Primary Care
Women's Health Society

Top tips

Testosterone use for women

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Date of last review: May 2025. Date of next review: May 2028.

This article is intended as a brief introduction to this subject; anyone considering initiating testosterone in primary care should ensure that they are competent to do so, and as a minimum should have a thorough understanding of the level of detail outlined in the British Menopause Society (BMS) guidance[1].

1) Background

- Testosterone acts as a central neurosteroid, affecting a variety of functions including sexual desire; a sudden or gradual drop may reduce sexual interest.
- Genital sexual response in women requires the tissues to be oestrogenised, though androgens may also have a role.
- Women produce more testosterone than oestrogen, but female testosterone production is much less than that in men.
- Testosterone is derived in approximately equal amounts from the adrenals and ovarian stroma.
- Levels naturally decline from about the age of 30 to the mid 60s; there isn't a steep drop in testosterone at the time of natural menopause, as there is for oestrogen.
- Surgical menopause will result in a more dramatic depletion of testosterone[2].

2) Holistic assessment

- Assessment should be holistic, covering all biopsychosocial factors.
- Consider testosterone supplementation when there is low desire which is troubling the woman, a biopsychosocial cause has been excluded, and oestrogen has been adequately replaced both vaginally and systemically.
- There is no evidence of benefit in the absence of a sexual indication. Although some women with joint pain, brain fog, fatigue and similar symptoms find testosterone helpful, use in these situations is not backed by any major guidelines and is not recommended.

3) Initial investigation.

- Before prescribing, a total testosterone assay is needed to confirm that activity is low enough to allow a therapeutic trial of supplementation; if the initial level is in the upper range, supplementation is more likely to give a supra-physiological level, which is not desirable from the perspective of adverse effects and safety.
- Whilst testosterone levels are not always accurate[4], they are recommended (instead of a measured free testosterone or calculated free androgen index) by both British[1] and international[3] guidance.
- Older immunoassays for testosterone may cross-react with other substances, notably norethisterone, producing a falsely high testosterone result. Consider discussion with your laboratory, or re-testing off norethisterone if this may be

an issue.
- Neither the BMS[1] nor international guidance[3] recommend routine measurement of sex-hormone binding globulin (SHBG), but it may be useful in the following circumstances:
    - Where SHBG is high due to the use of oral HRT, which increases SHBG[5]; a switch to transdermal HRT may help the woman to benefit more from her natural testosterone and avoid supplementation. Testosterone supplementation may be less effective in the presence of a high SHBG.
    - Where a woman is having androgenic adverse effects despite a normal testosterone level; a low SHBG may explain this, as more of the testosterone than average will be active.

4) Prescribing

- Depending on local pathways, testosterone may only be prescribable in primary care after specialist assessment and recommendation. Even when this is not stipulated, you should only initiate/share care if it is within your training and competence. Shared care is always voluntary and can be refused if the GP feels that it is not safe or appropriately resourced[6,7].
- Do not prescribe during pregnancy or breastfeeding, to women with active liver disease or those with a history of hormone sensitive breast cancer.
- Prescribing in athletes may have implications for drug monitoring.
- There is no licensed option for women in the UK[1]; lower doses of products aimed at men are used.
- The available options are all applied to the lower abdomen or inner thigh (where hair growth may increase but can be removed) and initiated at 5mg/day.
- Hands should be washed after applying gel – a 2003 MHRA alert noted some cases of premature puberty and genital enlargement in children who were accidentally exposed to topical testosterone being used by an adult[8].
- Prescribable options in the UK include:
    - Testogel®:
        - 40.5mg testosterone in 2.5 of gel.
        - Initiate using 1/8 sachet ≈ 5mg daily.
        - Divide the sachet to use over eight days, rolling the top and sealing with a clip between uses.
        - Sachets are supplied in boxes of 30; a pack will last 240 days, but smaller amounts can be prescribed.
        - Do not prescribe the larger pump; the concentration is the same, but the dose delivered per pump measure is 20.25mg, which cannot easily be divided.
    - Tostran®:
        - 2% testosterone gel.
        - This delivers 10mg of testosterone per 0.5g metered dose.
        - The typical starting strategy is one measure applied every other day, to deliver an average of 5mg daily.

    - A canister will last 240 days; it cannot be prescribed in smaller units than one canister, so care should be taken to ensure that it is not being requested too often.
- Patients may ask about Androfeme®, which is produced and licensed in Australia and imported to the UK by some private clinics. It is not available on the NHS; a standard prescription, when used privately, is 0.5ml (5mg of testosterone) from a 50ml tube, measured out with a syringe.

5) Ongoing monitoring

- Absorption, metabolism and response all vary between women.
- The BMS advises re-checking testosterone at 3-6 weeks after treatment is commenced, or as close to that as possible; they acknowledge that common NHS practice may mean that 3-6 weeks is aspirational, and 2-3 months is more likely.
- Monitoring should continue every 6-12 months to ensure that levels remain within the female physiological range; decisions on continuing/adjusting treatment should be based on symptoms, rather than aiming for a particular testosterone result.

6) Duration of treatment

- Ongoing treatment is based on relief of symptoms; the blood test is done to ensure that levels are not too high, not to titrate the dose to any ideal blood level. Each review should include the question of whether the woman still feels that she is benefiting from her testosterone and whether she wishes to continue.
- The effective maintenance dose may decrease over time.
- The balance of benefits and side effects is very individual. If symptoms do not adequately resolve, testosterone should be stopped.
- There is no formal guidance as to how long treatment should continue; safety data is only available for use up to 24 months[3].

Resources

- BMS. Testosterone replacement in menopause. Dec 2022.
- International Menopause Society. Global Consensus Position Statement on the Use of Testosterone Therapy for Women. 2019.
- Patient information leaflets:
    - International Menopause Society.
    - Women's Health Concern.

References

1) BMS. Testosterone replacement in menopause. Dec 2022. https://thebms.org.uk/wp-content/uploads/2022/12/08-BMS-TfC-Testosterone-replacement-in-menopause-DEC2022-A.pdf
2) Healthcare Improvement Scotland. Right Decision Service. Testosterone replacement in menopausal women. Oct 2022. https://rightdecisions.scot.nhs.uk/tam-treatments-and-medicines-nhs-highland/adult-therapeutic-guidelines/sexual-health/menopause/testosterone-replacement-in-menopausal-women-guidelines/
3) Davis SR, Baber R, Panay N et al. Global Consensus Position Statement on the Use of Testosterone Therapy for Women. J Clin Endocrinol Metab. 2019 Oct 1;104(10):4660-4666.
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5) Stomati M, Hartmann B, Spinetti A et al. Effects of hormonal replacement therapy on plasma sex hormone-binding globulin, androgen and insulin-like growth factor-1 levels in postmenopausal women. J Endocrinol Invest. 1996 Sep;19(8):535-41.
6) BMA. Prescribing in general practice. April 2025.
7) NHSE. Responsibility for prescribing between Primary & Secondary/Tertiary Care. Jan 2018.
8) MHRA. Topical testosterone (Testogel): risk of harm to children following accidental exposure. Jan 2023. https://www.gov.uk/drug-safety-update/topical-testosterone-testogel-risk-of-harm-to-children-following-accidental-exposure