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Testosterone

Endocrinology Shared Care Guideline

Specialist Details	Patient Identifier
Name: _____	
Location: _____	
Tel: _____	**Date:** _____

Introduction

Testosterone may be used as replacement therapy in hypogonadal 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.

Licensed indications: Androgen deficiency (hypogonadism).

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

Adult dosage and administration

Generic Presentation	Brand Name	Route	Typical Dose Regimen for Hypogonadism
Testosterone enantate inj 250mg/ml		Slow i.m	• Initially 250 mg every 2 - 3 weeks. Maintenance 250 mg every 3 - 6 weeks. • (Gender identity: 50 mg monthly).
Testosterone undecanoate inj 1000mg/4ml	Nebido	Deep i.m	• 1 g every 10-14 weeks
Testosterone esters inj 250mg/ml	Sustanon	Deep i.m	• 250 mg every 3 weeks • (Induction of puberty: 0.6 mL monthly)
Testosterone gel	Testim / Testogel / Testavan / Tostan	Topical	• Consult product literature

Hospital specialist responsibilities

- Diagnose the condition and assess if the patient is suitable for treatment with testosterone.
- 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.
- Undertake the baseline tests and monitor serum testosterone during the initiation phase. Communicate to the GP that these have been done.
- Review results of safety monitoring and request additional tests as required. Adjust the dose as required.
- Continue to review the patient at agreed specified intervals, sending a written summary to the GP whenever the patient is reviewed.
- Monitor response to treatment and need to continue therapy.
- Provide any other advice or information for the GP if required.

<u>Baseline tests</u>

- Serum testosterone
- PSA & Digital rectal examination (where appropriate e.g. Males > 45 years).
- FBCs

<u>Once initiation complete advise GP of any monitoring required for the following</u>

- Serum testosterone
- PSA (where appropriate)
- FBC, LFTs and Lipids

GP responsibilities

- Prescribe testosterone; continued prescribing is appropriate for patients attending regular review.
- For injectable formulations ensure arrangements are in place for administration.
- Report adverse drug reactions to initiating specialist and usual bodies (e.g. CHM, MHRA).
- Ensure no significant drug interactions with other medicines.
- Arrange and record monitoring if requested by specialist for the following, ensuring practice systems are in place to recall patients for blood tests.
    - Serum testosterone (preferably measured at approximately 9 am)
    - PSA (where appropriate)
    - FBC, LFTs and Lipids

Adverse effects, precautions and contraindications

Contraindications: breast cancer in men, prostate cancer, history of primary liver tumours, hypercalcaemia.

Tumours: Testosterone may accelerate the progression of prostate cancer (including subclinical)

and BPH. Should be used with caution in cancer patients at risk of hypercalcaemia due to bone metastases.

Caution advised with: Cardiac impairment; diabetes mellitus; elderly; epilepsy; hypertension; ischaemic heart disease; migraine; risk factors for venous thromboembolism; skeletal metastases; sleep apnoea; severe polycythaemia occurs; thrombophilia.

Common side effects: Hot flush; hypertension; polycythaemia; prostate abnormalities; skin reactions; weight increased; hypertriglyceridaemia.

Other side effects include: Alopecia; asthenia; behaviour abnormal; depression; dizziness; dyspnoea; dysuria; gynaecomastia; headache; hyperhidrosis; insomnia; nausea; sexual dysfunction; anxiety; epiphyses premature fusion; fluid retention; jaundice; oedema; oligozoospermia; paraesthesia; precocious puberty; prostate cancer; seborrhoea; sleep apnoea; urinary tract obstruction; anaemia; deep vein thrombosis; electrolyte imbalance; hypertrichosis; malaise; muscle cramps; musculoskeletal pain; testicular disorder; vasodilation.

Breastfeeding and Pregnancy: Should not be used.

Common drug interactions

Use testosterone with caution in association with:

- Coumarins and phenidione as testosterone may enhance anticoagulant effect.
- Insulin and Oral Hypoglycaemic Agents: concurrent testosterone possibly lowers blood glucose levels.
- Corticosteroids: concurrent administration may enhance oedema formation, particularly in those predisposed to oedema.

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

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