Image Awareness
Wellness Institute
One Problem Many Doctors

1271 High Street, Auburn, CA 95603 • Phone (530) 823-7092
E-mail: Jim@imageawareness.com Web: www.ImageAwareness.com

September 2021 **Volume 17: Issue 3**

One Probelm Many Doctors

Modern medicine has been captured by the pharmaceutical model of disease which prefers to focus on the symptoms of a problem as unrelated diseases rather than targeting the root causes of unwellness.

This is similar to the old Indian parable of the blind men who sought to define an elephant. One man grabbed the trunk and concluded that an elephant is a snake. Another grabbed an ear and concluded that an elephant is like a fan. A third attached himself to a foot and determined that an elephant is a tree. A fourth pounded on the side of the elephant and concluded that it was a wall. A fifth blind man grabbed the tail and thought the elephant was a rope.

Men experience a slow onset menopause similar to what women experience. A woman's menopause is easily identified by the ceasing of mentruation. A male loses 1-2% of his testosterone production each year as he ages, a much more gradual process.

The male loss of testosterone and increasing production of estrogen with age is associated with many symptoms which are generally treated as separate diseases by physicians. Symptoms include metabolic syndrome, high blood sugars, high blood fats, erectile dysfunction, central adiposity (fat around the middle), atherosclerosis, benign prostatic hypertrophy, prostate cancer, and atrial fibrillation.

One of the problems of modern medicine is to treat all the symptoms of low testosterone or upset testosterone/estrogen ratios with medications without ever addressing the underlying physiological problem.

Let us briefly consider some of the problems associated with this natural decline and rise in estrogen levels as men age. This is only a brief overview of what could be a lengthy book.

Reference:

Wright, Jonathan, and Lenard, Lane, *Maximize Your Vitality & Potency*, Petaluma, CA: Smart Publications, 1999, 122-126.

https://commons.wikimedia.org/wiki/File:Blind_monks_examining_an_elephant.jpg

ED: Erectile Disorder

Erectile disorder is one of the most obvious signs of decreasing levels of testosterone yet it is more often treated with pharmaceutical drugs by an endocrinologist or urologist.

A review article on ED summarized the importance of testosterone as follows: "Recent studies have demonstrated a close relationship between testosterone and ED and suggest that testosterone therapy may be a valuable option for an increasing number of affected men. European guidelines recommend that all men presenting with ED should have their testosterone concentrations measured."

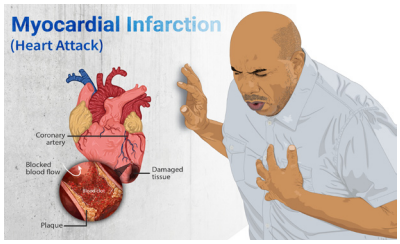
Drugs used to treat ED can include PDE5 inhibitors, TriMix, Edex or Caverject. Viagra and cialis are commonly prescribed. Optimal hormonal function is necessary for the popular PDE5 inhibitors to function effectively as a summary reports, "Furthermore, it has been demonstrated that the full therapeutic potential of PDE5 inhibitors will only become manifest in a eugonadal state."

Reference:

Yassin, Aksam, and Saad, Farid, Testosterone and erectile dysfunction, *Journal of Andrology*, November/December 2008; 29(6):593-604.

Angina and Poor Circulation

In 1939 Edward Edwards, M.D., noted that castrated men developed poor circulation that could be improved by testosterone injections. In the 1940's Maurice Lester, M.D., successfully treated angina pectoris with testosterone. The only other treatment at the time was nitroglycerin. Of 100 patients 51 showed marked improvement and



40 showed moderate improvement. The improvement came gradually over a period of a couple of months.

Angina is commonly treated with nitrates, calcium channel blockers, beta-blockers, blood thinners, statins, or surgery (stenting, balloon angioplasty, and coronary artery bypass graft surgery).

REFERENCES:

Wright, Jonathan, and Lenard, Lane, *Maximize Your Vitality & Potency*, Petaluma, CA: Smart Publications, 1999, 122-126.

Edwards, E., et al., Testosterone propionate as a therapeutic in patients with organic disease of the peripheral vessels, *N Engl J Med*., 1939;220:865.

