

PHYSICAL MEDICINE ASSOCIATES OF N.W. OHIO, INC.

939 W. Market St., Ste. 1

Lima, OH 45805

Phone: 419-228-5434

Fax: 419-228-4620

Kurt A. Kuhlman, D.O.

Xavier D. DiSabato, D.O.

Jodi M. Wilhelm, C.N.P.

Kathy M. Harvey, C.N.P.

Vicki S. Casey, C.N.P.

Consent for Testosterone Replacement in Women

Testosterone is a hormone secreted by the testes, ovaries and adrenal glands. We tend to think of testosterone as a "male" hormone, but in fact, testosterone is the most abundant active sex hormone in women throughout the female lifespan. An adult female has testosterone levels similar to a prepubescent boy.

Common symptoms of testosterone deficiency in women:

Urinary dysfunction with frequency, urgency, incontinence

Sexual dysfunction with poor libido and difficulty climaxing

Irritability, anxiety, depression

Changes in cognition and memory loss

Bone and muscle loss

Hot flashes

Fatigue/insomnia

Benefits of testosterone supplementation in women:

1. Improves urinary problems such as frequency, urgency, incontinence.
2. Improves sexual function - increases sexual desire, vaginal lubrication, clitoral sensitivity and orgasm. It is the most effective treatment for women with hypoactive sexual desire disorder.
3. Decreases visceral fat and improves insulin resistance and diabetes.
4. Improves energy, mood and sense of wellbeing.
5. Helps prevent osteoporosis (estrogen, DHEA and vitamin D also help).
6. Helps with cognition and prevention of dementia.
7. Helps protect against breast cancer and cardiovascular disease.
8. Improves muscle mass and strength.
9. Improves skin - increases collagen and skin thickness, improves texture and decreases wrinkles and cellulite.
10. Statins (taken for high cholesterol) and birth control pills both decrease testosterone levels. Women who take these medications may benefit greatly from testosterone replacement.
11. Women who have had a total hysterectomy (uterus and ovaries) should consider hormone replacement therapy including testosterone to help with hot flashes, lethargy, nocturia, incontinence, sexual dysfunction, energy level and to prevent premature osteoporosis.

Lab values: We typically check a testosterone total, testosterone free and DHEA levels.

Testosterone replacement contraindications in women:

1. Certain hormone responsive cancers
2. Pregnancy
3. Breast-feeding

Testosterone replacement side effects in women:

1. Increased libido (sex drive) - this commonly occurs.
2. Acne and increased facial/body hair - this can occur but is dose-dependent, so an easy treatment is to simply lower the dose. Alternatively, you can take spironolactone 25 to 50 mg daily. Spironolactone blocks the effect of testosterone on the skin and hair follicle. Additionally, if you do develop acne and excessive hair growth, there is a good chance you have insulin resistance. In this case, treat the insulin resistance first.
3. Slight increases in water retention, muscle mass and clitoral enlargement may occur. This will resolve when the testosterone dose is lowered.

How to administer testosterone to women:

1. **Compounded testosterone cream:** The most effective way to administer testosterone to women is to apply a compounded (made by a pharmacy) testosterone cream. We typically start at 2% (20 mg/g) and apply one fourth of a milliliter (about the size of a pea). This is about 5% of what a man would use. It is most beneficial if applied on and around the clitoris, labia minora and labia majora at bedtime. To apply, simply click or pump the container once to obtain 1/4 mL of cream, then with the pad of your index finger apply the cream to the clitoris and labia, then wash your hands (see diagram). Pubic hair, if present, over the labia majora will decrease absorption/effectiveness. It is okay but not necessary to apply inside the vagina. The excess can be wiped on the inner thigh. You can have sex after applying the cream, but some testosterone may be transferred to your partner. The cream can also be applied to the inner arm but this has two shortcomings. First, it does not get absorbed as well, so you will need to double the dose. More importantly, you will see less improvement in pelvic floor, urinary and sexual function. We typically obtain testosterone cream through MedQuest or St Rita's (Mercy) pharmacies. The cost for a 3-month supply is about \$45.
2. Testosterone intramuscular injections, oral micronized testosterone capsules, vaginal suppositories, and pellets inserted into the buttocks are less frequently used options.
3. DHEA is a hormone secreted by the adrenal glands and is a precursor to other hormones such as testosterone, estrogen and progesterone. A DHEA 10 mg oral pill is safe, inexpensive and can slightly increase testosterone levels in women.

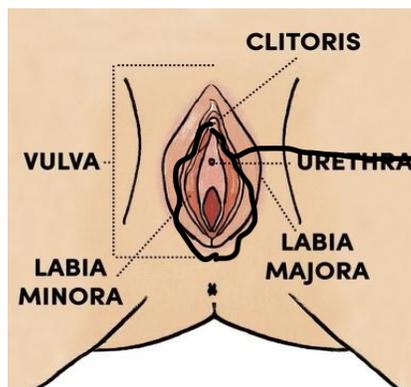
I have read and reviewed with my provider the above testosterone replacement therapy information. I give my informed consent to proceed with testosterone replacement therapy.

Patient: _____

Date: _____

Provider: _____

Date: _____



Apply testosterone cream inside this area