

Post Discharge Hormone Management for: Treatment of Gender Dysphoria/Incongruence in Trans Men and Transmasculine People (assigned female at birth)

GP:	
GP address	
Patient name	
Patient DOB	
Patient GIC ID no	

Dear Dr,

Your patient has recently been discharged from the Gender Identity Clinic. Below is guidance on the ongoing hormonal management of this patient in the immediate and longer term future. It is expected that hormonal therapy will be continued lifelong and the target levels for that hormone replacement are the same as for the general male population.

The current data suggest that long-term treatment with testosterone in trans men and transmasculine people (people who were assigned female at birth) is not associated with any increased risk of cardiovascular disease and the standard mortality ratio of this patient population is one, which is to say there is no increase in mortality. This is dependent on continued safe prescribing and monitoring.

The monitoring advice depends on the testosterone preparation being used, the details of each being given below. In general, only annual monitoring is needed once the patient is established on a stable regimen.

Standard health screening programme recommendations should be followed. The patient should be advised that they will get an automatic call-up to male but not female screening programmes if they have had their gender changed on the NHS computer system. A comprehensive gov.uk guide to screening for transgender people can be found here <https://www.gov.uk/government/publications/nhs-population-screeninginformation-for-transgender-people>

Additionally, if the patient retains their uterus then they should have cervical smears as per standard screening programme recommendations. They should also have a pelvic ultrasound every two years on testosterone therapy to monitor for endometrial hyperplasia.

We recommend they self-check their chest tissue on a monthly basis for lumps; it is also recommended they continue with monthly checks of the remaining chest tissue after mastectomy or masculinising chest reconstruction surgery unless specifically advised by a surgeon that this is not necessary. They should be invited for mammography as per the national screening programme if they have not had a mastectomy or masculinising chest reconstruction surgery.

They may also need contraceptive advice. It is important to prevent pregnancy on testosterone therapy (as it can be harmful to a foetus) and contraception should be started or continued if needed. Please consider a progestogen only formulation - or alternatives such as a coil or IUD. Testosterone therapy itself cannot be relied upon as a contraceptive and it is not licensed for this purpose.

Testosterone formulations: QUICK GLANCE DOSE TITRATION & MONITORING GUIDE						
Preparation	Dose	Frequency	Monitoring Method	Target range, testosterone	Maximum Dose	How to adjust, if needed
<u>Testosterone Injections (shorteracting)</u> Sustanon or Testosterone Enantate	Starting dose 250mg (1ml vial) (dose range 150-250mg, 0.6-1ml)	2-4 weekly	Trough: just before an injection (same day) Peak: 7 days later *bloods as below*	Trough level: 8 - 12 nmol/L Peak level: Less than 30 nmol/L	250mg every 7 days	Focus on trough level first, and adjust dosing interval as needed to achieve target (usually by a week up or down). If trough is in range, but peak is high, reduce dose in 50mg steps
<u>Longer Acting Testosterone Injection</u> Nebido (has an initial loading phase - please ask GIC for instructions before switching to Nebido)	1,000mg (4ml vial)	6-15 weekly	Trough: just before an injection (same day) *bloods as below* **No peak testosterone required	15 - 20nmol/L	1000mg every 6 weeks	Adjust dosing interval as required (usually by a week up or down). Dose is not usually adjusted.
<u>Testosterone gel pumps: (topical)</u> Testogel 16.2mg/g (20.25mg testosterone per pump actuation) or Tostran 2% (10mg per pump actuation) or Testavan 20mg/g gel (23mg per pump actuation)	Usual starting doses: Testogel: 2 pump actuations (40.5 mg) Tostran: 4 pump actuations (40 mg) Testavan: 2 pump actuations (46 mg)	Daily, apply full dose in the morning, to inner thighs or lower torso/ abdomen - but not to chest or genital areas.	Bloods 4-6 hours after gel application (ensure no gel on arms) *bloods as below*	15 - 20nmol/L	100mg daily (5 actuations of Testogel pump 10 actuations of Tostran pump 4 actuations of Testavan pump)	Adjust dose as required. Adjustments usually as steps of 1 pump actuation at a time.

Medications that may be recommended in addition to testosterone:

If testosterone therapy to adult male levels does not suppress menstruation, or the person has amenorrhoeic cycling, then a progestin (first-line) or GnRH analogue can be used to suppress ovarian function.

Progestins: Medroxyprogesterone acetate 10 mg BD, or TDS (if BD is not adequate).

GnRH analogues (as used for endometriosis): Decapeptyl (Triptorelin) SR 11.25 mg (IM) every 12 weeks or Zoladex (Goserelin) 10.8 mg (sub cut) every 12 weeks. Other alternatives listed in shared care document.

Blood tests that need to be requested (including safety blood tests, for monitoring):

Testosterone gels:

4-6 hours after gel application: testosterone, FBC, LFTs and fasting lipids.

