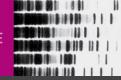
TESTOSTERONE FOR THE TRANS MAN

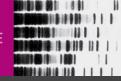
PRACTICAL TIPS FOR PRESCRIBING

Dr Fiona Bisshop Holdsworth House Medical Brisbane



MASCULINISATION





Testosterone: Permanent Changes

Will happen:

- Increased facial and body hair
- Deepened voice
- Clitoromegaly (4-5cm after 1-3 yr)
- Growth spurt and closure of growth plates if given before end of puberty

May happen:

- Male pattern baldness
- Reduced fertility but possibility of unexpected pregnancy

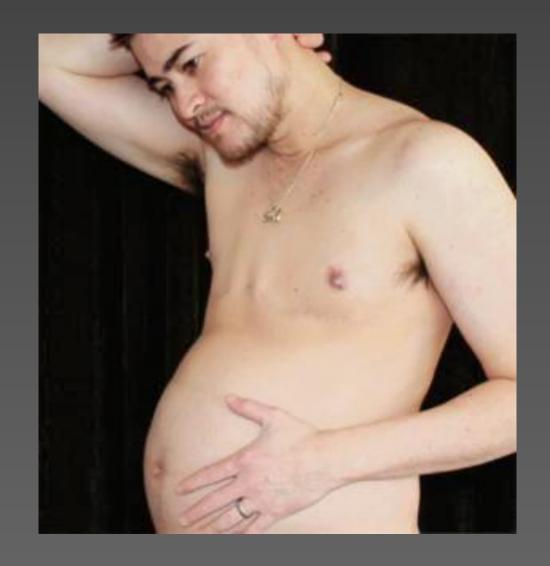
Future Fertility

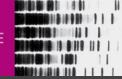
Egg retrieval

Egg freezing

IVF + Embryo Freezing

......\$\$\$\$ and no guarantees





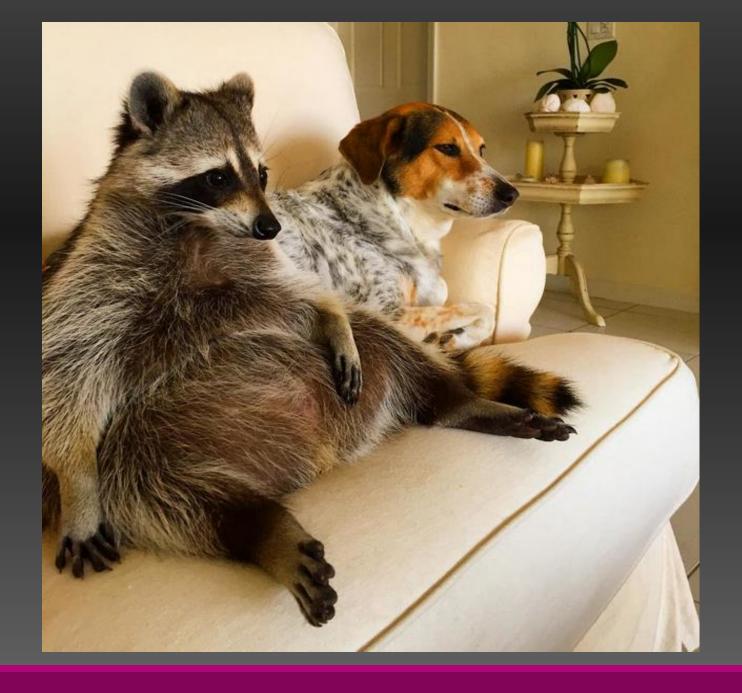
Testosterone: Reversible Changes

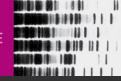
Increased libido

Increased appetite, weight gain, and fluid retention.

Increased muscle mass







Testosterone: Reversible Changes

Increased libido

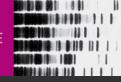
Increased muscle mass

Increased appetite, weight gain, and fluid retention.

Increased sweat and changes in body odor.

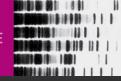
Prominence of veins and coarser skin.

Acne of the face, back, and chest (which if severe, may cause permanent scarring.)



