Testosterone for low libido in menopausal women

Traffic light classification- Amber 3
Information sheet for Primary Care Prescribers

Indication

Testosterone gel may be considered for menopausal women with low sexual desire if HRT alone is not effective. This is an unlicensed indication, but supported by NICE in NG23: Menopause: diagnosis and management and a global position statement. Before commencing a trial of testosterone, women should have been taking conventional HRT for at least 6 months and oestrogen dose should have been optimised. This may require a change in HRT preparation.

Therapeutic summary

There is an age- related decline in testosterone levels in women at least partly due to loss of ovarian function, but it can also occur more profoundly due to iatrogenic menopause which may be medical or surgical. Androgens, including testosterone, are essential for development and maintenance of female sexual anatomy and physiology, and modulation of sexual behaviour.

Medicines Initiation

Testosterone should only be prescribed for women who complain of low sexual desire after biopsychosocial approach has excluded other causes such as relationship, psychological and medication related Hypoactive Sexual Desire Disorder (HSDD) e.g. SSRIs/SNRIs. Women should have been taking conventional HRT for at least 6 months (see above).

Testosterone should be given initially as a 3- 6 month trial and if symptomatic benefit is not obtained, treatment should be stopped.

When treating low sexual desire/arousal it is also important that urogenital tissues are adequately oestrogenised in women with vulvovaginal atrophy / genitourinary syndrome of the menopause e.g. through use of vaginal oestrogen, to avoid dyspareunia.

Dosages and route of administration

Testosterone should be given in doses that approximate physiological testosterone concentrations for premenopausal women. The preparations approved for use locally are Tostran 2% gel and Testogel sachets as follows:

- Testogel [Besins Healthcare UK] (2.5g sachets containing 40.5mg testosterone): Starting dose 1/8 of a sachet/day = approx. 5mg/day. Apply a small pea sized amount each day. Seal sachet with a clip between uses. A box of 30 sachets should last 240 days. **Do not prescribe the pump version of Testogel.**

- Tostran [Kyowa Kirin Ltd] (2% testosterone gel in a canister containing 60g) : Starting dose 1 metered pump of 0.5g = 10mg on alternate days – each canister should last 240 days.

The testosterone gel should be applied to clean dry skin (lower abdomen/upper thighs) and allowed to dry before dressing. Skin contact with partners or children should be avoided until dry and hands should be washed immediately after application. The area of application should not be washed for 2-3 hours after application.

Duration of treatment

Testosterone therapy may be continued for as long as symptomatic benefit is obtained. Duration of use should be individualised and evaluated at least on an annual basis based on the same criteria that would be used for standard hormone therapy, i.e. weighing up pros and cons according to benefits and risks. There is an absence of long-term data regarding testosterone therapy in women.

Monitoring Requirements and Responsibilities

There is no value in monitoring testosterone levels for assessment of efficacy, but monitoring should be undertaken to ensure that values are being maintained within the female physiological range, thus making androgenic side effects less likely. Clinical assessment of potential adverse effects is however equally important as some women are more sensitive to physiological levels of androgens.

Total testosterone levels should be measured before treatment to establish a baseline for future monitoring and to ensure that levels are not in the upper range before treatment is commenced. It would be considered reasonable to trial testosterone if the baseline testosterone is 0.5nmol/L or more below the upper limit of normal.

Monitoring should then take place 3–6 weeks after initiation then up to every 12 months to screen for overuse. Monitoring should be conducted more frequently if there are concerns about adverse effects or overuse.

The aim should be to achieve total testosterone levels within the normal physiological range for women using the laboratory reference range where the test is carried out. As the aim of treatment is to replace sex hormones to an extent to premenopausal levels, when the laboratory report a pre- and postmenopausal adult female reference range, the *premenopausal* adult female reference range should be used.

In certain circumstances, SHBG levels may be helpful as additional supportive information:
— Where SHBG levels are high e.g. due to high dose oral estrogen therapy, especially conjugated estrogens. This may explain lack of therapeutic response to physiological testosterone replacement, despite normal total testosterone levels.
— Conversely, when SHBG levels are very low. This may explain why androgenic adverse effects with testosterone replacement have occurred, despite normal total testosterone levels.

Explicit criteria for review and discontinuation of the medicine

Adverse Effect	*Management advice*
Total testosterone levels >ULN	Ensure appropriate usage, reduce dosage, stop treatment
Increased body hair at site of application (occasional problem)	Spread gel more thinly, vary site of application, reduce dosage.
Generalised Hirsutism (uncommon)	Ensure appropriate usage, reduce dosage, stop treatment
Alopecia, male pattern hair loss (uncommon)	Ensure appropriate usage, reduce dosage, stop treatment
Acne and greasy skin (uncommon)	Ensure appropriate usage, reduce dosage, stop treatment
Deepening of voice (rare)/ enlarged clitoris (rare)	Ensure appropriate usage, reduce dosage, stop treatment

Contraindications

Testosterone should be avoided:

- During pregnancy or breastfeeding
- Active liver disease
- History of hormone sensitive breast cancer – off label exceptions to this may be agreed in fully informed women with intractable symptoms not responding to alternatives

Precautions:

Testosterone should be used with caution in:

- Competitive athletes – care must be taken to maintain levels well within the female physiological range
- Women with upper normal or high baseline testosterone levels / Free Androgen Index (FAI).

Clinically relevant medicine interactions and their management

- Warfarin- testosterone may increase the anticoagulant effect- monitor INR especially when the treatment is started, stopped or the dose adjusted.
- ACTH or corticosteroids- increased likelihood of oedema; use with caution, particularly in patients with cardiac, renal or hepatic disease.
- Anti-diabetic medicines- androgens may improve glucose tolerance and decrease the need for insulin or other anti-diabetic medicines. Monitor patients at the beginning or end of treatment.

Information given to patient

The initiating prescriber must inform women of the unlicensed nature of this indication, lack of long-term safety data and potential for androgenic side effects.

Women should be adequately counselled on application instructions to ensure appropriate usage. If Testogel sachets are being used, advise women to start with a (small) pea-sized amount and then they can adjust up or down depending on how long the first sachet lasts. Each sachet should last 8 days.

Care should be taken so that the testosterone product is not accidentally transferred onto the skin of someone else. Advise women of methods to reduce the risks of accidental exposure, including washing their hands with soap and water after application, covering the application site with clean clothing (such as a t-shirt) once the gel has dried, and washing the application area with soap and water before physical contact with another person- See MHRA advice.

Patients should be warned that the patient leaflet contained with the product relates to male use. **A patient leaflet about female use such as that from Women's Health Concern should be offered.**

References

NICE NG23: Menopause: diagnosis and management. Last updated: 05 December 2019

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

Global Consensus Position Statement on the use of Testosterone Therapy for Women. J Clin Endocrinol Metab, October 2019, 104(10):4660–4666.

Tostran SPC. Last updated on www.medicines.org.uk May 2025.

Testogel SPC. Last updated on www.medicines.org.uk Jan 2025.

Joint position statement by the British Menopause Society, Royal College of Obstetricians and Gynaecologists and Society for Endocrinology on best practice recommendations for the care of women experiencing the menopause. Post Reproductive Health 2022, Vol. 0(0) 1–2

MHRA Drug Safety Update: Topical testosterone (Testogel): risk of harm to children following accidental exposure. January 2023.