Lesser, M., Testosterone propionate therapy in one hundred cases of angina pectoris, *J Clin Endocrinol*., 1946;6:549-557.

https://upload.wikimedia.org/wikipedia/commons/7/7e/Depiction_of_a_person_suffering_from_a_heart_attack_%28Myocardial_Infarction%29.png

Blood Fats and Clots

In 1994 Gerald Phillips suggested that testosterone decreased the risk of elevated blood fats and the risk of blood clots reducing the risk of atherosclerosis. He noted that too much estrogen and too little testosterone in men was associated with heart attacks in men.

Testosterone was positively associated with HDL or good cholesterol which lowers risk of heart disease, while adequate testosterone levels appeared to reduce a number of factors associated with blood clots and harmful blood fats and blood sugar abnormalities.

REFERENCE:

Phillips, Gerald B., et al., The association of hypotestosteronemia with coronary artery disease in men, *Arterioscler Thromb*. 1994;14:701-706.

Metabolic Syndrome

In 1998 Gerald Reaven presented the concept of Syndrome X or what has come to be known as Metabolic Syndrome. This combines a combination of symptoms which are often treated as separate disorders into a cluster of associated symptoms.

Metabolic Syndrome consists of resistance to the proper functioning of insulin leading to elevated blood sugars, glucose intolerance, elevated insulin levels, increased levels of very low density lipoproteins (triglycerides, decreased good cholesterol (HDL) and high blood pressure. Weight gain about the waist or central adiposity is a marker of metabolic syndrome.

Glenn Cunningham writing in 2015 notes that weight loss is rare and difficult for those with this cluster of symptoms. He notes, however, that recent studies have shown that testosterone treatment can trigger "dramatic changes in weight, waist circumference, insulin sensitivity, hemoglobin A1c levels and improvments in each of the components of the metabolic syndrome."

Cunningham notes that some observational studies have suggested that testosterone replacement therapy increases risk of heart problems, but that the FDA has reviewed these reports and found them to be deeply flawed.

REFERENCE:

Cunningham, Glen R., Testosterone and metabolic syndrome, *Asian Journal of Andrology*, 2015;17:192-196.

Atrial Fibrillation

Testosterone is known to increase muscle size and strength. It should not be a surprise that it might improve the functioning of the heart when present in proper quantities.

Low levels of blood testosterone as well as use of anabolic steroids are associated with an increased risk of atrial fibrillation. Sharma and associates found that normalization of testosterone levels after treatment was associated with a significantly decreased risk of developing atrial fibrillation.

REFERENCES:

Sharma, Rishi, et al., Normalization of testosterone levels after testosterone replacement therapy is associated with decreased incidence of atrial fibrillation, *Journal of the American Heart Association*, May 9, 2017;6(5).

A Source of Problems

Xenoestrogens are environmental chemicals which can occupy the receptor sites for hormones produced within the body. These have the ability to upset the natural balance of testosterone to estrogen in the bodies of men and women.

A variety of male health problems related to sex hormones have dramatically increased in frequency with the chemicalization of our world after World War II. These same problems are also observed in wildlife. The most likely culprit are chemicals with estrogenic properties. The evidence suggests that these substances begin to create problems when the fetus is still in the womb.

The effects of xenoestrogens can be profound. One study found that bisphenol A, a common pollutant, interfered with the formation of brain synapses in male rats at levels considered safe by the EPA.

Exposing oneself to bisphenol A and other xenoestrogens has the ability to reduce testosterone and seriously upset the balance between testosterone and estrogens in the body.

Hormone disrupting chemicals are commonly found in pesticides and herbicides, cosmetic products, plastics, food dyes, and pharmaceuticals like birth control pills. They end up in foods and beverages and ultimately in our bodies.

REFERENCES:

Dechaud, Henri, et al., Xenoestrogen interaction with human sex hormone-binding globulin (hSHBG), *Steroids*, May 1999, 64(5):328-334.

Toppari, Jorma, et al., Male Reproductive Health

and Environmental Xenoestrogens, *Environmental Health Perspectives,* August 1996; 104(4):741-803.

Leranth, Csaba, et al., Bisphenol A prevents the synaptogenic response to testosterone in the brain of adult male rats, *Endocrinology*, March 1, 2008;149(3): 988–994.

Nakamura, Daichi, et al., Bisphenol A may cause testosterone reduction by adversely affecting both testis and pituitary systems similar to estradiol, *Toxicology Letters*, 2010;194:16–25.

https://commons.wikimedia.org/wiki/File:A_water_bottle.jpg

Nutritional Factors

A diet high in protein and fat increases testosterone levels in the male scrub-jay. The branched-chain amino acids (valine, leucine, isoleucine, and threonine) have been shown to increase testosterone levels after exercise in humans.

