

## **Hormone Replacement Therapy prescribing guide for General Practitioners**

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Last update: June 2019, Dr Adam Brownhill

### **Introduction**

Equinox Gender Diverse Health Centre was established in Feb 2016 and is operated by Thorne Harbour Health. We are based in Fitzroy Melbourne and have 3 GPs, a nurse, 2 counsellors and a drug and alcohol worker on site. We have welcomed over 1000 trans and gender diverse (TGD&NB) clients to our service.

At Equinox, we provide GP services and routinely prescribe hormone therapies for gender affirmation under an informed consent model of care.

**Informed consent:** <http://vac.org.au/site/assets/uploads/066ca531-equinox-informed-consent-guidelines.pdf>

This document briefly outlines the use of and monitoring requirements for clients accessing hormone replacement therapies including oestrogen, testosterone, antiandrogens, GnRH analogues and progesterone.

The information in this document has been prepared for use by registered Medical Practitioners to help them safely and confidently prescribe HRT. Because every person has individual goals, needs and outcomes, clients are strongly encouraged to seek professional medical support to access and safely take hormone replacement therapies. Understanding the options, risks and side effects, both positive and negative, is an important aspect of self care and positive health outcomes. Each person is different and a regimen used by one person may not have the same effect on another. Having a regimen individually tailored and monitored by a doctor is the safest, fastest way to achieve gender affirmation goals.

## Pronouns

It is essential to get pronouns right. When you misgender a transgender person you can cause significant distress. We ask our clients to record their sex assigned at birth, current gender identity and preferred name and pronoun on their intake form at first appointment. If unsure, check with your client “what’s your pronoun” or “what pronoun should I use”. Once this is established, ensure that all people in the clinic from reception to medical staff use the correct name and pronoun. Non binary clients may prefer gender neutral pronouns (them/they, rather than he or she).

Learn more about pronouns here: <https://www.minus18.org.au/pronouns-app/>

## Prescribing Hormones

Prescribing hormones is easy and is done by GPs at Equinox every day of the week.

There are some simple rules to follow.

It is important that both the practitioner and patient are aware of the effects and side effects hormones. A helpful summary of hormone effects in simple language for clients can be found here:

<https://equinoxdotorgdotau.files.wordpress.com/2018/05/oestrogen-faq.pdf>

<https://equinoxdotorgdotau.files.wordpress.com/2018/05/testosterone-faq.pdf>

The commonly used drugs for gender affirmation are medications GPs will be familiar with already.

## **Masculinising hormones – Testosterone**

### **Aim of testosterone therapy**

To reduce gender dysphoria and distress by aligning physical appearance with gender identity.

Doses can be adjusted to target trough total testosterone levels in the lower end of the male reference range (10–15nmol/L)

NB: non binary clients may request lower doses for partial masculinisation

Medical supervision is required to monitor effects, hormone levels, and prevent complications.

### **Expected effects of testosterone**

#### **Within a few weeks..**

Increase in clitoral size, heightened libido, oily skin, increased appetite, acne

#### **Within a few months..**

Facial hair and body hair growth (permanent), increased muscle bulk, body fat redistribution, deeper voice (permanent), cessation of periods

#### **Longer term..**

Development of male pattern baldness may occur (permanent), infertility or reduced fertility, cervical and vaginal atrophy, breast tissue atrophy

## Possible side effects of Testosterone

Testosterone can cause side effects such as polycythaemia however these side effects are rare. Some people experience mood swings on testosterone, and irritability as dose is wearing off. Generally, mental health improves for TGD people when they commence hormone therapy.

Testosterone may increase heart disease risk and cause dyslipidaemia, ensure clients quit smoking, optimise BMI and reduce other risk factors. Monitor fasting lipids, BP and BMI.

## Which testosterone should I prescribe?

### Most clients use Reandron for gender transition to male

Reandron	<p>3 monthly shots (6-8 weekly on initiation)</p> <p>Preferred by most due to reduction of peaks and troughs, less acne</p> <p>Mood generally more stable compared to fortnightly shots.</p> <p>Use 21G (green needle) slow IM glut</p> <p>4ml oily depot</p> <p>For larger clients use 2" 21G needle to ensure muscle deposition</p> <p>PBS listed</p>
Primoteston	<p><b>THIS IS CURRENTLY UNAVAILABLE 1/7/19</b></p> <p>Fortnightly shots, usually 125-250mg deep IM glut, alternate sides each visit.</p> <p>Use green 21G needle and discard the large yellow needle supplied in box.</p> <p>Private script only, not PBS listed (approx. \$40 for 3 shots)</p> <p>Many clients learn to self administer (fairly easy), supply with sharps bins etc</p>

**Androforte 5%** Daily transdermal cream. Normal starting dose is 1-2ml. much quicker at drying than testogel.

**Testogel** Daily trans dermal gel. Pump pack is 12.5mg per application. 1-4 pumps daily.

Risk of transferring dose to female partners. Takes a while to dry.

May not induce secondary amenorrhoea.

**Good for needle phobic clients, and for clients wanting partial masculinisation eg non binary clients. Or wanting to “go slow”, remember low dose DOES NOT EQUAL NO DOSE.**

**Practice points:** Doses can be adjusted to target trough total testosterone levels in the lower end of the male reference range (10–15nmol/L)

Check bloods frequently (3 monthly initially, 6 monthly in longer term)

Watch for polycythaemia (**HCT>0.50**), if this occurs reduce dose / frequency.

If polycythaemia persists consider haematology referral for regular venesection and to exclude other causes.

Testosterone is not adequate contraception, consider Implanon / IUD / Depoprovera

For vaginal irritation / atrophy clients can use Vagifem low, twice weekly if desired.