Management of Acne

- Epiduo
- Doxycycline
- Referral for Roaccutane
- Testosterone dose adjustment for severe cases
- Often settles after a few years



Testosterone: Reversible Changes

Increased libido

Increased muscle mass

Increased appetite, weight gain, and fluid retention.

Increased sweat and changes in body odor.

Prominence of veins and coarser skin.

Acne of the face, back, and chest (which if severe, may cause permanent scarring.)

Emotional changes (both good and bad)

Hyperlipidaemia

Hyperglycaemia

Polycythaemia

Amenorrhoea

Vaginal dryness and itching

Headaches/Migraines

TESTOSTERONE EFFECTS

Effect	Expected Onset	Expected Maximum Effect
Skin oiliness/acne	1-6 months	1-2 years
Facial/body hair growth	3-6 months	3-5 years
Scalp hair loss	>12 months	variable
Increased muscle mass/strength	6-12 months	2-5 years
Body fat redistribution	3-6 months	2-5 years
Cessation of menses	3-6 months	1-2 years
Clitoral enlargement	3-6 months	1-2 years
Vaginal atrophy	3-6 months	1-2 years
Deepened Voice	1-3 months	1-2 years

TESTOSTERONE OPTIONS

Injectable

Transdermal

(Oral)

(Implants)

TESTOSTERONE AND THE PBS

"Androgen deficiency....with established pituitary or testicular disorder"

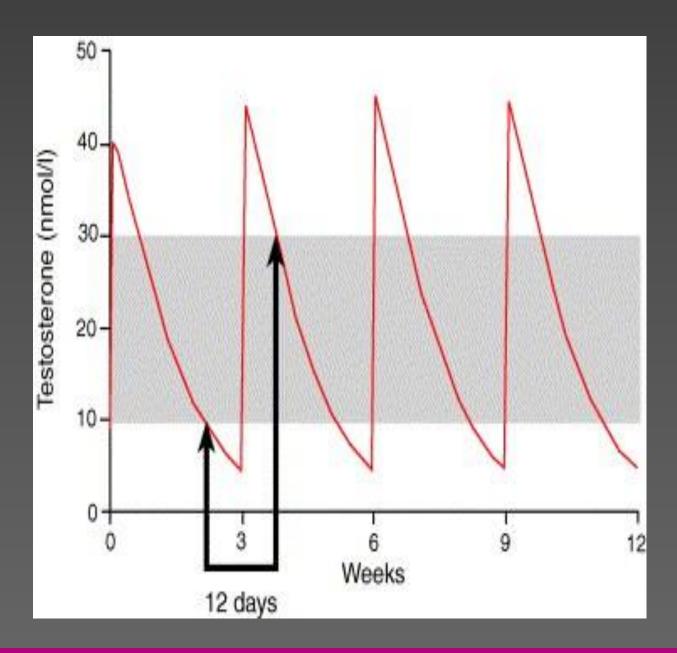
In consultation with

- endocrinologist
- sexual health physician
- urologist

TESTOSTERONE OPTIONS - INJECTABLE

Primoteston

- Testosterone enanthate
- 250mg in 1ml castor oil
- given 1-3 weekly in doses of 100 250mg
- peak and trough levels
- possibility of self-administration
- cheap, but no longer on PBS

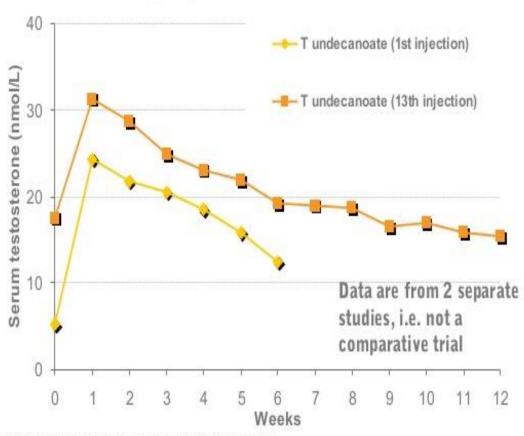


TESTOSTERONE OPTIONS - INJECTABLE

Reandron

- Testosterone undecanoate
- 1000mg in 4ml castor oil
- given 3 monthly after lead-in
- dose at 0, 6, 6-8, 8-10 weeks
- then 10-12 weekly (may be more frequent in obese patients)
- levels maintained in physiological range, avoiding peaks and troughs
- increased patient convenience with quarterly injections

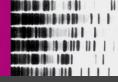
Pharmacokinetics of UK available injectable testosterone preparations: Nebido¹⁻³



Von Eckardstein S et al. J Androl 2002; 23(3):419-425.

