry of middle-age and older men, mean age 60.6 years, who received TRT for at least 2 years and for as long as 5 years. More than half of the patients had 4 years of follow-up. The objective was to determine the long-term effects of normalization of testosterone levels in the men. Standard treatment was 1,000 mg initial dose, followed 6 weeks later by 1,000 and then 1,000 mg every 12 weeks after. The baseline testosterone level averaged 287 ng/dL. Baseline weight averaged 236 lbs., and 95% of the men had a baseline body mass index (BMI) >25, including 71% of men who obese (BMI 30 to 40) or morbidly obese (≥40). The men had a median waist circumference of 42.2 inches Similarly to weight distribution, 4% of the men had a waist <37 inches, and 68% had a waist circumference ≥40 inches thick. Testosterone levels normalized (≥350 ng/dL) within 6 to 9 months and remained stable throughout follow-up. Annual measurements showed that testosterone levels significantly exceeded baseline values (P<0.0001) beginning at 12 months and continuing to the end of follow-up. Similarly, body weight declined significantly within 12 months and continued to decline for as long as 5 years. As well, weight declined significantly between annual measurements, beginning at year 2. More than half of the men (53%) lost at least 33 lbs., and almost a third lost 44 lbs. or more weight. Similarly, 86% of the men had a least a 2-inch reduction in waist circumference, and 46% dropped 6 inches or more. Commenting that: ""I don't know many treatments where more than 90% of patients respond in a positive way to the treatment," the lead study author emphasizes that: ""There is no evidence of an increased risk of prostate cancer in testosterone-treated men."

Saad F, et al. "Restoring testosterone to normal levels in elderly men is efficacious in weight reduction. A follow-up study over 5 years" [Abstract SAT-118]. Presented at ENDO 2012, June 23, 2012.

Testosterone May Exert Benefits for Heart Failure

Testosterone supplementation improves walking, oxygen consumption, fasting glucose, and insulin, in patients with heart failure.

Testosterone supplementation may help improve exercise capacity and metabolic factors in patients with heart failure. Justin Ezekowitz, from the University of Alberta (Canada), and colleagues completed a meta-analysis of four small, randomized, placebo-controlled trials involving a total of198 patients (84% male, mean age 67 years), with the majority of the patients (71%) having experienced ischemic heart failure. The data showed that testosterone therapy associated with 16% to 23% relative improvements in walking distance and peak oxygen consumption. Specifically, on average, patients on testosterone walked 54 meters (16.7%) longer on the 6-minute walk test and 46.7 meters (15.9%) longer on the incremental shuttle walk test. Peak oxygen consumption (VO2) improved by 2.70 mL/kg/min (22.7%). Although there were no effects on left ventricular ejection fraction, the percentage of patients who improved at least on New York Heart Association class was greater with testosterone (35% versus 9.8%). The researchers noted that there were no major safety concerns, but acknowledged the small sample sizes and short lengths of follow-up. The study authors conclude that: "Given the unmet clinical needs, testosterone appears to be a promising therapy to improve functional capacity in [heart failure] patients."

Mustafa Toma, Finlay A. McAlister, Erin E. Coglianese, Venketesan Vidi, Samip Vasaiwala, Justin A. Ezekowitz, et al. "Testosterone Supplementation in Heart Failure: A Meta-Analysis." Circ Heart Fail., April 17, 2012.

Age-Related Protein Decline is Reversible

Levels of nine specific proteins that decline with age can be reversed by testosterone treatment, suggesting beneficial effects for aging men.

Nine proteins, isolated from blood, decline with age, but researchers from Boston University School of Medicine and University of Texas Medical Branch have found that the profile of some of these proteins can be reversed by testosterone treatment. The team compared protein levels in serum samples from two groups of healthy men - young men ages 18-35 years and older men ages 60-75 years. Seven proteins, which were either growth factors (IGF-1, IL-7, IL-12p40, PDGF[beta]), or were involved in immune response (ENA78, MIP-1[beta], IP-10), and pro-collagen (PIIINP) were all reduced in older men. In contrast the monokine MIG, also involved in immune activity, was elevated. The team found that testosterone treatment increased lean muscle mass, and levels of the appetite suppressing hormone leptin, for both groups of men. Testosterone also increased levels of PIIINP and IGF-1 in young men and the researchers saw a similar increase in a small group of older men. The authors conclude that: "Results from this study suggest that there are potential phenotypic biomarkers in serum that can be associated with healthy aging and that some but not all of these biomarkers reflect gains in muscle mass upon testosterone administration."

Banerjee C, Ulloor J, Dillon EL, Dahodwala Q, Franklin B, Sebastiani P, Sheffield-Moore M, Urban RJ, Bhasin S, Montano M. "Identification of serum biomarkers for aging and anabolic response." Immunity & Ageing 2011, 8:5, 20 June 2011.

Hormone Replacement Exerts Positive Regenerative Effect on Joints Damaged by Osteoarthritis

German researchers suggest hormone replacement in the joint fluid may help treat the late stages of osteoarthritis.

The World Health Organization estimates that worldwide, osteoarthritis affects 9.6% of men and 18% of women ages 60 years or older, and the condition will be the fourth leading cause of disability by 2020. It is generally accepted that disturbances in joint architecture due to trauma, abnormal load, endocrine diseases (diabetes, hypothyroidism) or inflammatory conditions may result in osteoarthritis. Nicolai Miosge, from August University (Germany), and colleagues examined arthritic tissue during the late stages of osteoarthritis. The researchers speculated that chondrogenic progenitor cells (CPCs) may be influenced by sex steroids, and therefore hormone replacement therapy directed to the joint fluid could be beneficial in restoring damaged tissue. Tissue samples from 372 patients who underwent total knee replacement were analyzed. The mean age was 71 years of age for men and 72 years for women, with women representing 64.25% of participants. Estrogens are known to influence bone metabolism and researchers found that 17beta-estradiol (E2), which increases calcium deposition in both sexes, was present in the joint fluid of study participants. CPCs positive for estrogen receptors (ER-alpha and ER-beta) as well as androgen receptors were present in the osteoarthritis tissue as well. Both estrogen and testosterone influenced the expression of all 3 receptor genes and the CPCs by regulating gene expression. Observing that: “Physiologic concentrations of testosterone in men and premenopausal concentrations of estrogen in women have a positive effect on the chondrogenic potential of CPCs in vitro,” the team concludes that: "Therefore, strategies of hormone replacement in the synovial fluid of women and men might have beneficial effects on the regenerative potential of arthritic cartilage tissue in late stages of [osteoarthritis].”

Sebastian Koelling, Nicolai Miosge. “Sex differences of chondrogenic progenitor cells in late stages of osteoarthritis.” Arthritis & Rheumatism, Volume 62, Issue 4, Date: April 2010, Pages: 1077-1087.

Resveratrol Holds Promose as HRT Alternative

For postmenopausal women, resveratrol could become an alternative to hormone replacement therapy (HRT).

In that phytoestrogens have been studied as potential alternatives to hormone replacement therapy (HRT) and as chemopreventive reagents for breast cancer, Takako Sakamoto, from Jichi Medical University (Japan), and colleagues studied resveratrol, a compound derived from grape skins, and its e effects on breast cancer development and progression. The team found that resveratrol increased apoptosis, reduced the Bcl-2/Bax ratio, and significantly enhanced p53-dependent transcriptional activity. Resveratrol also exhibited other cancer silencing effects, leading the team to conclude that: "resveratrol might be the most promising candidate for HRT and chemoprevention of breast cancer due to its estrogenic activity and high antitumor activity."

Takako Sakamoto, Hyogo Horiguchi, Etsuko Oguma, Fujio Kayama. "Effects of diverse dietary phytoestrogens on cell growth, cell cycle and apoptosis in estrogen-receptor-positive breast cancer cells." The Journal of Nutritional Biochemistry, In Press, Corrected Proof, Available online 3 October 2009; doi:10.1016/j.jnutbio.2009.06.010 .

Hormone replacement therapy lowers risk of colorectal cancer

Research from the Carmel Medical Center in Haifa, Israel shows that hormone replacement therapy (HRT) reduces the risk of colorectal cancer in postmenopausal women. The study indicates a reduction of risk by more than half in women taking combined estrogen-progestin oral pills.

The study adjusted for demographics, aspirin and statin use, sports activity, family history of colorectal cancer, and vegetable consumption. Women who took aspirin or played sports did not demonstrate a risk reduction. Researchers caution that further study is necessary to understand the causes for such differences.

The study, published in the online "Journal of Clinical Oncology"compared the self-reported use of HRT from 2,460 peri/postmenopausal women among 2,648 patients with colorectal cancer and 2,566 controls. Results showed a 63 percent relative reduction in risk of colorectal cancer after adjustment for other known risk factors.

News source: http://www.modernmedicine.com/modernmedicine/Endocrinology/Hormone-Replacement-May-Lower-Colorectal-Cancer-Ri/ArticleNewsFeed/Article/detail/621692?contextCategoryId=40133

Who's Who in Anti-Aging and Regenerative Medicine

Week of August 17, 2009

Naina Sachdev, MD
Medical Director for the Advanced Aesthetics and Integrative Medicine Center

Dr. Sachdev is able to apply critical knowledge garnered through her medical degree from the University of Chicago Medical School and combine it with hands on experience from patients at her advanced Aesthetics and Integrative Medicine Center. With a thriving practice that focuses on Aesthetic, Integrative and Functional Medicine, this internist and antiâ€aging expert serves as Medical Director for the Advanced Aesthetics and Integrative Medicine Center.

At the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures in San Jose, California (September 9-12, 2009), Dr. Sachdev will present, Female Hormone Case Studies -- Using Saliva Hormone Assessment, on Thursday, September 10th as a part of the workshop, "LABORATORY TESTING IN ANTIâ€AGING MEDICINE ".

For more information call the A4M today; 1-888-997-0112.

Bioidenticals safer and more effective than synthetic HRT, studies show

The appearance of Suzanne Somers on a recent Oprah Winfrey show sparked controversy in the mainstream media about the benefits of using bioidentical hormones for hormone replacement therapy instead of synthetics. Dr. Al Sears, who notes that Somers is the author of several best-selling books on the subject, says that she has educated herself about the options for HRT â€“ and he writes that he agrees with her that bioidenticals are a better option. Why?

