

Testosterone for Women

Patient Information Sheet

<http://womenshealth.med.monash.edu.au>

Prior to menopause, women have circulating in their blood three major sex hormones: oestrogen, testosterone and progesterone. The ovaries produce each of these hormones. In addition the adrenal gland produce a hormone called DHEA which can be used by the ovaries and other cells in the body to make oestrogens and testosterone. Thus oestrogen and testosterone can be made throughout the body but particularly in body fat from hormones that are produced by the adrenal glands.

Testosterone and other related hormones in the body (also known as androgens) clearly have important roles in healthy women. It is generally known that testosterone is important for muscle and bone strength and for growth of normal body hair. But testosterone may have favourable effects on mood, well being, energy and 'vitality' in women. Many studies have now shown improvements in various aspects of female sexuality with testosterone therapy. Finally, oestrogen is actually made from testosterone, and without the ability of our bodies to make testosterone we cannot make oestrogen.

Why do some women have testosterone therapy?

Unlike the sudden fall in oestrogen and progesterone at menopause, testosterone levels fall more gradually with increasing age such that a woman in her forties has on average only half of the testosterone circulating in her blood stream as does a woman in her twenties. This will vary between individual women. Testosterone levels do not change over the course of natural menopause, but after a woman has her ovaries removed by surgery, testosterone levels can fall suddenly by up to fifty percent.

Testosterone mainly circulates in the blood bound to a protein called sex hormone binding globulin (SHBG). Oestrogen therapy, particularly in tablet form, increases the level of SHBG in the blood. This means that less testosterone is 'free' or able to act. Thus oral oestrogen therapy, or even the oral contraceptive pill, may cause a lowering of testosterone. Changing to a non-oral HRT or stopping the pill if appropriate can reverse this. This won't help a woman whose body is just not producing enough testosterone.

What are the symptoms of low testosterone?

In contrast to the abrupt onset of hot flushes and night sweats which occur in some women at the menopause when oestrogen levels fall, the symptoms related to testosterone deficiency develop more gradually and may go undetected. Testosterone appears to have direct independent effects in different parts of the body, and some women experience a variety of physical symptoms when their testosterone levels fall.

There is no level of testosterone below which a woman can be said to be deficient, and a 'Testosterone deficiency syndrome' has never been defined. However, research studies indicate that many women reporting low sexual function (loss of libido or sexual desire) benefit with testosterone therapy.

All women should have a blood test to measure their testosterone and SHBG levels before starting any testosterone therapy. This is not in order to diagnose deficiency, but rather to ensure women with normal to high levels of testosterone are not inappropriately treated.

Caution

Testosterone therapy will not be the answer for someone who has a poor partner relationship, depression or poor wellbeing due to other causes.

How do women take testosterone?

Testosterone theoretically can be replaced as tablets, by injection, as an implanted pellet or via the skin as a patch, cream or spray.

Currently testosterone therapy is not officially approved in Australia for women by the Therapeutic Goods Administration. However for many years it has been in common usage throughout public hospitals and private practice in postmenopausal women with low testosterone levels. The most commonly used form of replacement has been with a testosterone implant pellet that is inserted into the lower abdominal fat under local anaesthetic. The pellet releases testosterone over a period of three to six months, after which time it needs to be replaced.



Testosterone injections can also be used, however they result in high levels of testosterone and the effect is short lived. Testosterone patches have been developed and are now undergoing research trials and hopefully will be available within the next few years for more general use.

A testosterone cream applied to the skin is available in Western Australia, and approved by State authorities, but it is not as yet approved nationally.

Side Effects

Side effects of testosterone replacement are extremely rare when only used in appropriately selected women and given in the appropriate dose. Side effects from excessive dosage can include masculinisation with acne and excess body hair, fluid retention and adverse effects on blood cholesterol.

These side effects are rare if the appropriate dose of testosterone is administered.

Women with severe acne or severe excess body hair should not use testosterone. Similarly, women who are pregnant, lactating mothers or who have a suspected cancer should not use testosterone as a standard precaution.

Some studies have shown that high levels of testosterone are more common in women who develop breast cancer; however there is no data to indicate any association between testosterone replacement and breast cancer. BUT it is important that testosterone levels are monitored during treatment and that the blood levels achieved with therapy are kept within the normal range for women.