Low Testosterone in Women

“Could I have low testosterone?”

Typically, testosterone deficiency (TD) has been viewed as a problem in men caused by a “male hormone”. While it has been long known as a medical fact that women do have testosterone at much lower levels, there has been little research until recent years as to the significance of this hormone, the role it plays in health, and the problems caused by abnormalities in testosterone levels. Fortunately, there has been a significant increase in the research in this area in recent years and an appreciation of the importance of healthy testosterone levels of women is now growing. Most testosterone in women is produced in either the ovaries or the adrenal glands, and with varying smaller amounts produced in adipose (fat) cells from con-version of other adrenal and ovarian hormones. While there is some testosterone present from birth, this level significantly increases at puberty and then decreases again in most women at menopause. While the decline in testosterone late in life has long been considered normal because it is common, it should be remembered that virtually every other such age related change in physiology that has been studied thoroughly has come to be seen as a threat to health, i.e. decreases in bone mass (osteoporosis), atherosclerosis (heart disease), decreases in thyroid function (hypothyroidism), etc. Finally, TD can occur in women at any time after puberty and while the cause of such deficiency is often unknown, many causes have been identified and relate to conditions and/or therapies that disrupt ovarian, adrenal, and/or pituitary function.

Therefore, patients belonging to any of the subgroups listed below may be at increased risk of TD and should consider screening for such:

- Surgical removal of the uterus, ovaries, and/or adrenal glands
- Radiation therapy affecting the brain, adrenal glands, or pelvic organs
- Treatment with chemotherapy
- Perimenopause and menopause
- Conditions associated with anorexia (marathon running, anorexia nervosa), etc
- Depression and/or treatment with antidepressants
- Treatment with oral and inhaled cortical steroids (i.e. for asthma, arthritis, or inflammatory bowel disease, etc.)
- Treatment with oral contra- ceptives or estrogen containing hormone replacement therapies
- Treatment with narcotic pain relievers

“Why should I be concerned?”

While more research is needed to completely delineate the adverse effects of low testosterone in women, the types of symptoms and health changes that have been observed by patients and noted in studies can best be understood by familiarizing yourself with the tissues that are known to be affected by testosterone. These include many areas in the central nervous system and brain, bone, breast tissue, the oil and hair follicle complex of the skin, adipose cells (fat), and genital
tissues. Further, some medical conditions have also been implicated in being associated with higher risk of testosterone deficiency. Therefore, adult and adolescent female patients with the below listed signs, symptoms and/or medical conditions should consider being screened for testosterone deficiency:

**Symptoms:**
- Decreased sexual thoughts and sex drive
- Diminished intensity and or frequency of orgasms
- Diminished muscle mass and tone with diminished response to exercise
- Increased fat to lean muscle ratio in body composition
- Diminished sense of well being and/or assertiveness
- Depressed mood
- Persistent, unexplained chronic fatigue
- Hot flashes, vaginal dryness, and/or sleep disturbance in women with adequate estrogen
- Decreased bone mineral density
- Problems of memory, attention, or mental acuity
- Diminished hair and/or nail health
- Sleep disturbance
- Anemia

The above symptoms occur in varying degrees in different patients, depending on a number of factors including the degree of TD. It is easy to understand the marked impact on quality of life that such changes can have.

**“What benefits could I receive from testosterone replacement therapy?”**

The possible benefits of testosterone replacement therapy (TRT) can be anticipated from the effects of TD noted above and include the following:
- Improved body composition with increased muscle mass and tone, bone mass, and decreased body fat
- Improved sexual function
- Improvement in mood, anxiety, and irritability
- Improved energy, motivation, and job performance
- Improved memory, cognition, and attentiveness
- Improvement in glucose and insulin metabolism
- Improved response to diet and exercise
- Improved cholesterol (lipids)
- Improved red blood cell count

**“What options for therapy are available?”**

There are various options available for TD currently including the following:
- Subcutaneous testosterone pellets placed every four to six months
- Daily oral testosterone capsules, tablets, or troches
- Daily transdermal gels
- Weekly intramuscular injections
While there remains a great need for additional comparative research trials examining their respective effectiveness and safety, based on current scientific data and clinical experience, I believe that the most optimal hormone therapy for men and women is that which most resembles the body's natural delivery. While therapy is always individualized to the needs and desires of the patient, current therapy of choice for most patients is subcutaneous pellets followed by transdermal gels and weekly intramuscular injections. The only currently available treatment option approved by the FDA is in the form of methyltestosterone in combination with a fixed dose of estrogen and approved for use as a component of postmenopausal hormone replacement therapy. I recommend oral testosterone therapies only in women seeking intermittent treatment for the relief of sexual complaints and/or those who cannot tolerate continuous testosterone replacement therapy. Finally, estrogen replacement is a component of testosterone replacement therapy in all women who do not have adequate estrogen levels except those who are breast cancer patients or at high risk for such.

“How do I get started?”

Schedule an initial consultation with my office staff which will include a thorough, appropriate history and examination followed by a plan of evaluation. This evaluation will include appropriate laboratory tests as well as other diagnostic tests depending on your clinical situation. You will need to provide the office staff with your previous medical records to insure that we do not unnecessarily repeat previously performed testing. While a more thorough discussion of the risk versus benefits of treatment will occur with your consultation, some patients would rather study the issue further before making an appointment. Such patients can call the office and obtain my booklet on TRT for a nominal charge.

Patients typically choose one of three treatment tracts with my practice:

- Sex hormone therapy
- Sex hormone therapy plus other specialty consultation (see back cover)
- For those currently without a primary care physician, transferring responsibility for your complete primary care delivery to our office.

Whichever treatment you choose, we look forward to meeting you soon and serving you in achieving and maintaining a healthier lifestyle.