As. Dr. Sears notes in his column, bioidenticals are safer, with several studies and analysis supporting his contention. He refers to a recent analysis of more than 200 studies that found bioidentical HRT to be both more effective and offer greater health benefits for menopausal women than synthetic hormones. “The study showed that women taking them were less likely to have sleep problems, anxiety, depression and cognitive problems â€” common side effects of synthetic hormones. And these women had a reduced risk of breast cancer and superior heart protection,” he writes. He points to a German study that found the effects of the bioidentical estriol to be successful in 92 percent of all cases, with the drug eliminating hot flashes and sweating in 71 percent of the women. Another study of Japanese post-menopausal women who took estriol found no side effects in the uterus or breasts of the women.

Conversely, Dr. Sears notes that synthetic HRT drugs have a whole array of reported risks, from chest pain and shortness of breath, to vision problems, breast lumps, dizziness and depression. “Alleviating the symptoms of menopause can often result in something much, much worse if you take the synthetic form of the drugs,” he points out. Moreover, a study of the Women's Health Initiative evaluated women who had taken an estrogen-progestin combination drug called Prempro. The National Institutes of Health had to cut the study short when their findings showed that the drug resulted in a 26 percent increase in breast cancer, 41 percent increase in strokes, 29 percent increase in heart attacks, 100 percent increase of blood clots in the legs and lungs, and an increased risk of ovarian and endometrial cancer.

As Dr. Sears explains, bioidenticals are made from plants that have an identical molecular structure to the hormones produced by the human body. “Your body doesn't see them as foreign matter, whereas synthetic HRT drugs are chemically altered forms of hormones that come from animal waste,” he notes, highlighting that Prempro and Premarin, one of the most widely prescribed HRT drugs, both contain horse urine from pregnant mares.

So, how should patients get started with bioidenticals? Dr. Sears stresses the importance of first having a physician check levels of estrogen, progesterone and testosterone in order to detemine which hormones need replenishing. And he emphasizes that not all bioidenticals are equal. “When it comes to hormones, one size does not fit all. Everyone's needs are different. With bioidenticals, a doctor can prescribe a custom blend of naturally occurring hormones that are specific to the patient's needs,” he notes. Some doctors are unwilling to prescribe bioidenticals, but many are, particularly those who specialize in alternative and natural health. A

directory of physicians is available at his website at: www.alsearsmd.com/health-directory/

News Release: What you need to know about hormone replacement therapy http://www.totalhealthbreakthroughs.com/2009/07/are-oprah-and-suzanne-somers-right/ July 10, 2009

This Week's Anti-Aging Video Feature: Bio-identical Hormone Replacement Therapy

Dr Pati, one of the world's foremost eductators and practicing physicians in the field of HRT discusses the beneficial effects of bio-identical hormone replacement which multiple studies have shown do not share the same problems as synthetic hormones.

At the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures, Dr. Pati will present, Putting It All Together: The Nuts and Bolts of Hormone Restoration in Men and Women.

For more information, call; 1-888-997-0112.

Who's Who in Anti-Aging and Regenerative Medicine

Week of July 6, 2009

David Brownstein, MD
Clinical Assistant Professor of Internal Medicine, Wayne State University of Medicine

In private practice in Farmington Hills, Michigan, Dr. Brownstein is the author of three books, *The Miracle of Natural Hormones*, *Overcoming Thyroid Disorder*s, and *Overcoming Arthritis*.

He is the principal investigator on two research studies, and is a Clinical Assistant Professor of Internal Medicine at Wayne State University of Medicine.

At the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures in San Jose, California (September 9-12, 2009), Dr. Brownstein will present, Iodine: The Most Misunderstood Nutrient, on Friday, September 11th.

This lecture will focus on why iodine levels have declined during the last 30 years. Discussed will be which iodine test is the best measure of iodine sufficiency and how to interpret the tests and which form of iodine provides the best therapeutic result.

For more information call the A4M today; 1-888-997-0112.

This Week's Anti-Aging Video Presentation: Dr. Smith Discusses the Anti-Aging and Regenerative Medicine Fellowship

Pam Smith, MD, Director of the Anti-Aging and Regenerative Medicine Fellowhship discusses this comprehensive, two-year program . To view the video, click here.

Modules I and VIII of the Fellowship will be presented at the upcoming Anti-Aging Conference: Clinical Appliations for In-Office Procedures in San Jose, California, September 9-12, 2009. For more information, call 1-888-997-0112.

Who's Who in Anti-Aging and Regenerative Medicine

Week of June 21, 2009

Eugene Shippen, MD
Medical Staff for The Reading Hospital and Medical Center

Dr. Shippen is Board Certified in Family Practice with 33 years experience in actual practice. For the last 15 years of practice, he has focused on the endocrine changes in men, particularly testosterone deficiency and methods of testosterone replacement. He is a member of The Endocrine Society, a faculty member of The Endocrine Societys Second Annual Andropuase Consensus Committee, 2001, and co-author of the Guidelines for Treatment of Testosterone Deficiency that summarized the committees conclusions.

Dr. Shippen is also the author of The Testosterone Syndrome. Throughout the U.S. and internationally, he is a highly sought speaker on the subjects of testosterone deficiency and treatment.

At the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures in San Jose, California (September 9-12, 2009), Dr. Shippen will present, Advanced Hormone Replacement for Aging Men Revolutionary New Approaches / Successful Treatments, on Thursday, September 12th.

This practical seminar for beginners and experienced practitioners will cover the following:

- Overview of Endocrine changes in aging -- an evidenced based review
- Review of hormonal relationships to aging diseases -- looking at the hormone symphony from Adrenals to Growth Hormone
- The medical workup for the aging male
- The “hypogonadism” of aging -- defining testosterone sufficiency or deficiency
- SHBG -- the critical factor in determining individual optimal treatment goals
- Endocrine stimulation testing protocols
- Treatment modalities -- The diagnosis determines treatment options
- Testosterone “boosting” and new “pulse< dosing” treatments
- The critical role of estrogen in men -- when is too much, when is too little -- how to treat
- Case histories of common presentations, challenging problems and solutions
- Enhancing sexuality -- new approaches that work!
- Take home protocols to follow for diagnosis and treatment options

For more information call the A4M today; 1-888-997-0112.

Growth hormones yield positive changes for AGHD patients

Scientists have good news for people with adult GH deficiency (AGHD). According to research presented at the Endocrine Society's 91st Annual Meeting, treatment with growth hormones dramatically improved body composition and serum levels of insulin-like growth factor 1 (IGF-1) in a dose-responsive manner in AGHD patients. In addition, serum low-density lipoprotein (LDL)-cholesterol decreased in both low- and high-dose GH-treated groups, but showed a significant increase only in the group treated with high-dose hormone replacement therapy.

The findings came from a randomized, placebo-controlled, double-blind study that included 96 Japanese patients aged 18 to 64 years with severe AGHD, including 68 with childhood-onset and 26 with adult-onset AGHD. The researchers also conducted a 48-week open-label study following the double-blind study.

"The goal of the studies were to assess whether a relationship exists between the dose of GH administered and body composition in this patient population," explains Katsuhiko Tachibana, Research and Development Division of Japan's JCR Pharmaceuticals, who presented the research at the annual meeting, which was held on June 11. "The changes in body composition, serum IGF-1 SDS, total cholesterol and LDL-cholesterol at the end of the double-blind study persisted throughout the open-label study, and there was no clinically relevant adverse event during both studies," he says. Funding for the study was provided by JCR Pharmaceuticals Co., LTD.

News Release: Growth hormone improves serum levels of insulin-like growth factor, cholesterol in dose-responsive manner www.docguide.com June 18, 2009

This Week's Anti-Aging Video Presentation: Dr Eugene Shippen: Testosterone deficiency

Testosterone deficiency in men was almost unstudied and unpromoted until Viagra arrived and men came out of the closet. Previously doctors had been told there was no such thing as the male menopause and that the changes associated with testosterone deficiency such as loss of muscle mass, decreased strength, stamina and libido were all normal aging changes. Dr Shippen discusses further the problems associated with testosterone deficiency and what can be done to improve them, click here.

At the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures, Dr. Shippen will be presenting a special workshop entitled, ADVANCED HORMONE REPLACEMENT FOR AGING MEN: REVOLUTIONARY NEW APPROACHES AND SUCCESSFUL TREATMENTS on Thursday, September 10, 2009, in San Jose California.

This seminar will be an interactive process with breaks for questions and panel discussion of issues or complex problems. Case histories of common problems will be presented. Physicians should be able to immediately use the information and treatments in their practices. The focus will be on newest innovative treatment approaches guaranteed to change your clinical approach to this complex area of medicine.

For more information, call 1-888-997-0112.

This Week's Anti-Aging Video Preview--Nutriceutical Balancing and Enhancement of BHRT

Naina Sachdev discusses Nutriceutical Balancing and Enhancement of BHRT at the 16th A4M Conference in Orlando, FL. To view the video preview, click here.

Dr. Sachdev will present three sessions at the upcoming Anti-Aging Conference: Clinical Applications for In-Office Procedures in San Jose, California, September 9-12, 2009. She will present two sessions on using saliva hormone assessment including case studies for both female and male patients in a special workshop entitled, LABORATORY TESTING IN ANTIâ€AGING MEDICINE on Thursday, September 10th. On Friday, Septemer 11th, in the workshop entitled, DETOXIFICATION, Dr Sachdev will present, "Detoxification Pathways of Liver Metabolism" . For more information, call 1-888-997-0112.

Academic Deceit in Gerontology Exposed

For the past fourteen years, the gerontological establishment has sought to persecute anti-aging physicians, anti-aging health practitioners, and the American Academy of Anti-Aging Medicine (A4M; www.worldhealth.net) itself, simply because they defy the prevailing model of disease-based, drug-oriented medicine. In the *Archives of Gerontology and Geriatrics*, an international scientific shocking insights into the calculated and deliberate repression of innovative thought and freedoms of choice in healthcare. The Abstract of this important paper is online, at: http://www.sciencedirect.com/

We urge you to review this important paper, from which we excerpt Prof. Dr. Zs.-Nagy, MD's quotes as follows:

- "Complete disregard by certain individuals bearing some of the most prestigious affiliations in the gerontological establishment, for truth, academic integrity, and scientific professionalism. Instead they have waged a wanton effort to sabotage and retard a global movement of clinicians, practicing physicians on the front lines who have embraced that aging is not inevitable, and is indeed, preventable."
- "[T]he gerontological elite has instead sought to obfuscate the facts ... the reason for this is nothing less than an abject fear ... to avert their loss of control, power, prestige, and position in the multi-billion dollar industry of gerontological medicine."
- "The gerontological elite have waged a multi-million dollar campaign to influence media and exert deliberate control of public information ... selective funding of journalists aimed to deliberately misrepresent the anti-aging movement [with] public funds that were appropriated by the US National Institute of Aging."
- "[T]he gerontological elite has trumpeted meaningless public relations stunts .. mocking the anti-aging medical movement and its physician leaders. These frivolous efforts, led by non-clinicians ... were clearly mounted for personal gain ... [and] speak volumes as to the extremes of intellectual dishonesty."
- Under the influence of the misinformation campaign contrived by the gerontological elite, US Federal Statute 21 USC Sec. 333(e) "enables a witch-hunt of [anti-aging] physicians who judiciously administer hGH therapy," when instead the statute was intended to prohibit trafficking of performance enhancing substances by non-physicians, prior to the existence of the anti-aging medical movement.

