

# ANDROPAUSE

## The male version of menopause

As the information on hormone replacement therapy (HRT) for women emerges from the dark ages into more enlightened times, the information on HRT for men remains essentially prehistoric. For women the onset of irregular menses accompanied by hot flashes, night sweats, insomnia and dramatically fluctuating moods undeniably herald the hormonal decline of menopause. Men, however, don't experience such an abrupt and unmistakable decline in their hormones. Lacking the bells and whistles of menopause, men often slip into old age oblivious to their more quiescent, yet equally significant, hormonal decline.

With the majority of all medical research and drug formulations geared toward the anatomy and biochemistry of men it is interesting that this critical health issue has been almost entirely overlooked. The entire idea of a hormonal diminution in men is so new and controversial it hasn't even been officially named. Many by default just refer to it as male menopause but the more apropos term andropause is quickly replacing it.

Andropause refers specifically to declining levels of a class steroid hormones called androgens. Like the estrogens, which are an ensemble feminizing hormones, androgens are a medley masculinizing hormones. Of the androgens, testosterone is unquestionably the most notorious.

Testosterone is also an anabolic steroid hormone which means it promotes the building of bone and muscle. It also positively impacts ones mood, energy level and sense of well being. It is most renowned for its powerful effects upon libido and virility. DHEA and androstenedione are also androgens but are less potent ones.

Testosterone begins to decline in men usually sometime in their forties or fifties. Symptoms of testosterone deficiency fatigue, depression, apathy, diminished mental acuity, loss of sexual function and desire, decreasing muscle mass, increasing fat, loss of ones resilience, flexibility and endurance. Increasing joint aches, muscle pains, stiffness and risk of injury increase.

Stress, nutritional deficiencies, disturbed or deficient sleep and obesity are some of the most prevalent factors which will hasten testosterone's decline. Excessive alcohol and numerous pharmaceuticals negatively impact testosterone levels as well. Xenoestrogens and the indiscriminate use of hormones to fatten and mature livestock are probably the most detrimental of all.

Xenoestrogens, which are manmade chemicals with potent estrogenic properties, are endocrine disrupters which negatively impact both the levels and the functions of numerous hormones including testosterone. They are deleterious to almost every creature on earth. Many pesticides are xenoestrogens. Numerous plastics slowly release these substances into the environment.

Symptoms of testosterone deficiency are numerous and include fatigue, depression, apathy, diminished mental acuity, loss of sexual function and desire, decreasing muscle mass and increasing fat. Low testosterone also results in a loss of ones resilience, flexibility and endurance. As testosterone declines joint aches, muscle pains, stiffness and risk of injury increase.

Many opponents of HRT for both men and women argue hormonal decline is just a natural part aging and shouldn't be treated. If that were a valid argument, we shouldn't treat any of the diseases of aging like heart disease, arthritis, hypertension and Alzheimer's. What's interesting is that many of these diseases are being directly linked to a variety of hormonal deficiencies and imbalances.

A few carefully selected bioidentical hormones can potentially treat numerous diseases as well as provide a variety side benefits instead of side effects. Treating the plentiful branches of a few

fundamental imbalances with numerous pharmaceuticals clearly benefits someone else besides the patient.

Decades of using synthetic versions of testosterone in variety of inappropriate ways combined with some very faulty reasoning has generated a plethora of modern myths about the real thing. One such myth is that testosterone is very hard on the liver and quite dangerous. If this were true, our hospitals would be full of virile young men in their teens and early twenties as their testosterone peaks

All of testosterone's precursors which include cholesterol, progesterone, DHEA and androstenedione are all considered safe enough to be sold in stores. It's descendant's, the real estrogens, aren't considered hepatotoxic either. It is the synthetic steroid hormones, foreign to our bodies, which are injurious to the liver and have given all steroids such a bad reputation.

That men have a higher incidence of cardiovascular disease than women has been erroneously been blamed on testosterone. If testosterone were truly to blame then why do cardiac events happen with ever increasing frequency as hormone levels drop? Numerous studies show higher testosterone levels correlate with lower

Testosterone levels can be measured using blood, saliva or urine. Many labs, however, use only one references range which includes what is normal for men from 18 to 80. When a reference range this wide is used, younger men will be told their levels are normal when in fact they are well below normal for their age. Using labs which give age adjusted values will circumvent these type of problems.

Ideally we should all have our hormones checked when we're in our prime. Even with an age adjusted reference range we may be told our levels are normal, which does not necessarily mean they are optimal. If a man who has had hormone levels in the 90<sup>th</sup> percentile most of his life suddenly drops down to the 20<sup>th</sup> he will feel significantly less vital.

Antiquated methods of testosterone replacement usually involved getting injection, of some pseudo testosterone, every two weeks. Testosterone levels peak in the morning and ebb throughout the day. Using injections entirely disrupts this circadian rhythm. The results of such an imbalanced therapy often resulted in testicular atrophy, severe acne and mood swings. The term roid rage was used to describe the unpredictable and intense outbursts of anger this particular therapy frequently caused.