Saccharomyces cerevisiae is a baker's yeast that is a natural source of the B complex vitamins. Mannaa et al. reported that Saccharomyces cerevisiae increased testosterone levels in rats

References:

Schoech SJ, Bowman R, Reynolds SJ. Food supplementation and possible mechanisms underlying early breeding in the florida scrub-jay (Aphelocoma coerulescens). *Hormones and Behavior*. 2004; 46: 565-573.

Sharp, CPM, et al., Amino acid supplements and recovery from high-intensity resistance training. *Journal of Strength and Conditioning Research*, 2010; 24: 1125-1130.

Carli, G, et al., Changes in the exercise-induced hormone response to branched chain amino acid administration. *European Journal of Applied Physiology and Occupational Physiology*, 1992; 64: 272-277.

Mannaa F, Ahmed HH, Estefan SF, Sharaf HA, Eskander EF. Saccharomyces cerevisiae intervention for relieving flutamide-induced hepatotoxicity in male rats. *Die Pharmazie*. 2005; 60: 689-695.

Minerals

Selenium deficiency decreases testosterone levels in rats and supplementation increases levels. Selenium is also protective against toxic exposures (phthalates) that impact testosterone.

Phthalates have been called the everywhere chemicals because they are so widely used in industrial applications like food packaging and plastic manufacture.

Phthalates are weak endocrine disruptors and androgen blocking chemicals. This means that when absorbed into the body phthalates can either mimic or block female hormones, or in males, suppress the hormones involved in male sexual development.

Zinc is particularly important for testosterone production. Supplementation of bulls resulted in a dose related increase in testosterone production.

References:

Erkekoglu P, et al. Reproductive toxicity of di(2-ethylhexyl) phthalate in selenium supplemented and selenium-deficient rats. *Drug and Chemical Toxicology*. 2012; 34: 379-389.

Kumar N, et al.,. Effect of different levels and sources of zinc supplementation on quantitative and qualitative semen attributes and serum testosterone level in crossbred cattle (Bos indicus x Bos taurus) bulls. *Reproduction, Nutrition, Development*. 2007; 46: 663-675.

Arangasamy A, Venkata Krishnaiah M, Manohar N, Selvaraju S,

Guvvala PR, et al., Advancement of puberty and enhancement of seminal characteristics by supplementation of trace minerals to bucks. *Theriogenology*. 2018; 110: 182-191.

Aziz NM, et al.,. Antioxidant, antiinflammatory, and anti-apoptotic effects of zinc supplementation in testes of rats with experimentally induced diabetes. *Applied Physiology, Nutrition, and Metabolism*. 2019; 43: 1010-1018.

Antioxidants

The combination of vitamins C and E helps prevent toxin induced declines in testosterone. The combined nutrients have been shown to benefit testosterone production in a number of animal studies.

CoQ10 increased testosterone and improved testicular function in aged roosters. This nutrient is an antioxidant and plays a key role in energy production in the mitochondria.

Resveratrol is a polyphenol compound which has been shown to increase testosterone in rats. Other polyphenols and flavonoids may have similar benefits.

References:

Sönmez, M, Türk G, Yüce A. The effect of ascorbic acid supplementation on sperm quality, lipid peroxidation and testosterone levels of male wistar rats. T*heriogenology*, 2005; 63: 2063-2072.

Amer, M.A. Modulation of age-related biochemical changes and oxidative stress by vitamin c and glutathione supplementation in old rats. A*nnals of Nutrition and Metabolism*, 2003; 46: 165-168.

Sharideh, H, et al., Use of supplemental dietary coenzyme q10 to improve testicular function and fertilization capacity in aged broiler breeder roosters. *Theriogenology*. 2020; 142: 355-362.

El-Khadragy, M, et al., Impact of coenzyme Q10 administration on lead acetate-induced testicular damage in rats. *Oxidative Medicine and Cellular Longevity*. 2020; 2020: 1-12.

Banerjee, B, et al., Protective Effect of Resveratrol on Benzo(a)Pyrene Induced Dysfunctions of Steroidogenesis and Steroidogenic Acute Regulatory Gene Expression in Leydig Cells. *Frontiers in Endocrinology*. 2019; 10: 272.

[139] Guo, Y, et al., Effects of resveratrol on reducing spermatogenic dysfunction caused by high-intensity exercise. *Reproductive Biology and Endocrinology*. 2019; 17: 42.