Prof. Dr. Imre Zs.-Nagy, MD, a part of the gerontology movement for four decades, and founder and Editor-in-Chief of the *Archives of Gerontology and Geriatrics,* has courageously stepped up to speak the truth. At great professional risk, he has come forth to blow the whistle on fourteen years of censorship and repression of the science of anti-aging medicine, and advanced preventive medicine, by the gerontological establishment.

In asking "Is consensus in anti-aging medical intervention an elusive expectation or a realistic goal?," Prof. Dr. Zs.-Nagy, MD concludes that: "there has been little else as dramatic, important, beneficial, and significant as the anti-aging medical movement. ... [A]nti-aging medicine has flourished in its sixteen-year long history,

garnering the support of more than 100,000 physicians and scientists worldwide who practice or research life enhancing, life extending interventions."

Dr. Ronald Klatz, MD, DO, President of the American Academy of Anti-Aging Medicine (A4M; www.worldhealth.net), observes that: "A decade-long campaign waged by the gerontological elite has severely restricted the freedoms of physicians to administer life enhancing, and potentially life saving, therapeutics such as hGH and HRT therapies. The effect of this calculated campaign has held back the advancement of clinical anti-aging and HRT research, leading to unnecessary morbidity, and, likely - mortality, for millions of people worldwide. In my opinion, this is a heinous crime against humanity. The A4M remains committed to defending the independent physician and we applaud Prof. Dr. Imre Zs.-Nagy, MD for his courage and fearless commitment to intellectual and academic honesty."

This Week's Anti-Aging Video Preview--Testosterone Replacement Therapy (TRT): Optimizing Clinical Outcomes

Michael Aziz, MD presents Testosterone Replacement Therapy (TRT): Optimizing Clinical Outcomes at the 16th A4M Conference in Las Vegas.

Dr. Aziz discusses male andropause and testosterone replacement including causes of low testosterone, comorbidities related to low testosterone levels, replacement therapy and its potential adverse effects. To view the video preview, click here.

Muscle strength improvements shown in adults undergoing long-term growth hormone treatment

It is widely understood that adults who have a growth hormone deficiency, a condition that affects an estimated 10,000,000 people annually worldwide, tend to have excess body fat and less strength in their muscles. However, little has been known about how prolonged growth hormone therapy can impact muscle strength - until now. Dr. Galina Gotherstrom and colleagues at Goteborg University studied how 10 years of growth hormone treatment affected 109 people with adult-onset growth hormone deficiency. Study participants were an average age of 50. The investigators looked specifically at muscle strength and neuromuscular function.

They discovered that long-term treatment with growth hormones of at least 10 years improves muscle strength in people with adult-onset growth hormone deficiency. Specifically, the team learned that the first five years of treatment restored muscle strength, while during the second five years, growth hormone therapy was responsible for slowing normal age-related loss of strength. In a *Journal of Clinical Endocrinology and Metabolism* report, the researchers noted that "growth hormone replacement induced a sustained increase in lean mass and isometric knee flexor strength during the first five years and increases in upper leg and handgrip strength."

Muscle strength decreased during the second five years, returning to previous levels and in some cases, lower levels. But when the age and gender of each participant was taken into account, Gotherstrom's team found that "there were sustained and even progressive increases in the measures of muscle strength through seven years of follow-up." They concluded that the net result was that leg and hand strength returned to normal levels after 10 years of growth hormone replacement therapy.

News Release: Growth hormone slows age-related loss of strength www.reuters.com April 9, 2009

Who's Who in Anti-Aging and Regenerative Medicine

Week of April 6, 2009

Stephen Holt, MD, PhD, ND, LLD

Dr. Stephen Holt, MD is a Distinguished Professor of Medicine and a medical practitioner in New York State. He has published many peer-review papers in medicine and he is a best-selling author with twenty books in national and international distribution. He has received several awards for teaching and research. As a full professor of medicine for 20 years and an adjunct professor of Bioengineering for 10 years, Dr. Holt is a frequent lecturer at scientific meetings and healthcare facilities throught the world.

At the upcoming 17th World Congress on Anti-Aging and Regenerative Medicine in Orlando (April 23-25, 2009), Dr. Holt will present, Rejuvenation Through Detoxification, on Thursday, April 23rd, 2009.

This presentation will include discussion about the importance of detoxification including how to perform it and the role it has in healthcare.

He will also Co-Chair the Advances in Anti-Aging Medicine lecture track, Thursday, April 23rd, and present, A Primer of Natural Therapeutics: An Introduction to Certification in Dietary Supplement Counseling, on Friday, April 24th.

For more information, call 1-888-997-0112

A4M's Online Medical Lecture Series--April Selection--ready to view!

A4M and DiGiVision Media offer two complementary video recordings per month of lectures from A4M Conference Training Session on DiGiVision Media for viewing!
The lectures feature renowned experts presenting a wide variety of Anti-Aging topics. Click on the links below to begin viewing the presentations selected for April.

The lectures feature renowned experts presenting a wide variety of Anti-Aging topics. Click on the links below to begin viewing the first two lectures.

Lecture 1: Hormone Myths vs. Medical Literature and How to Grow Your Own Stem Cells
Speaker(s): Ronald Rothenberg
Description: Reveals the scientific medical literature on the benefits and safety of hormone replacement therapies. Reviews the physiology of adult stem cells and presents data documenting the relationship of lifestyle and hormones Endothelial Progenitor Cells, stimulation of which may produce a number of health benefits.
Click Here

Lecture 2: Alzheimer's Disease: A Hormonal Approach to Treatment
Speaker(s): Mark L. Gordon, MD
Description: Presents a literature review supporting the notion of a potential therapeutic role for androgens, estrogens, progesterone, and their active metabolites, which have been shown to be neuroprotective, repair enhancing, and disease slowing, in the treatment of Alzheimer's Disease.
Click Here

To view either or both lectures, visit: www.instatapes.com/A4Mfeatures

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Misleading information leading to missed diagnoses of hypothyroidism in the UK

Hypothyroidism, which develops when the thyroid gland produces too little thyroxine, is becoming a more prevalent problem in the United Kingdom as the population ages. However, many people suffering from common symptoms of an under-active thyroid - feeling very tired and cold, having difficulties concentrating, gaining weight and experiencing fertility problems - are not getting the right information about their condition. And consequently they are not being treated properly. As experts note, the symptoms can mimic other conditions, and if the under-active thyroid is not diagnosed correctly, some patients may suffer from serious harmful effects.

According to the Royal College of Physicians, which recently established guidelines for how hypothyroidism should be diagnosed and treated in the UK, specifies that a blood test to measure hormone levels is the only accurate way to diagnose the disease, which currently affects three percent of the population. The guidelines also state that giving patients a synthetic form of thyroxine to supplement their natural levels of the hormone is the only proven way to treat the condition. The British Thyroid Association (BTA) also stipulates that urine test, saliva test and measuring body temperatures are not accurate diagnostic tests.

Says Dr. Amit Allahabadia, the secretary of the BTA, "This is potentially an enormous problem, given that in any one year, one in four people in the United Kingdom have their thyroid function checked. I think it is essentially doctors who are outside the NHS who may be misdiagnosing the condition. Patients may go to see them when they think they have an under-active thyroid, or when tests have shown they have normal hormone levels but they still feel ill." And adds Peter Trainer of the Society for Endocrinology, which represents the specialists who treat thyroid disorders: "Our sympathy has to lie with the patient because there is potentially misleading information available on the web."

News Release: Thyroid disorders misdiagnosed www.news.bbc.co.uk March 27, 2009

Who's Who in Anti-Aging and Regenerative Medicine

Week of March 23, 2009

Pamela W. Smith, MD, MPH
Director for Anti-Aging and Functional Medicine Fellowship

Pamela W. Smith, M.D., MPH spent her first twenty years of practice as an emergency room physician with the Detroit Medical Center. She is diplomat of the B oard of American Academy of Anti-Aging Physicians and is an internationally known speaker and author on the subject of wellness, anti-aging, and functional medicine.

She is currently the owner and director of The Center for Health Living and Longevity. She is a member of the American Academy of Anti-Aging Physicians and is a board examiner. Dr. Smith is the Director of the Fellowship in Anti-Aging, Regenerative, and Functional Medicine, which is the only fellowship of its kind in the U.S. She is also the author of the best selling books, "HRT: The Answers", "Vitamins: Hype or Hope", and "Demystifying Weight Loss". Her newest book, "What You Must Know About Vitamins, Minerals, Herbs & More" has just been published.

At the upcoming 17th World Congress on Anti-Aging and Regenerative Medicine in Orlando (April 23-25, 2009), Dr. Smith will be chairing The Fellowship in Anti-Aging Regenerative & Functional Medicine, Modules III and VII. To download the Fellowship program, click here. To download the Fellowship Schedule, click here. For more information, call 1-888-997-0112

"Bioidenticals" â€“ a safe, proven alternative to synthetic replacement-hormone therapy

For many years, older women with symptoms associated with menopause - a health condition that affects 65 million people in the U.S. - have gone to their doctors for relief. For the most part, physicians have prescribed synthetic hormone-replacement therapy. And over time, FDA-approved synthetic hormones, specifically Premarin, Provera and Prempro (a combination of the two), have become the norm. In fact in 2001, Premarin was the best-selling drug in the U.S., with $2 billion in annual sales for its manufacturer, Wyeth.

In 1994, the National Institutes of Health initiated a study of 16,000 women to determine the effectiveness of these drugs to alleviate symptoms, as well as to protect aging women from heart attacks, strokes, osteoporosis and cancer. The study came to an abrupt halt on July 9, 2002, when it was shown - unequivocally - that the drugs were not safe and actually increased the risk of heart attacks, strokes and breast cancer. This led doctors to immediately take their patients off these drugs. Millions of women began experiencing severe withdrawal symptoms, ultimately leading the American College of Obstetrics to develop new guidelines recommending that physicians prescribe the same drugs, but in lower doses for shorter periods of time. Amazingly, it acted without having scientifically proven the effectiveness of this "low dose" option, writes Drs. Erika Schwartz, Kent Holtorf and David Brownstein, founding members of the non-profit Bioidentical Hormone Initiative, in a *Wall Street Journal* editorial.