Remember to ensure no gel was applied to the arm from which blood is taken (or inaccurately high levels may result).

Sustanon / Testosterone Enantate:

1. On day of injection, immediately before injection (trough): testosterone, FBC, LFTs and fasting lipids.
2. 7 days later (peak): testosterone only.

Nebido:

On day of injection, immediately before injection (trough): testosterone, FBC, LFTs and fasting lipids

**No peak testosterone required.

When the dosing or frequency of a preparation is changed, repeat blood tests (as above) need to be arranged:

Testosterone gels: 8 weeks after the adjustment.

Sustanon / Testosterone Enantate: trough & peak bloods at the 4th injection after the adjustment.

Nebido: a trough level just before the 3rd injection after the adjustment. **No peak testosterone required.

Monitoring frequency:

We recommend that monitoring bloods are done when due (as per above) after any change to dose, frequency or formulation.

Additionally, monitoring bloods should be done every 3-6 months in the first year, every 6-12 months in the second year, and then annually thereafter if therapy is stable with no red flags as below.

Blood pressure and body mass index should be monitored every 3-6 months in the first year of therapy, and after any dose change, then annually when treatment stabilised (or more frequently if indicated).

Red flags for monitoring, and actions:

As well as adjusting the testosterone dosing regimens, as per the table above, there will occasionally be results from the safety blood tests that need action:

Liver Function Tests:

For values less than 3x the upper limit of normal: check medicines and alcohol history, retest in 4-6 weeks. If LFTs are abnormal on repeat, then perform further investigations to determine the cause: Hepatitis B and C serology, HIV serology, EBV, Ferritin, Copper, Caeruloplasmin, liver auto-immune screen, ultrasound of the liver.

It may be appropriate to change to a topical testosterone to reduce the strain on the liver; please discuss this with the GIC endocrine service.

Values of greater than 3x the upper limit of normal: GP to suspend hormone therapy and refer to local hepatology.

Lipids:

Normal cardiovascular risk assessment and management applies. Seek advice if significant changes in lipids. Calculate the Q-risk score of the patient using the male gender to make intervention decisions.

Polycythaemia: actions for Haematocrit / Packed Cell Volume levels:

- Haematocrit less than 0.52 is acceptable.
- Haematocrit 0.52 - 0.55: Advise patient to drink 2L water, ensure they are not smoking. Repeat bloods just before next Sustanon or Nebido injection, or 8 weeks later if using gel. If still raised on repeat, GP to seek advice from GIC.
- Haematocrit 0.55 - 0.59: GP to inform GIC urgently. Check FBC history to see if a pattern. Advise patient to drink 2L water, ensure they are not smoking. Repeat bloods just before next Sustanon or Nebido injection, or 8 weeks later if using gel. If pattern of polycythaemia on injections, then we advise switching to testosterone gel (as above) and also assess for other potential causes such as Obstructive Sleep Apnoea.
- Haematocrit 0.60 or above: GP to pause testosterone therapy and refer urgently to haematology for venesection, also inform GIC urgently. After haematology clearance then return to testosterone as topical therapy, with haematology plan for venesection.

If stopping therapy, reassure the patient that this is temporary, and that we would expect testosterone therapy to be resumed after the pause in treatment. The pause is unlikely to cause significant change in physical appearance.

Medication shortages and alternative formulations:

If there are local supply issues with particular formulations of hormonal medications, there are alternatives. We also have information on appropriate doses when switching formulations. Please see the following link for our advice: <https://gic.nhs.uk/gp-support/updates-on-physical-interventions/>

Contact with the GIC endocrine team:

Please note we are not an emergency service. We can only give advice on patients who are under, or who have been under, our care. Please only contact us by one means, either email or telephone. Doing both puts extra strain on our resources.

Many of your questions may be answered by looking at the endocrine advice on the GIC website we suggest that you check here for the answer to your question in the first instance: <https://gic.nhs.uk/gpsupport/updates-on-physical-interventions/>

We can advise on dose titration and adjustments to therapy, on receipt of blood test results and other monitoring information. If sending results for review, please also send confirmation of current hormonal therapies and dosages for clarity and safety purposes.

Email: GPs and other healthcare professionals can email gic.endocrine@nhs.net with queries, or for advice and support regarding hormonal therapies.

Telephone: We have a hormone advice telephone line for GPs and other healthcare professionals. If we do not answer the phone call, please leave a message. We aim to respond within 48 hours. The telephone number is: 020 8938 7369

Updates to hormonal treatment practice:

We suggest that from time to time you check with the clinic's website (gic.nhs.uk) to see if there have been any change in hormonal treatment practice, as occasionally, with increasing knowledge, we do

change our hormonal advice and practice. The webpage for hormone advice is:
<https://gic.nhs.uk/gpsupport/>