Omega-3 Fats

Omega-3 fatty acids have been shown to benefit testosterone and reproductive efficiency in a large number of animal studies.

References:

Safari, Asl R, et al., Improvements in semen quality, sperm fatty acids, and reproductive performance in aged Ross breeder roosters fed a diet supplemented with a moderate ratio of n-3: n-6 fatty acids. *Poultry Science*. 2018; 97: 4113-4121.

Rossi, G, et al., Sexual maturity and fertility-related measures in young Nellore bulls receiving long-term dietary supplementation with rumen-protected polyunsaturated fatty acids. T*heriogenology*. 2019; 139.

Tran, L.V, et al., Effect of omega-3 and omega-6 polyunsaturated fatty acid enriched diet on plasma IFG-1 and testosterone concentration, puberty and semen quality in male buffalo. *Animal Reproduction Science*. 2017; 173: 63-

https://commons.wikimedia.org/wiki/File:Lisa_Murkowski_with_salmon.jpg

IMAGE AWARENESS
WELLNESS INSTITUTE
1271 HIGH STREET, AUBURN, CA 95603
PHONE (530) 823-7092 ORDER LINE (800) 359-6091
E-MAIL: MAIL@IMAGEAWARENESS.COM
VISIT OUR WEBSITE! WWW.IMAGEAWARENESS.COM

POMEGRANATE

In animal studies with rats pomegranate fruit extract (PFE) has been shown to exert a number of beneficial effects upon the prostate and associated testosterone function.The highest level of supplementation with the fruit extract reduced the increase in prostate weight by 30.8% and the prostate weight/body weight ratio by 55%. The researchers concluded, "The current findings elucidate the effectiveness of PFE in preventing testosterone-induced BPH in rats. This could be attributed, at least partly, to its anti-oxidant, anti-inflammatory, and pro-apoptotic properties."

In another study pomegranate juice was shown to improve sperm quality in rats. The researchers concluded, "A significant decrease in malondialdehyde (MDA) level and marked increases in glutathione (GSH), glutathione peroxidase (GSH-Px) and catalase (CAT) activities, and vitamin C level were observed in rats treated with different doses of PJ (pomegranate juice). PJ consumption provided an increase in epididymal sperm concentration, sperm motility, spermatogenic cell density and diameter of seminiferous tubules and germinal cell layer thickness, and it decreased abnormal sperm rate when compared to the control group."

It appears that pomegranate phytonutrients may be beneficial in preventing abnormal development of the prostate, but also in promoting fertility.

Active research is being conducted on the anti-cancer properties of pomegranate. One study concluded, "Considerable data demonstrates the in vitro and in vivo efficacy of pomegranate against cancer growth and promotion; however, well-designed human clinical trials are necessary to validate the usefulness of these natural agents either alone or in combination with current therapy for the prevention and treatment of skin, breast, prostate, lung, and colon cancers."

REFERENCES:

Ammar, Amr E., et al., The effect of pomegranate fruite extract on testosterone induced BPH in rats, *The Prostate*, May 15, 2015;75(7):679-692.

Turk, Gaffari, et al,, Effects of pomegranate juice consumption on sperm quality, spermatogenic cell density, antioxidant activity and testosterone level in male rats, *Clinical Nutritio*n, 2008; 27, 289-296.

Sharma, Pooja, et al., Pomegranate for prevention and treatment of cancer:An update, *Molecules* 2017, 22, 177; doi:10.3390/molecules22010177.

Kataoka, Tomoya, et al., A Review of foods and food supplements increasing testosterone levels, *Journal of Men's Health*, 2021; 17(2): 4-14.

https://commons.wikimedia.org/wiki/File:Pomegranate02_edit.jpg

CONCLUSION

There are medical approaches to normalizing testosterone levels in aging males, but the benefits of the many nutrients discussed here should not be overlooked. Nature often knows best how to age safely.

WEB RESOURCE

www.imageawareness.com

DISCLAIMER

This publication contains the opinions and ideas of its author. It is intended to provide helpful and informative material on the subjects addressed in the publication. It is provided with the understanding that the author and publisher are not engaged in rendering medical, health, or any other kind of personal professional services in this newsletter. The reader should consult his or her medical, health or other competent professional before adopting any of the suggestions in this newsletter or drawing inferences from it.

The author and publisher specifically disclaim all responsibility for any liability, loss, or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of use and application of any of the contents of this newsletter.