As the editorial points out, Premarin and Provera continue to dominate the market - and the manufacturers do little, if nothing, to educate doctors about the benefits of bioidenticals in treating symptoms. Yet, the efficacy and safety of natural progesterone, which is identical to the progesterone molecule produced by our own bodies, is backed by 25 years of scientific research and hundreds of studies done in the U.S. and in Europe. In fact, it has been proven that bioidentical hormones, estradiol and micronized progesterone are at least as effective as synthetics - and they are safer. Despite this, the distinction between natural progesterone and synthetics is widely misunderstood. And the debate about hormone replacement therapy continues to generate confusion and ignorance. According to Drs. Schwartz, Holtorf and Brownstein, "The medical establishment must stop kowtowing to drug companies and start serving women's best interests-and that involves widely prescribing bioidentical hormones. This will lead to healthier, happier women, and in the long run, help reduce America's skyrocketing healthcare costs." Fortunately, millions of women are beginning to embrace bioidenticals, leaving, writes the doctors, "their conventional physicians looking stubborn and foolish."

Editorial, written by Drs. Erika Schwartz, Kent Holtorf and David Brownstein: *The Truth about Hormone Therapy Wall Street Journal,* March 16, 2009

A study is underway to determine if memory problems are linked to menopause

Scientists from the Women's Health Program at Monash University in Melbourne, Australia, are conducting a study to determine if a depleting supply of oestrogen is responsible for memory loss in women between the ages of 45 and 55 - the average age of menopause. If they find a link, they believe that hormone replacement therapy could help them prevent dementia.

To conduct the study, the researchers are using software called CogState, which is able to detect subtle changes in cognitive ability. It was originally designed to assess whether a football player was affected by a concussion and if so, if the player were able to remain in the game safely. The women who are participating in the study will undergo an MRI at the beginning and end of six months, which will show just how much the brain is straining to perform a task.

"Women (at that age) often complain that they can't remember where they put the keys, or they miss appointments - they say `I never used to be like that'," says program director Professor Susan Davis. "Women are often busy at this time of life, with adolescent children, elderly parents and work. (The memory effects) may just be a result of being sleep deprived. Or it might be that hormonal changes are setting in train changes in the biochemistry of the brain. We are trying to unravel that."

Co-researcher Dr Fiona Jane indiciates that if the results from the six-month study prove positive, "Women might consider using HRT. If you had a strong family history of dementia, or didn't have any other risk factors that stopped you taking HRT, you might consider that to be something to use around menopausal time," she says. "It's a stepping stone into understanding dementia more, and other areas of investigation about preventing the onslaught of dementia - which is going to be an epidemic."

News Release: *Study gives pause for thought* www.theage.com.au March11, 2009

Who's Who in Anti-Aging and Regenerative Medicine

Week of March 9, 2009

Mark L. Gordon, MD
Medical Director for The Millennium Health Group for Anti Aging Medicine

After 14 years of Clinical Orthopedics and 20 years as a residency trained board certified Family Physician, Dr. Mark L. Gordon integrates Anti Aging Medical theories into a program of sports rehabilitation.

Using nutrition, exercise and his knowledge of supplementation he has helped a number of injured patients return to their activities in a significantly reduced time. Pre-operative programs help surgical outcome and reduce the down time for both sports and non-sports related injuries. Many natural products are available to accomplish these goals.

Dr. Mark Gordon has been recognized as a leader in the area of Anti Aging Medicine and holds Associate Clinical Professorships at USC and UCLA.

Dr. Gordon has recently been reappointed as Medical Director for CBS Studios, Medical Consultant to HBO and FX. In these positions he is available for consultation on areas of Preventive, Anti-Aging and Alternative Medicine. He writes articles on nutritional supplementation and hormonal replacement some of which have been published in Max Muscle and Planet Muscle. Dr. Gordon is owner and Medical Director of Millennium Health Centers-Medicine for the 21st century.

At the upcoming 17th World Congress on Anti-Aging and Regenerative Medicine in Orlando (April 23-25, 2009), Dr. Gordon will be presenting a special pre-convention workshop, THE CLINICAL APPLICATION OF INTERVENTIONAL ENDOCRINOLOGY. This course will be based on the book by the same name. The participants will be able to understand: (i) Andropause: Nuances in treatment and options; (ii) Menopause: The challenge of the female; (iii) Somatopause: Nuances and treatment strategies; (iv) Traumatic Head Trauma: Legal justification for treating Traumatic Brain Injuries; (v) Frailty Syndrome: Hormone replacement for life; (vi) The Front Office: Procedures and Protocols; (vii) Millennium Intake and Chart Forms; (viii) Male & Female Handbook; and (ix) Legal Considerations to the Practice. For more information, call 1-888-997-0112

Who's Who in Anti-Aging and Regenerative Medicine

Week of February 23, 2009

Ronald N. Rothenberg, MD
Clinical Professor, Preventive & Family Medicine for University of California

As a pioneer in the field of Anti-Aging Mecidine, Ronald Rothenberg, MD, was one of the first physicians to be recognized for his expertise to become fully board certified in the specialty. Dr. Rothenberg founded the Calfornia HealthSpan Institute in Cencinitas, Calfironia in 1997 with a commitment to transforming our understanding of and finding treatment for aging as a disease. Dr. Rothenberg is dedicated to the belief that the process of aging can be slowed, stopped, or even reserved through existing medical and scientific interventions.

Challenging traditional medicine's approach to treating the symptoms of aging, California HealthSpan's mission is to create a paradigm shift in the way we view medicine: treat the cause. He received his MD from Columbia University, College of Physicians and Surgeons in 1970. Dr. Rothenberg performed his residency at Los Angeles County-USC Medical Center and is also board certified in Emergency Medicine. He received academic appointment to the USCD School of Medicine Clinical Faculty in 1997 and was promoted to full Clinical Professor of Preventive and Family Medicine in 1989. In addition to his work in the field of Anti-Aging Medicine, Dr. Rothenberg is an Attending Physician and Director of Medical Education at Scripps Memorial Hospital in Encinitas, California. Dr. Rothenberg travels extensively to lecture on a variety of topics, which include Anti-Aging Medicine and Emergency Medicine and is the author of Forever Ageless. He has recently been featured in the University of California MD TV series in the shows on Anti-Aging Medicine.

At the upcoming 17th World Congress on Anti-Aging and Regenerative Medicine in Orlando(April 23-25, 2009), Dr. Rothenberg will be presenting, A PRACTICAL APPLICATION OF TREATING ADULT HORMONE DEFICIENCY USING BIO-IDENTICAL HORMONE REPLACEMENT THERAPY. This workshop is designed to teach the physician how to practice medicine with the use of Human Hormone Replacement. This is the medicine they did not teach you in Medical School. You will learn the basic and advanced techniques of using Human Hormones to prevent the degeneration of aging. This is a must for Ob/Gyns and General Practitioners, Physician Assistants, Nurse Practitioners, Naturopaths, and Family medicine Physicians. For more information, call 1-888-997-0112

A long fertile lifespan can help protect women from developing Parkinson's

Scientists from Albert Einstein College of Medicine in New York City conducted research involving almost 82,000 postmenopausal women and found that women who are fertile for more than 39 years and who go through a natural menopause have less risk of developing Parkinson's. At the same time, the study found that women with four or more pregnancies are at 20 percent greater risk of developing the neurological disease. And for those women who had hysterectomies, which surgically catapulted them into menopause, their chances of getting Parkinson's nearly doubled.

"Thirty five or thirty-six years is about average," says study researcher Rachel Saunders-Pullman, MD, MPH, assistant professor of neurology at Albert Einstein College of Medicine. "It does appear that hormones and reproductive factors play a role in the development of Parkinson's disease." Specifically, she says that the "longer duration of exposure to the body's own hormones may help protect the brain cells affected by Parkinson's." Dr. Saunders-Pullman will present her findings at the American Academy of Neurology's 61st annual meeting in Seattle, April 25-May 2.

Dr. Saunders-Pullman notes that researchers have been looking into the role of hormonal factors in Parkinson's for about 15 years. Knowing that the disease affects two times more men than women, she suggests that the key question is, "Why are women at decreased risk? Is there a hormonal role? Could female hormones be protective?"

Saunders-Pullman and her colleagues analzyed records from the Women's Health Initiative Observational Study, 74,000 women who underwent natural menopause and 7,800 who had surgical menopause. While the findings "suggests there clearly is a hormonal role as far as women developing Parkinson's disease," Saunders-Pullman says, "It is far too premature to consider going on hormone therapy to protect against Parkinson's disease."

News Release: *Hormones may help shield women from Parkinson's* www.health.usnews.com February 25, 2009

News Release: *Hormones May Play a Role in Parkinson's* http://www.webmd.com/ February 25, 2009

Global Anti-Aging Products Market to Reach $291.9 Billion by 2015, According to New Report by Global Industry Analysts

San Jose, CA (PRWEB) February 19, 2009 -- The primal desire of humans to remain young forever so long has groomed and nurtured a goliath of an anti-aging industry worldwide. The market for anti-aging health, and appearance products posts sanguine growth patterns for the upcoming years, backed largely by the affluent aging baby boomers with high levels of disposable incomes. Anti-aging products market is traditionally resilient to economic cycles, given consumers' unchanging desire to look young and healthy, and the importance accorded to health, and well-being. The propensity to spend on skincare is not hugely impacted by a slowdown, rather consumer preferences during these periods tend to shift towards lower priced mass-market products. Product effectiveness will become an important factor as consumers begin to seek visual, sensory, and functional benefits from products. Benefiting from significant investments both in terms of product innovation and marketing, worldwide market for anti-aging products has emerged into a lucrative industry churning out top dollars for market participants.

Growth in the anti-aging product categories varies by product, with least perceptible dent to be witnessed in the health maintenance segment. World market for Anti-Aging Products for Health Maintenance is dominated by the US and Europe, as stated by the recent report published by Global Industry Analysts, Inc. In the relatively less essential appearance enhancement products market, premium products are expected to take the brunt of lower consumer disposable incomes, and reduction in household wealth. Anti-aging products that include natural, and organic ingredients such as botanical herbs, and vitamin E are rising in popularity. Market for Anti-Aging Products for Appearance Enhancement in United States is expected to be more than US$5.0 billion by 2015. Increasing consumer concerns regarding harmful skin cancer and wrinkles caused by recurrent exposure to sun is expected to lead to introduction of multipurpose products with dual benefits of moisturizing and sun protection.

