

Hormones – facts, myths and safe usage

You may be tempted to buy hormones from the Internet, or in some way other than through a doctor. Maybe you have already started. This may be because treatment seems unduly delayed. Also, you may want to try the effects of hormones without anyone else knowing.

ALERT! If you are taking hormones without a doctor's prescription, however understandable your reasons, this is unwise and could put your health at risk.

Risks of taking hormones without a doctor's prescription?

- the products may not be genuine, have no effect, and be a waste of money;
- they may be of poor quality and even harmful;
- you may not know all the possible risks and side-effects
- or the risks of combining hormones with any other medications or herbal products;
- you won't have had a health check to see if you have any conditions that could be affected by hormone medication;
- the dosage and the way of taking the medication (pills rather than patches, for instance) may not be suitable for you. More is not necessarily better!
- you may not have considered any impact on reproductive options;

If you have already started taking hormones, see your GP and/or a gender specialist or endocrinologist as soon as possible. Doctors are now able to provide 'bridging prescriptions' so that you can be brought into a properly prescribed regimen as quickly as possible.

If your GP is not knowledgeable, you can signpost the elearning on the Royal College of GPs website at: <http://elearning.rcgp.org.uk/gendervariance>. This is written specifically for GPs and provides them with the relevant information to treat adults as well as children and adolescents and it tells them where they can refer you for specialist care.

The most serious risks when taking oestrogens are:

- thrombosis
 - deep vein thrombosis (DVT),
 - stroke
 - pulmonary embolism (block in a blood vessel in the lungs)
- altered liver function

The most serious risk when taking testosterone is:

- polycythaemia (over-production of red blood cells)

Gels and patches are safer than pills or injections



Trans Health Factsheet on Hormones

Trans women, trans feminine, non-binary, non-gender (assigned male) Feminising hormones - goal: serum total testosterone less than 3.0 nmol/L and serum estradiol within the range 200-600pmol/L; prolactin, liver function, and fasting glucose and lipids within reference ranges. Progestogens are not prescribed for the treatment of gender dysphoria.

Medication: Transdermal estradiol (as patch or gel; Evorel® patches⁹; Sandrena® gel¹⁰; Oestrogel® 0.06% gel¹¹); typical starting dose Evorel 100 (6.4mg estradiol/patch) patch twice weekly (range 1.6 to 9.6mg/patch or concurrently applied patches) or 2mg, as gel, daily (range 0.5 to 4mg). Risk of thrombosis is not dose-related with transdermal preparations.

Oral estradiol typical starting dose: 4mg daily; range: 2mg to 12mg. Risk of thrombosis increases with dose and is greater in over-40s. Estradiol implants are not recommended because they deliver very high levels of oestrogen.

GnRH analogue may be required if testosterone is not adequately suppressed. Typically this is triptorelin (Decapeptyl SR®¹³) 11.25 mg by intramuscular injection, three monthly. Goserelin is administered as an implant, involving a more complex procedure that may cause abdominal scarring and persistent subcutaneous nodules; Leuprorelin is less cost-effective. Treatment may continue until gonadectomy. GnRH analogues are better tolerated than cyproterone acetate which can cause liver problems and increased risk of thrombosis, but it may be used temporarily, 50mg twice daily for 2 weeks, to block the initial rise in testosterone when GnRH analogues are started. Estradiol is suspended for a few weeks before major surgery.

Estradiol is continued through life, but reviewed in the 50s age group when reduction to the lowest effective dose may be prescribed. Male pattern baldness may be treated with finasteride administered systemically and topical minoxidil. Established hair loss is extremely likely to be irreversible.

Base line monitoring: BP, FBC, urea and electrolytes, LFTs, fasting blood glucose, lipid profile, serum free T4, testosterone, estradiol, prolactin (every 6 months for 3 years, then yearly).

Trans men, trans masculine, non-binary, non-gender (assigned female)

Medication: Long-acting testosterone depot injection; or transdermal testosterone gel (recommended for patients with potential polycythaemia).

Testosterone and testosterone esters are recommended, as they do not have a damaging effect on the liver. Testosterone implants and oral preparations are not recommended.

a. Testosterone undecanoate 1000mg depot injection (Nebido®¹⁹), given intramuscularly: initial injection followed by second injection after six weeks, and subsequent injections at twelve week intervals; biochemical response assessed immediately before fourth injection; frequency of injection may be adjusted to achieve treatment target range.

b. Testosterone 2% gel (Tostran®²⁰) 10mg per metered dose from pump applicator. Starting dose is typically 5 pump actuations (50mg) daily, but range is 1 to 8 pump actions (10 to 80mg). This is more cost-effective than 50mcg sachets, and the higher concentration of testosterone (Tostran® 2%; other gels 1%) reduces the volume of gel required daily.

GnRH analogue may be added if periods have not stopped in three months on testosterone. Typically triptorelin (Decapeptyl SR®) 11.25 mg by intramuscular injection, is given every three months, with the testosterone.

Baseline monitoring: BP, FBC, U&E, LFTs, fasting blood glucose, lipid profile, serum free T4, prolactin, serum estradiol and testosterone (every 6 months for 3 years, then yearly)

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