

Testosterone and the menopause

Low testosterone levels have been implicated in hypoactive sexual desire disorder/dysfunction (HSDD).

Testosterone in women

- Testosterone is produced by the ovaries, adrenal glands and peripheral conversion (in liver, kidney, muscle, fat, skin) of precursor steroids such as androstenedione and dehydroepiandrosterone.
- Most testosterone circulates tightly bound to sex hormone-binding globulin (SHBG) or weakly bound to albumin, and the biologically active fraction is only the approximately 1–3% that is unbound (free testosterone (FT)).
- Levels are lower in women than in men and fall with age.
- The low levels mean that not all methods of measuring testosterone are reliable when used in women.

The only evidence-based indication for testosterone therapy for women is for the treatment of HSDD, with available data supporting a moderate therapeutic effect.

Testosterone replacement in women

- HSDD after the menopause is the only evidence-based indication for testosterone in women.
- The availability of testosterone products varies worldwide.
- Where an appropriate approved female testosterone preparation is not available, off-label prescribing of an approved male formulation is reasonable provided hormone concentrations are maintained in the physiological female range.
- Compounded 'bioidentical' testosterone therapy is not recommended due to the lack of evidence for efficacy and safety, unless an authorized equivalent preparation is not available.
- If an approved product is unavailable and a compounded product is needed, the compounding pharmacy should meet industry standards for purity of Active Pharmaceutical Ingredients and Good Manufacturing Practice.
- Dosing should achieve testosterone concentrations in the physiological premenopausal range.

Practical issues with testosterone replacement

- Safety data for testosterone in physiological doses are not available beyond 24 months of treatment.
- Systemic testosterone therapy for postmenopausal women, in doses that achieve premenopausal physiological concentrations, is sometimes associated with mild increases in acne and body/facial hair growth, but not with alopecia, clitoral enlargement or voice change.
- While short-term data on cardiovascular and breast disease are reassuring, long-term information is required.

Monitoring of women on testosterone therapy

- Total testosterone levels should be measured before and then 3–6 weeks after treatment is started, using liquid/gas chromatography and tandem mass spectrometry.
- Clinical response to treatment and total testosterone levels should be checked at 6 months.
- If there is no benefit after 6 months, treatment should be stopped.
- In women who benefit from treatment, monitoring should continue every 6–12 months.

Further information

Global Consensus Position Statement on the use of Testosterone Therapy for Women 2019 10.1016/j.maturitas.2019.07.001

Testosterone replacement in menopause. British Menopause Society 2022 <https://thebms.org.uk/publications/tools-for-clinicians/testosterone-replacement-in-menopause>