Like any other industry, anti-aging products also contend with skepticism, and conflicting clinical research results surrounding the actual health and appearance benefits of many widely publicized compounds, and ingredients. The oncoming regulatory reformation brings with it a mixed bag of benefits and challenges. While the industry may be necessitated to provide authentic products, and services thereby benefiting the consumer, smaller companies are likely to take the exit route due to lack of scientific expertise, and financial funding leading to a shake out in the industry. Today, manufacturers to avoid the regulatory ire develop, and market cosmeceuticals by incorporating only pharmaceutical ingredients approved by the FDA i.e. retinol or minoxidil, antioxidants and natural extracts which have withstood the test of time, and which do not require the FDA's approval.

Key players dominating the global anti-aging products market include Allergan Inc, Alberto Culver Company, Avon Products Inc, Beiersdorf, Bio Pharma US Corp, Bayer Schering Pharma AG, Chanel SA, Christian Dior, Clarins, Elizabeth Arden Inc, Ella Bache, Estee Lauder Inc, F. Hoffmann-La Roche Ltd, GlaxoSmithKline Plc, General Nutrition Centers Inc, Henkel KgaA, Jan Marini Skin Research Inc, Johnson & Johnson, Janssen Pharmaceutica Products LP, Neutrogena Corporation, L'Oréal SA,

Merck & Company Incorporated, NeoStrata Company Inc, Novartis International AG, Orlane SA, Procter & Gamble, Pfizer Incorporated, Revlon Inc, Robanda International, Shiseido Co. Ltd, SkinMedica Inc, Unilever PLC, Valeant Pharmaceuticals International, Woodridge Labs Inc, Wyeth and Zosano Pharma â„¢ Inc., among others.

The report titled "Anti-Aging Products: A Global Market Report" published by Global Industry Analysts, Inc., provides a comprehensive review of industry overview, regulatory environment, product overview, key market trends, product introductions/innovations, and recent industry activity. The report analyzes market data and provides analytics in value sales for regions such as the United States, Canada, Japan, Europe, Asia Pacific (excluding Japan), Middle East/Africa and Latin America. The study also analyzes the Anti-Aging Products market by the following product segments - Anti-Aging Products for Health Maintenance (Pharmaceuticals for Age-Related Health Conditions, and Supplements for Age-Related Health Conditions), Anti-Aging Products for Appearance Enhancement (Skin Care, Hair Care, and Others).

For more details about this research report, please visit
http://www.strategyr.com/Anti_Aging_Products_Market_Report.asp

About Global Industry Analysts, Inc.
Global Industry Analysts, Inc., (GIA) is a reputed publisher of off-the-shelf market research. Founded in 1987, the company is globally recognized as one of the world's largest market research publishers. The company employs more than 700 people worldwide and publishes more than 880 full-scale research reports each year. Additionally, the company also offers a range of more than 60,000 smaller research products including company reports, market trend reports and industry reports encompassing all major industries worldwide.

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Dr. Pati's Framework for Anti-Aging Medicine

Are you on a quest for anti-aging remedies? Is there such a thing, a magic pill or a secret solution? Yes, the search for magic pills, the age control genes and the secret remedies continues hotly pursued in the world of research. Yes, there is a growing body of evidence that the human life span can be extended, with some Japanese Okinawans living upwards of 120. But is it the extension of life that intrigues us? Or is it the possibility that we may live as productive, happy and disease-free people if we use restorative approaches to correct imbalances in hormones, nutrition, toxins, mind and body, allowing our body does what it does best; keep us healthy.

Whether you call it “anti-aging” or “regenerative” or “restorative” or “functional”; this is no myth. The last two decades in medicine proves that applied correctly this new genre of medicine results in greater than a 90% resolution of symptoms such as fatigue, insomnia, decreased libido, weight gain, anxiety, depression, muscle and joint pains and decreased mental function. It also results in greater than an 80% improvement of disease states such as fibromyalgia, rheumatoid arthritis, chronic fatigue syndrome, gastric reflux, IBS, high cholesterol, high blood pressure, PMS, PCOS, infertility and in teenagers, ADD, anxiety and sleep disorders; and thus, the quest for “anti-aging” medicine.

Anti-aging medicine applies advanced technologies for very early detection, prevention and reversal of age-related disease. There is a growing body of data supporting the reality of anti-aging medicine, while derailing the notion that it is a myth. For example, studies show that:

- The field of anti-aging medicine is the most rapidly growing medical specialty with more than 30,000 physicians worldwide in 80 countries.
- American Academy of Anti-Aging Medicine, 2005
- Women receiving hormone replacement immediately after menopause have reduced heart attacks, strokes, bone fractures and Alzheimer's. They also have significant improvements in sexual function, mood, skin, energy and sleep.
- Euro J Anti-Ageing Med Mar 2006, Journal of General Internal Med 2006
- Men receiving hormone replacement when levels are low (andropause) have reduced heart attacks, strokes and risk of Alzheimer's. They also have improved mood, confidence, motivation, sexual function, muscle mass, energy and strength.
- Eur J Endocrinol. 2006, Eur Heart J. 2006, Curr Drug Targets CNS Neurol Disord. 2005
- In both men and women, sexual function improves sharply after restoration of normal levels of testosterone, DHEA and nutrition (i.e. Vitamin B-12, nitrogen).
- J Clin Endocrinol Metab. 2006, Fertility and Sterility 2004, Int J Impot Res 2005,
- Growth hormone and aggressive nutritional supplementation speed recovery from muscular, skeletal and surgical injuries significantly.
- Hormone Res 1996
- Preventing sugar spikes is the best way to prevent diabetes, obesity, heart disease, stroke, skin aging and cancer.
- International Anti-Aging Magazine, 2006

- High sugar consumption and meats increase cancer risk
- John Hopkins University and American Cancer Society, 2005.
- Inositol pentakisphosphate from beans slow cancer cell growth
- Sackler Institute,2005
- Men with higher levels of B-6, B-12 and folate had better retention of verbal and spatial skills
- Tuft's University, 2005
- Exercising 2 times per week cuts Alzheimer's risk in ½. It also cuts risk of heart attack and stroke.
- Finnish Study, 2005, American Journal Cardiology 2006
- Gum disease increases risk of Alzheimer's by 50%. Flossing prevents this.
- University of South Carolina, 2005
- Eating broiled or baked fish 1 to 4 times per week cuts down stroke risk by 28%, while eating fried fish or fish sandwich increased stroke by 37%
- Harvard University, 2005
- Beta-glucan from Oat kernels penetrate the skin reducing fine lines and wrinkles
- Canadian researchers, 2005
- Alpha and Beta hydroxyl acids promote natural skin exfoliation and cell renewal

- American Academy for Anti-Aging Medicine, 2005
- Radiation levels (which cause cancer) from cell phones increase 10-fold inside a closed vehicle.
- Science and Technology Team, UK
- Older adults with a brighter outlook on the future, have 77% less chance of dying from stroke or heart attack than their pessimistic peers.
- Netherlands researchers, 2005
- The power of deep breath: shallow breathing leads to a low oxygen, acid state in which our chemical reactions do not function optimally.

- Science of Breathe,1998
- Stress increases the hormone cortisol, which impairs the immune system, anti-cancer mechanisms, thyroid function, fat burning, vascular health, brain function and almost every other repair and maintenance function in the body. In that, it is the plague of the 21st century.

- J Trauma Stress. 2006, J Nucl Cardiol. 2006

Is anti-aging for you? Take yourself for a moment to age 50. You have the rest and the best of your life in front of you. How do you want to live these years? The basis of our current medical standard is the treatment of existing disease. If you have high blood pressure, you can take a pill. If you have a heart attack, you can get a bypass. If you have cancer, you can get chemotherapy. But once the bypass is complete and once the cancer is removed, you are still left with the underlying imbalances that allowed the plaque or the cancer to develop in the first place. Given the choice; would you not choose to restore optimal function and prevent recurrences in the future? Would you not choose to live walkie-talkie, strong and energetic rather than in a wheel chair, not knowing your name? If so, you are on a quest. You are on a quest for information and a health care provider who will partner with you to help restore balance and optimize your quality of life.

Restoring the balance means optimizing the ability of our cells to do what they do best: keep us healthy, happy, keep those cancer cells at bay and repair those arteries that are damaged daily. This involves correcting deficiencies of 1) hormones and 2) nutrients, 3) removing toxicities 4) mental peace and 5) a body which is pain free and structurally sound. All disease is a manifestation of imbalances in these five areas, rather than just one cause. For example,

Weight gain is a result of imbalances in hormones (insulin, thyroid, cortisol, estrogen, progesterone etc), nutrients (that activate fat breakdown and muscle development), toxicities (i.e. acidity preventing the release of fat) and stress in the mind (causing increased cortisol and fat storage).

Cogonitive decline (i.e. brain fog) results from hormone deficiencies (i.e. thyroid, estrogen, testosterone), nutrient deficiencies (i.e. B-12, B-6, folate, anti-oxidants), toxicities (i.e. bowel, acidity, chemicals) and mind imbalances, especially stress.

- Thyroid deficiency symptoms result from low thyroid hormone compounded by nutrient deficiencies (i.e. iodine, zinc, selenium, ferritin, B-12), and bowel and liver toxicities which prevent absorption and activation of thyroid. There is also increasing data showing the role of stress on thyroid suppression.
- Bone decline is a caused by deficiencies of hormones (i.e. progesterone, estrogen, testosterone, growth hormone) and nutrients (calcium, magnesium, Vitamin D, boron), compounded by toxic overload such as acidity, heavy metals (which displace calcium and magnesium) and bowel toxins which prevent the absorption of nutrients.
- Skin aging is a result of deficiencies of collagen builders such as estrogen, DHEA, growth hormone, thyroid, Vitamin C, Vitamin E, amino-peptides and others. Almost all skin cells are maintained by a combination of hormones and nutrients. Thus, interventions on the outside must be accompanied by ones to correct the inside.

So, whether we aim to cure or prevent a symptom or a disease, the basic 5 areas must be addressed: establish a healthy, enabling mind, correct deficiencies (of hormones and nutrients), remove toxicities and get the body pain-free and strong. By reestablishing this balance we achieve optimal cellular function, so the cells of the body can best do what they do- keep us healthy.

