

Testosterone

Endocrinology Shared Care Guideline

Using a printed guideline?
Always check you are using the most up to date version.
See www.ipnsm.hscni.net

Introduction

| Specialist Details | |
|--------------------|-------|
| Name: | _____ |
| Location: | _____ |
| Tel: | _____ |

| Patient Identifier | |
|--------------------|-------|
| Date: | _____ |

Licensed indications: Androgen deficiency (hypogonadism).

Unlicensed indications: Induction of puberty in delayed pubertal adolescents, management of gender identity disorders.

Testosterone may be used as replacement therapy in castrated adults and in those who are hypogonadal due to pituitary or testicular disease. The aim of therapy is to raise testosterone level to middle of normal range.

Injectable or topical preparations are preferred as oral testosterone undergoes extensive first pass metabolism making it difficult to maintain normal serum testosterone concentrations. Intramuscular testosterone in an oil-based vehicle allows for the gradual release of testosterone and maintenance of normal levels. Topical preparations have similar benefits resulting in relatively stable levels.

Adult dosage and administration:

| Generic presentation | Brand Name | Route | Typical Dose Regimen for hypogonadism |
|---|---------------------|----------|---|
| Testosterone enantate inj 250mg/ml | | Slow i.m | <ul style="list-style-type: none"> Initially 250mg every 2-3 weeks. Maintenance 250mg every 3-6 weeks. (Gender identity: 50mg monthly). |
| Testosterone undecanoate inj 1000mg/4ml | Nebido | Deep i.m | <ul style="list-style-type: none"> 1g every 10-14 weeks. |
| Testosterone esters inj 250mg/ml | Sustanon | Deep i.m | <ul style="list-style-type: none"> 250mg every 3 weeks (Induction of puberty: 0.6mls monthly) |
| Testosterone propionate inj 100mg/2ml | Viormone | i.m | <ul style="list-style-type: none"> 50mg 2-3 times weekly. |
| Testosterone implant 100mg & 200mg | | Implant | <ul style="list-style-type: none"> 100-600mg. 600mg usually maintains plasma testosterone within normal range for 4-5months |
| Testosterone gel 50mg/5g tube | Testim/ Testogel | Topical | <ul style="list-style-type: none"> 50-100mg applied once daily |
| Testosterone gel 2% (10mg/ application) | Tostran | Topical | <ul style="list-style-type: none"> Initially 60mg once daily. Max 80mg daily |
| Testosterone undecanoate 40mg caps | Restandol Testocaps | Oral | <ul style="list-style-type: none"> 120-160mg daily for 2-3 weeks. Maintenance 40-120mg daily |
| Testosterone buccal tabs M/R 30mg | Striant SR | Buccal | <ul style="list-style-type: none"> 30mg every 12 hours |

Hospital Specialist Responsibilities

- Arrange shared care with the patient's GP.
- Provide patient/carer with relevant (preferably written) information on use, side-effects and need for monitoring of medication.
- For injectable formulations liaise with primary care to ensure arrangements are in place for administration.
- Provide shared care monitoring record booklet if required.
- Baseline tests:
 - Serum testosterone
 - PSA & Digital rectal examination (where appropriate e.g. Males > 40years).
- Monitor serum testosterone during initiation phase.
- Review results of monitoring and adjust dose as required.
- Once initiation complete advise GP of any monitoring required for the following:
 - Serum testosterone
 - PSA (where appropriate)
 - FBC
 - LFT
 - Lipids

GP Responsibilities

- Prescribe testosterone as advised by specialist.
- For injectable formulations ensure arrangements are in place for administration.
- Arrange and record monitoring if requested by specialist for the following:
 - Serum testosterone (preferably measured at approx 9 am)
 - PSA (where appropriate)
 - FBC
 - LFT
 - Lipids
- Report adverse drug reactions to initiating specialist and usual bodies (e.g. MHRA).
- Ensure no drug interactions with other medicines.

Adverse Effects, Precautions and Contraindications

Tumours: Testosterone may accelerate the progression of prostate cancer (including sub-clinical) and BPH.

Fluid retention: May cause oedema and sodium retention with or without congestive heart failure in patients suffering from severe cardiac, hepatic or renal insufficiency or ischaemic heart disease.

Androgenic side effects include: hirsutism, male-pattern baldness, seborrhoea, acne, pruritis, excessive frequency and duration of penile erections, suppression of spermatogenesis.

Others cautions: May exacerbate sleep apnoea, epilepsy and migraine.

Other side effects include: increased haematocrit, myalgia, arthralgia, hypertension, nausea, changes in libido, depression, nervousness, mood disturbances, cholestatic jaundice, gynaecomastia, asthenia, paraesthesia, weight gain, increased bone growth.

Breastfeeding and Pregnancy: Should not be used.

Contraindications:

- breast cancer in men
- prostate cancer
- history of primary liver tumours
- hypercalcaemia
- nephrotic syndrome.

Common Drug Interactions

Coumarins and phenidione: Testosterone enhances anticoagulant effect.

Insulin and Oral Hypoglycaemic Agents: Concurrent testosterone lowers blood glucose levels.

Dutasteride and finasteride: May increase bioavailability of testosterone.

Communication

For any queries relating to this patient's treatment with testosterone, please contact the specialist named at the top of this document.

This information is not inclusive of all prescribing information and potential adverse effects.
Please refer to full prescribing data in the SPC or the BNF