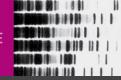
Behre HM et al. Eur J Endocrinol 1999;140:414-419.

Andrology



TRANSDERMAL TESTOSTERONE

- daily circadian profile of testosterone delivery
- daily adherence required
- not ideal for initiation due to more gradual changes (although preferred by some)
- care with transference to female partner or children



TRANSDERMAL TESTOSTERONE

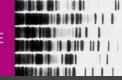
Testogel

- 50mg testosterone in 5g gel, daily
- skin reactions in 4-10% of patients
- avoid washing for 6 hours

- -30mg testosterone in 1.5ml actuation, daily
- underarm application

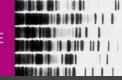
Androderm - patches





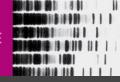
BASELINE TESTING

- Physical exam BP, BMI, further exam as indicated
- Fasting lipids and BSL
- LFTs
- LH/FSH if PCOS suspected
- Pap (if indicated)



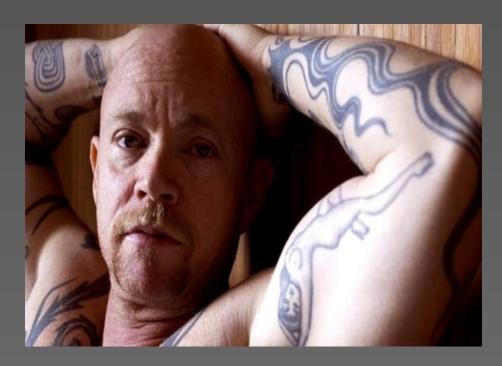
MONITORING

- Trough testosterone level in male range
- 6 mnthly E/LFTs, FBC and fasting lipids
- 。 BP
- 。 BMI
- Proactive management of acne

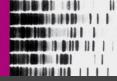


Management of Hair Loss

Embrace It!







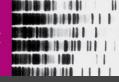
Management of Hair Loss

5-alpha-Reductase Inhibitors - Finasteride – start early

Minoxidil

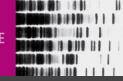
FGF5 Inhibitor (Evolis)— prolongs anagen phase

Surgery/Transplant



Enhancing Facial Hair





Enhancing Facial Hair

Minoxidil 5% topical can be applied to the face to accelerate the transformation of vellus hair to terminal hair.

This accelerates facial hair development. It takes approx 6 months to see significant benefit and should generally be avoided until month 3

Look for fuzzy vellus hairs on the face before prescribing.

Testosterone and the Vagina

Testosterone causes vaginal atrophy and decreased secretions

--> can lead to general discomfort and difficulty with penetrative sex

Mx – lubricants, topical oestrogen



If puller nervises annually series (in any use) and have in anniu, promet regime Pape, 'Dead uninormediate for none eliteration and ignorations is make getting a Pap reside.





Pap smears can be poor quality or show atypia on cytology

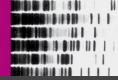
Mx - 2 weeks of topical oestrogen prior to test

(Shouldn't affect HPV testing)

Annotate your path form to avoid a call from the confused pathologist!