Restoring Hormones

We age because our hormones decline, not the other way around. In women and men, hormone imbalances occur from age 30 onwards. By age 50, we are at approximately 50% of hormone function for estrogen, progesterone, testosterone, thyroid, DHEA, melatonin and growth hormone. Of course, a healthy lifestyle plays an important role in optimizing cellular function. Of course genes play a role; however at some point our organs will not produce hormones even with the healthiest lifestyle and the best genes.

Symptoms are one reason that people restore hormones; but the more compelling reason is the potential to prevent degenerative disease, since symptoms can be handled by a variety of other ways. Studies show that every brain cell in the body has a receptor for thyroid, estrogen, progesterone and testosterone, as does every

heart cell, every nerve cell, every bone cell, every vascular cell and every skin cell. With that, it becomes clear that as hormone levels decline, so will the stimulation to these cells. As stimulation declines, the cells degenerate leading to a myriad of symptoms (such as sexual decline, fatigue, anxiety, mood swings, weight gain, insomnia, cognitive decline), but more importantly degenerative diseases (such as heart disease, cognitive disease, and osteoporosis). Preservation depends on restoration of physiologic hormone levels.

In women, one of the first hormones to decline is progesterone around age 35. This produces a symptoms such as anxiety, panic attacks, lighter sleep, PMS, mood swings, fibroids, breast and ovarian cysts, heavier or irregular bleeding and weight gain. Progesterone is also responsible for bone building, thus women start to lose bone around age 35. Some women even have hot flashes and lower sex drive with declining progesterone.

In women, estrogen levels begin to decline and become imbalanced around age 45 and eventually wane altogether at age 51, the time of official menopause. Changing estrogen levels produce hot flashes, skin and vaginal dryness, recurrent urinary infections, urine incontinence, bone loss and cognitive decline.

Risk in women? When women consider hormone replacement the looming question is about the risks, especially of breast cancer, strokes and heart attacks. On review, women are the most protected during their 30's when they have the highest hormone levels. It is only after menopause that women have increased risk of stroke, heart attack and breast cancer. Data suggests that it is hormone imbalances that contribute to breast cancer. We know that, most breast cancers occur after menopause; precisely at the time when the ovaries stop producing the normal balance of hormones.

Why? First, progesterone, which prevents breast cell division, declines from the late 30's. Second, approximately 10 years later comes an imbalance of the estrogens. Estriol (E3) , which is breast and clot protective, decreases from 80% to 10%. Estrone (E1), which is breast and clot stimulating, goes up from 10% to 80%. The increased E1 is undesirable as E1 is converted to forms of estrogen (i.e. 16-OH E1) which are mutagenic and carcinogenic to the breast. So, restoration of protective hormone levels needs to be considered a possible preventative step against breast cancer.

Large studies so far have used, synthetic, hormones (not identical to human hormones) with a ratio of estrogen weighted towards E1 like the large Women's Health Initiative (WHI) study published in 2002, which was followed by much confusion. Reanalysis of this study and many others has eventually led to the following three conclusions on hormone restoration in women.

1) When started early, hormones are protective on the heart and brain.

2) “Progestins” have been shown to increase clots and breast cancer in 5 trials compared with natural “progesterone” which is associated with protection.

3) Bio-identical Estradiol (E2) delivered through the skin is cardioprotective, as opposed to E1, delivered through the mouth (i.e. Oral Premarinâ„¢ used in WHI).

So, when restoring hormones, we aim to use protective forms and delivery routes.

Testosterone declines in men and women from the late 30's onwards producing loss of desire for sex, joint and bone pain, muscle weakness, loss of confidence, moodiness, depression, anxiety, muscle loss and fat gain. Testosterone restoration not only addresses these symptoms; but studies support a protective role for testosterone against heart disease, cognitive decline and bone loss.

Risk in men? Traditionally testosterone restoration was thought to be associated with heart attacks and prostate cancer. If this were the case, men should have heart attacks and prostate cancer when the testosterone levels are the highest in the 20's instead of when they are the lowest after age 50. In fact, the New England Journal of Medicine finally analyzed this in 2004 and published their conclusion that it is low testosterone and high estrogen, which is associated with prostate cancer. The cardiology literature has since shown that men who maintain testosterone levels in the upper ranges are lower risk of cardiac and neurologic events.

Thyroid; how many people do you know who have “normal” thyroid labs, but many of the classic thyroid symptoms: fatigue, mental slowness, depression, weight gain, dry skin, constipation, feeling cold, hair loss, swelling of ankles, palpitations. Thyroid hormone and function eventually decline in everyone due to both low thyroid production and also low thyroid function at the receptor site. Sometimes lab values may be “normal” and yet not “optimal”. They can also be “optimal” but not “functional” because of deficiencies in ferritin, zinc, selenium, iodine or any cofactor needed to activate thyroid.

In the early 40's, insulin generally goes up causing some degree of insulin resistance in everyone. With this comes weight gain in insulin controlled areas (lower abdomen, thighs, under arms, under chin), as areas of muscle start to become areas of fat. This weight is stubborn due to the powerful hormone insulin directing the body to store all food as fat (i.e. even lettuce) and not let it go. This stubborn weight needs more than exercise and calorie reduction to resolve. In this pre-diabetic state, cardiac risk is higher. Glucose and insulin swing high and low, producing fat storage when high and hypoglycemic symptoms (i.e. sugar cravings, severe sleepiness, dizziness, headache) when low. This metabolic imbalance is effectively addressed by hormonal and nutritional restoration along with clearance of toxins from the bowel and liver.

Other hormones that decline include:

- DHEA, which enhances strength, sexual energy and immunity,
- Melatonin, known for its effects on sleep, however it is actually one of the most powerful anti-cancer hormones due to its role in activating natural killer cells,
- Pregnenolone, most well known for effects on memory and concentration and
- Growth hormone , with the role of maintaining connective tissue (i.e. joints, bone, muscle, cartilage, fat, skin), body composition and preventing frailty.

Tip 1: Use only the forms of hormones, which are exactly identical to the body's molecular structure (i.e. bio-identical hormones)

Tip 2: Hormone replacement should always be accompanied by the nutrients that activate the hormone receptor and removal of toxins that may interfere with the

activity of the nutrients or hormones. In addition, stimulation of the energetic pathways using homeopathy and acupuncture permits hormones to act optimally.

Tip 3: Hormone function is more important than a hormone level. So, even though your thyroid hormone may measure normal, you may not have optimal thyroid function.

Tip 4: To achieve optimal function of hormones it is necessary to use a little bit of each deficient hormone, since they activate each other, instead of a whopping dose of one like DHEA, with hopes that it converts to the others.

Tip 5: There is no magic pill to balance Cortisol and high Insulin. Therefore, these hormones require attention to stress reduction, adrenal support, detoxification, lifestyle changes and insulin support.

Restoring nutrients

Although, we in the U.S. are daily bombarded by the concepts of anti-oxidants, “bad carbs”, “good carbs”, transfats, good fats, low fat; we are as a nation mineral and vitamin deficient, according to current Nutrition Council data. The leaching of the soil and prolonged storage practices has produced a state of nutrient depletion in our food supply.

Every cell reaction, whether to activate a brain chemical, produce energy or to break down fat and build muscle, needs a vitamin or mineral to proceed. Every cell reaction produces damaging free radicals, which requires anti-oxidants to neutralize them. Every hormone needs a vitamin and mineral to activate its receptor. As an example molecular data show that:

- thyroid hormone needs zinc, selenium and iodine to be activated. Thyroid function needs a Vitamin D 25-OH level of greater than 55 and a ferritin level of greater than 90 ng/mL.
- Insulin needs chromium, vanadium, magnesium and Vitamin B3 to be active.
- And estrogen needs B vitamins, iodine and cobalt to be active.

We can improve our food-based nutrition by eating more vegetables (50% of intake), eating organic produce (which increases nutrients by 30-40%), increasing good fats (i.e. nuts, salmon, avacado, olive oil), eating fresh and flash-frozen vegetables and avoiding preservatives, processed food (in boxes and cans), simple sugars and bad fats (fried food, hydrogenated oils); but even then we can not get the nutrients needed to activate hormones, energy cycles, brain chemistries and other pathways through food alone. In fact the American Medical Association has now recommended that we take a multi-vitamin/ mineral to “prevent chronic disease”. This is the premise for supplementing nutrients through superfoods (i.e. green food supplements, phytonectars, bee pollen, spirulina, chlorella, berries, acai, mangosteen, gogi, noni) and formulated products.

Tip 6: There are good tests covered by insurance to analyze nutritional and anti-oxidant status. These help take the guesswork out of which nutritional supplements are needed. Always evaluate Vitamin D 25-OH, ferritin, iodine, B-12, folate.

Tip 7: The first place to look to explain nutrient deficiency is lack of proper absorption caused by bowel toxins and not enough good bowel bacteria.

Tip 8: Supplements should be of high quality without fillers, binders, dyes and impurities (i.e. listed as “other ingredients”).

Tip 9: Oral supplements should be taken in divided doses, at least 2 times a day, because the intestines can not absorb the entire days' nutritional needs at one time. If taken at one time, the intestines absorb only about 30% while 70% is lost. With smaller, multiple doses the body gets nutrition the way it is meant to and absorption improves.

Tip 10: Many people are B-12 deficient due to lack of intrinsic factor, which is needed for B-12 absorption. B-12 levels should be bumped initially with 8 weekly injections.

Tip 11: The ratio of each meal should aim towards 50% vegetables, 25% lean protein and 25% complex carbohydrates.

Tip 12: Some of the best anti-oxidants include superfoods such as spirulina, chlorella, berries, clove oil and a variety of colorful vegetables such as green leafy, beets, carrots, squash and eggplant. Red wine and dark chocolate (or cocoa) in moderation also are excellent sources. Some of the best “good fats” come from walnuts, almonds, fresh ground flaxseed and (non-farmed) salmon.

Tip 13: The best strategy is to use a range of healthy sources instead of to overindulge in any one healthy food source (i.e. soy).

Removing Toxins

We are exposed to 50 times the level of toxins compared to most other developed countries, through water, air, industry, computers, cell phones, preservatives, plastics and fumes. These toxins reside in the bowel, the liver and the fat tissues especially. Toxins impair all chemical reactions in the body. As an example:

- Bowel toxins like Candida or other bacterial overgrowth impair absorption and production of nutrients.
- Acidity from shallow breathe, lack of vegetables, and inflammation causes slowing of chemical reactions in the body, which proceed optimally at pH 7.0 and above.
- Electromagnetic radiation (EMF) from cell phones, computers, cordless phone bases, and WiFi zones are now known to have a real effects on sperm function, brain waves, thyroid function and immunity.
- Liver toxins (i.e. Tylenol, prescription drugs, alcohol, fuel fumes) impair the detoxification process, which occurs in the liver.