Fortunately bioidentical testosterone is available for those who need or want to replace what their bodies no longer produce. From conventional pharmacies one's choices are limited to either a gel or a patch both of which come only in two different strengths. Due to the enduring misconception testosterone harms the liver oral forms are not widely available. Compounding pharmacies offer far more flexibility in both the size of the dose and the method of delivery.

Next month's article will cover the choices compounding pharmacies provide. Herbal, nutritional and supplemental approaches to hormonal health will also be covered.

Last month's article was part I of II in a series about andropause, the male version of menopause. The article covered the signs and symptoms men may experience as their levels of testosterone dwindle. It also set out to exonerate testosterone as the culprit responsible for the liver damage caused by the use its synthetic cousins. It also challenged the illogical, but persistent myth, that testosterone causes heart disease.

When presented with the facts not the folly, few would doubt that testosterone is quintessential for men's health. It is also quite beneficial for women as well. What remains debatable is what defines optimal levels and what if anything should be done to achieve them. Since this field is in its infancy the number of different opinions you'll be offered will likely match the number of practitioners you consult.

Low testosterone levels can be the result of testicular failure or from the brain failing to send the signal to the testicles to make testosterone. Another pivotal but often entirely overlooked, piece of the

hormonal puzzle in men is estrogen. As men age more and more testosterone gets converted into the estrogens, estradiol and estrone. High levels of estrogens relative to testosterone will effectively neutralize the actions of testosterone. Testosterone to estrogen ratios should be least 8 to 1 and can be as high as 50 to 1.

The farther the ratio dips below 8 the more men will experience all the symptoms testosterone deficiency even if their testosterone levels are quite high. This is why thorough testing is imperative. Supplementing more testosterone in these cases will push estrogens even higher with increasingly unwanted results.

Estrogens stimulate reproductive tissues to proliferate. In men this may cause their prostate to swell causing urinary trouble and sometimes infection. It could also fan the flames of a smoldering cancer. Until recently a metabolite of testosterone called dihydrotestosterone (DHT) was given most of the blame for both of these problems.

Like the estrogens DHT is a metabolite of testosterone and increases with age as testosterone drops. Because men with prostate problems tend to have higher levels of DHT it was presumed to be the cause. It is also the presumed cause of male pattern baldness.

Several herbs contain substances which inhibit the enzymes responsible for converting testosterone into estrogens and dihydrotestosterone. Saw palmetto berries effectively down-regulates the production DHT without stopping it altogether. An extract of passion flowers called chrysin and the mineral zinc both inhibit the enzyme responsible for converting the androgens into estrogens. Additional substances in foods like broccoli and grapes have been shown to enhance the livers ability to efficiently clear the estrogens from the body.

Men over forty or of any age taking hormone replacement therapy(HRT) would be wise to use these herbs and foods on a regular basis. The dose of chrysin should be 500 to 1000mg per day. The recommended dose for saw palmetto berries is 300mg standardized to contain 85% fatty acids and sterols. Taking a high quality vitamin and mineral supplement would also be wise. Sufficient sleep, exercise and good nutrition are the fundamentals required for any therapeutic intervention to be successful.

If you suspect low testosterone might be contributing to your maladies have your levels checked. Since testosterone is such a fundamental factor for good health it is sometimes difficult to determine whether low levels are the cause or the result of another illness. The majority of the symptoms listed (see chart) have many potential causes. A comprehensive history and physical exam is, therefore, essential for an accurate diagnosis and efficacious intervention.

Whether you want to maintain the vigor and vitality you still possess or regain the vibrant health and virility .of your past, if your testosterone level has plummeted then HRT may prove worthwhile. With a return of a more optimal level one or more of your medial maladies may diminish or even disappear... of you decide hormone replacement therapy (HRT) is right for you make sure what you're prescribed is genuine

All of the steroid hormones used for HRT, with the exception of Premarin, are synthesized in a lab. Therefore they are, technically, not all natural. What distinguishes the genuine from the imitation hormones is that the real ones are exact replicas of the hormones found in humans. The imitations are variations on a theme and do not occur in nature. The best term to describe the authentic replicas is bio identical.

If the word testosterone doesn't appear anywhere on your prescription or an additional name has been tacked on to the word testosterone what you're getting is probably not bio identical. Fluoxymesterone and methyltestosterone and are two such examples. They are commercially available, respectively, under the brand names Android and Halotestin. Who would want to take a hormone called Android anyway, which Webster's defines as "a mobile robot with a human form"?

Unless your prescription is filled at a compounding pharmacy your options will essentially be a one size fits all. Bioidentical testosterone is available commercially as a gel or a patch both of which come in two different strengths. Compounding pharmacies, however, provide a near limitless number of different strategies to use for HRT.

Bio identical testosterone its precursors can be used in any combination you and your provider desire. There are also numerous methods to deliver it. Besides a patch or a gel it can be given in a capsule, a cream, a lozenge or suppository. Choosing an experienced practitioner can turn an overwhelming number of possibilities into a manageable program designed specifically for your individual needs.

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