PV bleeding is not unusual early on in transition, but unexpected bleeding later on must always be investigated Don't forget possibility of pregnancy

T is not a fail-safe contraceptive - adequate birth control may be required

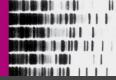


"Oestrogen Blockers"

Potential use for management of breakthrough periods

Use not recommended in guidelines

Potential side effects



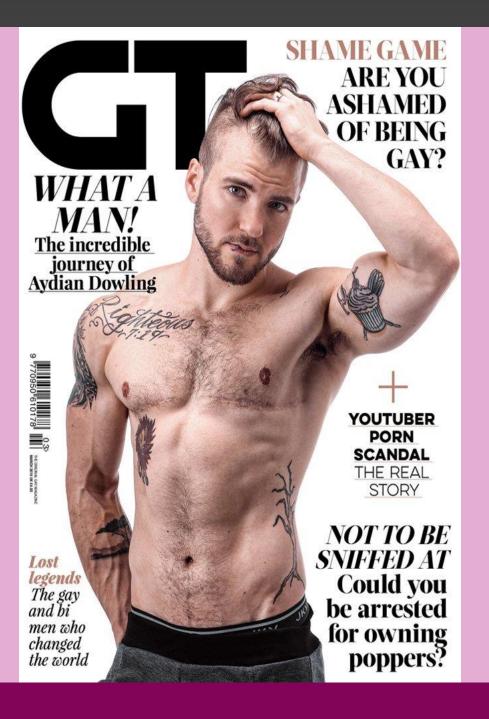
"Oestrogen Blockers"

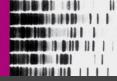
Aromatase inhibitors (off-label use)

- testosterone → oestradiol
- androstenedione → oestrone
- aromatase highly expressed in adipocytes Als may be of benefit in obese patients
- •3rd generation most potent, selective, least toxic anastrazole (Arimidex), letrozole
- S/E menopause-like symptoms
- usually ↑ testosterone, haematocrit

SERMs

- tamoxifen
- agonist in endometrium may worsen uterine bleeding





CONTRACEPTION AND SEXUAL HEALTH

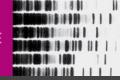
Many trans men have sex with women, including trans women

Some trans men have sex with men, including trans men

Sexual orientation may change over time

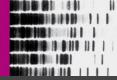
Your patient may not volunteer information

Assumptions are dangerous!



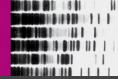
STI SCREENING

- Sexual history
- "do you have sex with someone who has a penis, and do you have penetrative sex?
 Where do they put their penis during sex?"
- PIV or "front hole"sex, sharing of sex toys
- •Condom use?
- •HIV risk should be discussed if having condomless sex with cis MSM



STI SCREENING

- Urine NAAT for Chlamydia/gonorrhoea
- •HVS or ECS
- rectal/throat swabs
- Serology for syphilis and BBV (HIV, Hep B, Hep C)
- Consider PrEP if at risk of HIV acquisition



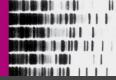
PrEP

Pre-exposure prophylaxis prevents HIV transmission

Trans men and women who have sexual partners who fall into risk groups should be considered for PrEP

Eligible for QPrEP demonstration study

May soon be available on PBS

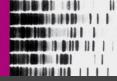


TESTOSTERONE AND PREGNANCY

Testosterone is not a reliable contraceptive

Testosterone is a teratogen and may cause foetal harm, excessive virilization





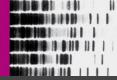
CONTRACEPTION OPTIONS

Condoms

Long acting reversible contraceptives

- •Implanon
- Mirena
- Copper IUCD

Oophorectomy and/or Hysterectomy



Emergency Contraception

- •Ella One (ulipristal) within 5 days
- •Postinor (levonorgestrel) within 3 days
- •IUD (within 5 days)

Long-term Health Management

- routine health screening as per age and guidelines
- remember the anatomy uterus, cervix, ovaries, breast tissue
- ongoing monitoring of hormone effectiveness and management of adverse events

Cancer Screening

Breast Chest wall exam

Cervical Pap smears if history indicated

Ovarian/ Consider Family History

Uterine Screen for PCOS

Evaluate unexplained uterine bleeding

Osteoporosis Screening

On T >5-10yr, no oophorectomy Consider bone density screening if age 50+, earlier if additional risk factors

Ca++/Vit D

Postoophorectomy

As above

Continue T, if discontinued consider bisphosphonate

Thank You