DHT cream is not recommended for “bottom growth.”

Consider self collected HPV for cervical screening.

Call Medicare for authority Testosterone scripts, use “established androgen deficiency with testicular or pituitary disorder” indication. For the client to access PBS scripts, the prescribing GP will need to obtain an approval from a sexual health physician, urologist or endocrinologist depending on local specialist availability.

How people feel is far more important than actual levels as long as those levels are medical safe/appropriate.

## **Feminising hormones - Oestrogens**

### **Aim of oestrogen therapy**

To reduce gender dysphoria and distress by aligning physical appearance with gender identity.

Usually aim for hormone levels in the average cis female range (oestradiol level 300-600). Be mindful with respect to timing of dosing and blood tests when interpreting results.

NB: non binary clients may request lower doses for partial feminisation.

Ongoing medical supervision required to monitor effects, hormone levels, and prevent complications.

### **Expected effects of oestrogen**

#### **Within a few weeks..**

Calmer mood, decreased libido, softer skin

#### **Within a few months..**

Body fat redistribution, reduced muscle bulk and power, breast tenderness and swelling

#### **Longer term..**

Breast growth (permanent, may take 2-3y), reduction in size of penis and testicles, reduced facial and body hair, slowing of male pattern baldness, infertility (permanent)

## Possible side effects of oestrogen

Oestrogen may cause nausea and weight gain. Oestrogen can cause serious side effects such as DVT, PE, liver impairment - however these side effects are rare. Some people experience mood swings on oestrogen. Generally, mental health improves for trans and gender diverse people when they commence hormone therapy.

Topical oestrogens are preferred in older clients due to lower thromboembolic risk. Smokers should be advised to and be provided support to quit.

Oral oestrogen is contraindicated in people experiencing migraine with aura.

## Which oestrogen should I prescribe?

### Oestrogen therapy

#### Most (85%) of our clients take Progynova (oral oestradiol valerate)

**Oestradiol** Most clients take 6-8mg. For HRT initiation start with 2mg daily and gradually titrate up to 6 or 8mg depending on blood hormone levels.

**Microgynon 30/50** Usually 1 a day. NB: It's not possible to measure blood ethinyloestradiol levels, aim for suppressed testosterone. Anti-androgen is usually not required. Avoid in older clients, DVT, migraine history, smokers etc. There may be a higher DVT risk with this product compared to oestradiol.

**Climara** Weekly oestradiol patch. Lower clot risk, good for older clients.

**Estraderm /Estradot** Topical oestradiol patch, change every 3-4 days

**Sandrena gel** Daily oestrogen topical gel, usually 1 sachet per day

**Practice points:** Oestrogen can cause permanent infertility – encourage clients to freeze sperm prior to HRT and document this.

Aim for oestradiol levels around 300-600. Remember to take into account timing of dosing and blood test when interpreting levels. To also consider LH levels.

Oestrogen therapy does not change voice – consider referral to speech therapy if client desire “voice feminisation”

Oestrogen alone may suppress testosterone, but often not to desired level, consider adding in anti-androgen (see below)

Therapeutic Goods Administration-approved estradiol injections and implants are not available in Australia. Therefore Equinox does not currently prescribe these. We will regularly review this.

How people feel is far more important than actual levels as long as those levels are medical safe/appropriate.

## Antiandrogens

### Aim of anti-androgen therapy

To reduce gender dysphoria and distress by aligning physical appearance with gender identity.

To reduce testosterone levels.

Ongoing medical supervision required to monitor effects, hormone levels, and prevent complications.

## Expected effects of anti-androgens

Reduce body hair growth, reduce libido and erections and reduce acne.

## Possible side effects of antiandrogens

**Spironolactone** may cause electrolyte/renal disturbance, postural hypotension, diuresis, gynaecomastia.

**Androcur** may cause liver impairment (rare).

Anti-androgens can cause or exacerbate **fatigue and depression**. Monitor closely.

## Which antiandrogen should I prescribe?

Most of our clients take spironolactone or cyproterone acetate. Both are currently PBS listed.

**Spironolactone:** Usually 25-100mg daily. Monitor electrolytes/eGFR, low BP.

**Cyproterone acetate:** Usually 12.5-25mg daily eventually this can in some cases be reduced to 25mg 2-3/wk. Monitor LFT

**Practice points:** Not all clients want anti-androgens. For clients wishing to preserve erections, consider oestrogen alone, or oestrogen + low dose antiandrogen.

Cyproterone acetate is more potent and a good option for clients who want to cease erections.

Reduction in body hair can take several months. For facial hair laser or electrolysis may be required to achieve desired outcomes.

Antiandrogen effects are generally reversible on cessation (except gynaecomastia with Spiro)

Beware of antiandrogens as sole HRT agent as likely to cause Osteoporosis without concurrent oestradiol therapy.

Some clients opt for an orchidectomy to reduce testosterone levels and avoid lifelong antiandrogen medication.

**GnRH analogues** only available via Endocrinology, very expensive

**Domperidone** is NOT recommended or prescribed at Equinox

### **What about Progesterone?**

It is unclear and controversial as to whether progesterones should be prescribed for trans women.

Possible side effects of progesterones include fluid retention, insulin resistance, and depression.

Anecdotally trans women report increased breast growth with progesterones and they can be useful for some clients, particularly in the first 2-3 years of transition.

Provera 5mg can be prescribed, take one daily.

Prometrium 100mg daily (micronised progesterone) - This is not currently PBS listed.

Equinox and Thorne Harbour Health would like to thank the following people for their invaluable contributions in reviewing and commenting on these HRT prescribing guidelines:

Dr Ada Cheung, Dr Nick Silberstein, Peter Locke, Ren Grayson