- Viruses, fungi and parasites are present everywhere and accumulate in the body.
- Heavy metals diminish neurological function and bone among other things.
- Toxins impair the absorption and utilization of nutrients and hormones. This is the premise for regular bowel, liver and tissue detoxification and specific detoxification as needed, for example if heavy metals or parasites are identified.

Tip 14: First, avoid toxins such as chlorinated water, processed foods, plastic water bottles and food containers, pesticides, EMF, gas fumes and medications.

Tip 15: Seasonal bowel cleanses with vegetables and supplements containing probiotics (good bacteria), enzymes and fiber are a great way of increasing bowel absorption.

Tip 16: There are accurate tests to identify specific toxins including salivary pH testing, urine and stool testing, heavy metal testing and live blood observation.

Balancing the mind and the body

In the entire restorative approach, the most powerful interventions are those targeting mind and body balance. Just look at the physical strength of a middle-aged person who has practiced Tai-Chi or Marshall Arts and you will question our Western concept of when in life we are at our strongest. The Far East embraces the idea that it is indeed the last half of life in which we have the potential to be the strongest. After marriage, after the child bearing, after child rearing and worrying about relatively unimportant things, we are able to focus our energy on the mind, the body and the spirit if we so choose. A mounting body of scientific evidence supports the powerful effect of the mind on the bodily functions of repair, maintenance and prevention of age-related disease. Every disease has been shown to be associated with stress in the mind in some way. Every bodily process is affected by not only the state of the mind, but even the energy produced by mental “intention”, which can produce change at a cellular level. So, mind and body must be addressed actively for optimal health.

Tip 17: Make yourself the center of your own universe. Set your intention to achieve health and peace in all you do. Take care of yourself first, honor your own needs first and then only can you be strong enough to take care of others.

Tip 18: Strengthen the body with Yoga, Tai-Chi, Qi-Gong, regular exercise with breathing, which has been shown to cut down cancer, heart disease and cognitive decline by over 30%. Just try it.

Tip 19: Indulge in regular weekly massage and hydrotherapy with Epsom salts to rebalance the blood flow to all organs. The strong therapeutic benefits of these

practices have been well established by the ancient Romans, Greeks, Russians and people of the Far-East.

Tip 20: Practice conscious breathing (breathe awareness) 5-10 minutes a few times a day

So, close your eyes. Take a deep breathe. In fact, take 10 deep, slow, easy breaths while relaxing all muscles one at a time. Congratulations! You have just extended your healthy life.

Conclusion

With the knowledge that we will live longer than those before us, comes the quest to live better than those before us. Will we be in a wheel chair with scarce recollection of our past? Or will we be walking, talking, energetic and happy? We stand on the threshold of a new paradigm, for the first time we can apply advanced technologies for very early detection, prevention and reversal of age-related disease. When we realize that only 4% of breast cancer is accounted for by the breast cancer genes and that less than 50% of heart attacks occur in those with high cholesterol, it becomes crystal clear that these conditions are the result of preventable imbalances in hormones, nutrients, toxins, the mind and the body. When corrected, the reality is that the body returns to its optimal functional state. So, whether you call it “anti-aging” or “regenerative” or “restorative” or “functional”; this is evidence-based medicine. It is no myth.

Recommended Reading

General

- 121 ways to live to 121 Years and More by Dr. Ron Klatz and Dr. Robert Goldman, Basic Health Publications, 2007
- The Anti-Aging Revolution by Dr. Ron Klatz and Dr. Robert Goldman, Basic Health Publications, 2007

Hormones

- The Sexy Years by Suzanne Somers, Random House, 2004
- Ageless by Suzanne Somers, Crown Publishers, 2006
- The Testosterone Syndrome By Dr. Eugene Shippen, 2001
- The Andropause Mystery: Unraveling Truths About the Male Menopause
- by Robert S. Tan, AMRED Publishing, January 2001
- The Natural Hormone Makeover by Dr. Phuli Cohan, Wiley 2008
- The Natural Superwoman by Dr. Uzzi Reiss, Penguin, 200
- Natural Hormone Balance for Women by Dr. Uzzi Reiss, Pocket Books, 2001

- Adrenal Fatigue by Dr. James Wilson, Smart Publications 2001
- Overcoming Thyroid Disorders by Dr. David Brownstein, Med Alt Press, 2002
- What Your Doctor May Not Tell You About Premenopause by Dr. John Lee, Time Warner Books, 1999
- The Better Brain Book by Dr. David Perlmutter, Riverhead Books, 2004

- The Edge Effect by Dr. Eric Braverman, 2005
- Hormone Replacement Therapy in Women: The Evidence by Dr. Sangeeta Pati published in European Journal of Anti-Aging Medicine, March 2006

Cardiovascular effects of medroxyprogesterone acetate and progesterone: case of mistaken identity? by Dr. R. Kent Hermsmeyer, et al, Nature Clinical Practice, www.Nature.com, June 2008

Novel Perspectives for Progesterone in Hormone Replacement Therapy, with Special Reference to the Nervous System by Dr. Michael Schumacher et al, published in Endocrine Reviews, July 2007, 28(4):387-439

Nutrition

Vitamin D Deficiency by Dr. Michael F. Holick, New England Journal of Medicine 2007;357:266-81

- Iodine: why you need it, why you can't live without it, Dr. David Brownstein, 2006

Detoxification

- The New Detox Diet by Elson Haas, Celestial Arts, 2004

Arthritis

- Overcoming Arthritis by Dr. David Brownstein,

Cardiology

- The Sinatra Solution: Metabolic Cardiology by Dr. Stephen T. Sinatra, Basic Health Publications 2008
- Reverse Heart Disease Now: Stop deadly plaque before it's too late by Dr. Stephen T. Sinatra, Wiley 2008

Cancer

- Keeping aBreast by Dr Kahlid Mahmud, Author House, 2005

Worldhealth.net Broadcasts Urgent Call to Doctors for Training to Meet the Demand for Bio-Identical Hormone Replacement Therapy (BHRT).

Interest in and awareness of Bio-identical Hormone Replacement Therapy has skyrocketed among the public in recent weeks following the airing of two back-to-back Oprah shows on the subject.

As renowned hormone restoration expert and lecturer Dr. Sangeeta Pati recently commented, "Oprah has provided the perfect platform for a real discussion on a hotly debated and critically important topic for aging America, â€˜Bio-identical Hormones'."

Bio-identical hormones are available in a wide variety of FDA-approved delivery systems, but special training on individualized treatment of patients suffering symptoms of hormonal imbalance is needed.

Such training is available through the A4M and its Board Certification and a variety of the Academy's workshops focusing on hormone restoration.

With the demand for BHRT now far exceeding the supply of trained doctors, A4M is issuing a call to action to the nation's doctors to commence board certification studies at the 17th World Congress on Anti-Aging and Regenerative Medicine this spring in Orlando, Florida.

Patrick Savage, president of BodyLogicMD, an organization that helps patients seeking BHRT find qualified doctors has said, "We are faced with a great problem. Before Oprah, our doctors were scheduling appointments 4-5 weeks out, post Oprah, many of the physicians we work with only have open appointments 9-12 weeks out. We are filling our doctors' schedules with patients at a faster pace than they can keep up with".

As the general public ages and becomes more aware of the differences between E1 type estrogen that has been associated in health risks for women in clinical studies, and Bio-identical E2 and E3 estrogen which has been shown to actually have protective effects, the demand for such treatment will only grow.

For Doctors interested in boosting their practice, the opportunities in this growing field of medicine are significant.

Those interested in learning more about the A4M, bio-identical hormone replacement and the upcoming 17th World Congress on Anti-Aging and Regenerative Medicine are encouraged to contact A4M by calling, 1 (888)-997-0112.

A4M announces special Hormone Replacement Workshop at the 17th World Congress on Anti-Aging Medicine.

"Putting It All Together: The Nuts and Bolts of Hormone Restoration in Men and Women" will be held in Orlando, Florida on April 23, 2009 in conjunction with the upcoming World Congress on Anti-Aging Medicine.

"With a basic theoretical understanding of hormone restoration comes the challenge of putting it all together in practice," says Sangeeta Pati, M.D., the workshop presenter. "This program teaches clinicians how to restore optimal hormonal balance through the introduction of hormones & nutrients, removing toxicities & rebalancing the mind & the body."

The program will cover the protocols to measure & restore each hormone. Practical case applications will be the main modality of illustrating the use of the protocols.

The learning objectives are as follows:

1. Learn how to interpret laboratory tests (hormones, nutrients, toxicities) & prescribe therapy for men and women from ages 13-90, based on the individual's symptoms, examination, & lab results as regards:

    a) the full array of hormones

    b) nutritional supplements

    c) removal of toxicities

    d) balancing the mind, balancing the body

2. Practical tips on establishing a hormone restoration practice (fees, marketing).

The workshop will be held during the A4M's World Congress on Anti Aging Medicine. Attendees may register for the workshop alone, or take advantage of the wealth of learning and networking opportunities available at the full conference. More information is available by visiting http://www.anti-agingevents.com/orlando.

About Dr. Pati:

Sangeeta Pati, MD is an obstetrician/gynecologist specializing in natural hormone replacement, anti-aging andholistic, preventative medicine.

Dr. Pati practiced obstetrics-gynecology in the Washington, D.C. area for 14 years before opening holistic SaJune Medical Center in Orlando, Florida. Dr. Pati helps each patient develop an aggressive preventative plan to restore optimal balance of hormones, nutrients while removing toxins.

Dr. Pati graduated at the top of her medical class at the University Of Maryland School Of Medicine, Baltimore, and served a residency at Georgetown University School of Medicine, Washington, D.C. She has worked extensively in the U.S. and internationally as Medical Director for a 350-employee non-profit organization, Engenderhealth. Dr. Pati is renowned in her field, having authored numerous scientific articles and addressed audiences worldwide.

Growth hormones can prevent loss of muscle mass following bariatric surgery

Gastric banding and other weight loss surgery techniques can help reduce body weight and subsequent obesity-related diseases such as diabetes. However, the rapid and sustained weight loss associated with these procedures can cause complications. Among these is the risk of losing lean body and skeletal muscle mass.

The study looked at whether treating patients with growth hormones could prevent or reduce such losses. Specifically, Dr. Silvia Savastano, M.D., Ph.D., researcher at University Federico II of Naples in Italy, and her colleagues studied women who, after having undergone laparoscopic-adjustable silicone gastric banding surgery, were diagnosed with growth hormone deficiency. One group of women received the growth hormone, while a second participated in the same diet and exercise regimen but were not given the hormone. Six months later, the researchers determined that those women receiving the growth hormone showed a substantial decrease in fat mass, as well as an increase in muscle mass.

"Besides its more commonly known effect on linear growth during childhood, growth hormone benefits body composition throughout life by increasing muscle mass and reducing fat mass," says Dr. Savastano, who was lead author of the study. "The results of our study show that the use of short-term treatment with growth hormone during a standardized program of low calorie diet and physical exercise is effective in reducing the loss of muscle mass and increasing the loss of fat mass after bariatric surgery." However, she cautions that "growth hormone treatment can be costly and a careful cost-benefit analysis that also takes into account the cost of commonly used therapy for management of morbidly obese patients is needed."

News Release: *Growth hormone treatment after weight loss surgery prevents loss of muscle mass* www.eurekalert.org February 3, 2009

Bio-Identical Hormones, Oprah and Some Important Facts

(We recently asked Sangeeta Pati, FACOG to reflect on the impact of Oprah's recent shows on HRT and give us her thoughts on bio-identical hormones. Dr. Patti will be presenting an important workshop addressing hormone therapy at the upcoming 17 th World Congress on Anti-Aging Medicine in Orlando this spring. At the conference doctors can also commence their Anti-Aging Board Certification training.)

Logic dictates that human identical, bio-identical products are the only acceptable products when we are restoring hormones or nutrients. Why use a product that *acts* like the real thing when you can get the real thing? Oprah's show brings to the forefront of discussion the real need to help women (and I should add men) who suffer from symptoms and the real need for people to continue their quest for better health and options.

I would like to comment on three issues that came up during Oprah's recent show on hormone replacement therapy:

1. Risk in women? When women consider hormone replacement, the looming question is about the risks, especially of breast cancer, strokes and heart attacks. On review, women are the most protected during their 30's when they have the highest (balanced) hormone levels. It is only after menopause that women have increased risk of stroke, heart attack and breast cancer. Data suggests that it is *hor mone imbalances* that contribute to breast cancer. We know that, most breast cancers occur after menopause; precisely at the time when the ovaries stop producing the normal balance of hormones.

Why? First, progesterone, which prevents breast cell division, declines beginning in one's late 30's. Second, approximately 10 years later comes an imbalance of the estrogens. Estriol (E3) , which is breast and clot protective, decreases from 80% to 10%. Estrone (E1), which is breast and clot stimulating, goes up from 10% to 80%. The increased E1 is undesirable as E1 is converted to forms of estrogen (i.e. 16-OH E1) which are carcinogenic to the breast. So, restoration of protective hormone levels needs to be considered a possible preventative step against breast cancer.

Large studies so far have used, synthetic, hormones (not identical to human hormones) with a ratio of estrogen weighted towards E1 like the large Women's Health Initiative (WHI) study published in 2002, which was followed by much confusion. Reanalysis of this study and many others has eventually led to the following three solid conclusions on hormone restoration in women.

1. When started within 10 years of menopause, hormones *are* protective to the heart and brain.
2. "Progestins" (not identical to bio-identical progesterone) have been shown to increase clots and breast cancer in 5 trials compared with natural "progesterone" which is associated with protection.
3. Bio-identical Estradiol (E2) delivered through the skin has been shown to decrease clots and risk of stroke and heart attacks, as opposed to E1, delivered through the mouth (i.e. Oral Premarin™ used in WHI) which increases clot heart attack and stroke risk because of the first pass through the liver which makes clotting factors.

So, when restoring hormones, we aim to use protective forms (E2, E3) and protective delivery routes (transdermal). We aim for protective levels for the heart, brain, bone, skin and organs by measuring levels.

2. *Not enough long term studies on bio-identical hormones?* This was stated a few times during Oprah's show. First, nature gave us these hormones and when they are balanced in our 20's and 30's we are most protected. Second, the FDA has over 20 bio-identical hormone products approved and on the market such as Climara® patch, Vivelle® dot, Evamist® spray, and Prometrium® capsules (progesterone). Each one of these products has been studied extensively, enough to get FDA approval. There is a very good reason why pharmaceutical companies are currently busy developing new "bio-identical" hormone products at an increasing pace. They can not patent the hormone, since it is a natural product, however they patent the delivery systems (i.e patch, dot, spray, gel). We should ask ourselves why they are not patenting the "other" hormone products.

3. The compounding pharmacy. There is no need to be on one extreme end with the position that there is *no role for compounding* or on the other extreme end where there is *no role for the pharmaceutical*. At times one needs a 25 mg dose of progesterone, which is only available at the compounding pharmacy. At times one needs 100 mg of progesterone, which is available at CVS® and Walgreens®. At times one needs Estradiol at .05 mcg available as Climara patch at CVS and Walgreens. At times one needs a lower dose available compounded. I use both, depending on what suits the patient best.

When choosing a compounding pharmacy check credentials, certifications, quality checks, sterility processes and membership in PCCA and other national organizations that assess their quality standards and adherence to the principles of compounding medicine.

In conclusion:

With the knowledge that we will live longer than those before us, comes the quest to live better than those before us. Will we be in a wheel chair with scarce recollection of our past? Or will we be walking, talking, energetic and happy?

To learn more about Dr. Pati's upcoming workshop entitled, *Putting It All Together: The Nuts and Bolts of Hormone Restoration in Men and Women*, visit http://www.anti-agingevents.com/orlando.

About Dr. Pati:

Dr. Pati is a Georgetown University trained physician who practiced traditional and holistic medicine for fifteen years in the Washington D.C. area. She has practiced extensively in the U.S. and internationally including serving as Medical director for a 350-employee non-profit organization. Dr. Pati is multi-lingual and is renowned in her field having authored numerous scientific articles and addressed audiences both nationally and internationally. She is recognized by physicians internationally as a foremost authority in the field of Hormone Replacement Therapy. Dr. Pati holds board certifications from the American Board of Ob/Gyn and the American Board of Anti-Aging and Bioregenerative Medicine. She is currently Medical Director for

SaJune Medical Center in Orlando, Florida, which specializes in restoring optimal function through hormones, nutrients, detoxification and mind/body balance.

Rapid menopause can increase the risk of heart disease

A study conducted by the Los Angeles Atherosclerosis of 203 women between the ages of 45 and 60 determined that those who transitioned from being premenopausal to fully postmenopausal within three years had a greater buildup of fatty plaque in their carotid arteries. This placed them at an increased risk for a higher rate of "preclinical atherosclerosis" â€“ the narrowing of arteries due to thickening of their artery walls.

Of the 203 women, 52 were premenopausal, 20 were perimenopausal and 131 were postmenopausal. None had prior cardiac disease. The participants were first evaluated as they entered the study, then again at two 18-month intervals. Evaluations were not made using such subjective factors as hot flashes, but rather on carotid intimal-media thickness (cIMT) measurements and objective measures of menopausal status based on hormone levels and physiologic changes.

"We know that more fatty plaque accumulation predicts future heart attacks and strokes, but this is our first venture into this particular line of inquiry," says the study's principal investigator, Cardiologist C. Noel Bairey Merz, M.D., Director of the Women's Heart Center and the Preventive and Rehabilitative Cardiac Center at the Cedars-Sinai Heart Institute. "The findings suggest that we study this more definitively to possibly determine if women undergoing a more rapid menopause might benefit from early hormone replacement therapy," she adds.

Dr. Merz emphasizes that patients should not use the findings of the study to diagnose themselves. "Women will say they're perimenopausal because they're having hot flashes or sleep disturbances or some cycle irregularity, but those are all symptoms. We use a very specific code of definitions to assess hormones and whether or not the ovaries are cycling." News Release: *Is rapid transition through menopause linked to earlier onset of heart disease?* www.eurealert.org January 27, 2009

HRT can shrink the brain

New research suggests that some forms of hormone replacement therapy (HRT) can cause brain shrinkage in postmenopausal women.

Susan Resnick, PhD, of the National Institute on Aging in Baltimore, and colleagues took MRI brain scans of 1,400 women aged 71 to 89 one to four years after the end of the Women's Health Initiative Memory Study (WHIMS). Results showed that brain volume was 2.37 cubic centimeters lower in the frontal lobe and 0.10 cubic centimeters lower in the hippocampus â€“ both key areas of the brain involved in thinking and memory â€“ in women who had taken estrogen with or without progestin than in those who had taken a placebo. Loss of volume in the hippocampus is a known risk factor for dementia.

However, the results also showed that the effects of HRT on brain volume were more apparent in women who may have already been experiencing memory problems before they used HRT. “This suggests that estrogen may adversely affect thinking skills among women whose brains may already be beginning a neurodegenerative disease process,” said Dr Resnick.

Resnick SM, Espeland MA, Jaramillo SA, *et al*. Postmenopausal hormone therapy and regional brain volumes. The WHIMS-MRI Study. *Neurology* 2009;72:135-142.

News release: *Hormone Therapy Linked to Brain Shrinkage, But Not Lesions.* American Academy of Neurology. January 12th 2009.

HRT reduces risk of colorectal cancer

Study results suggest that hormone replacement therapy (HRT) that combines estrogen with progestin may dramatically reduce a women's risk of developing colorectal cancer.

Jill R Johnson and colleagues at University of Minnesota School of Public Health studied data from 56,733 postmenopausal women who participated in the Breast Cancer Detection Demonstration Project follow-up study. Results showed that use of any type of estrogen HRT was associated with an overall 17% reduced risk of colorectal cancer, with risk reduction climbing to 26% in those who had been taking estrogen for ten or more years.

However, results also showed that women who had ever used estrogen in combination with progestin â€“ the combination used in the Women's Health Initiative Study, which led to millions of women discontinuing HRT because of breast cancer fears â€“ had a 22% reduced risk of colorectal cancer. They then went on to find that women who had used progestin sequentially or for less than 15 days a month had a 36% reduced risk. Women who had used estrogen and progestin at least five years ago were found to have a highly significant 45% reduced risk of the disease.

Johnson JR, Lacey JV, Lazovichi D, *et al.* Menopausal Hormone Therapy and Risk of Colorectal Cancer. *Cancer Epidemiology Biomarkers & Prevention*. 209;18:196-203. doi:10.1158/1055-9965.EPI-08-0596
