**Anti-androgen (androgen blocker) therapy**

Anti-androgen drugs are sometimes prescribed in addition to oestrogen if this alone is not able to adequately lower your testosterone. Taking anti-androgens can reduce the amount of oestrogen you need to get the same effects, which minimizes the health risks associated with higher doses of oestrogen.

There are different types of anti-androgen. The one most typically offered is an injection of something called a GnRH analogue (eg: Decapeptyl, Prostap, Zoladex). This is given either monthly or three-monthly. Less often, a daily tablet called Finasteride is considered; this is particularly useful if you have concerns about scalp hair loss but is not always as efficient at lowering testosterone.

Anti-androgen drugs can also sometimes be prescribed alone for people who want to reduce “masculine” characteristics for a more androgynous appearance, as it is less “feminising” than oestrogen.

The anti-androgen injection works by over-activating the gland under the brain which controls the testicles. When this gland is over-stimulated it eventually goes to sleep, but initially it will instruct the testes to produce more testosterone. To counteract this ‘testosterone storm’, a medicine called Cyproterone acetate is given. It is only needed for the first two weeks, and only after the very first injection, after which time production of testosterone is switched off completely.

Finasteride is a medicine that stops testosterone being converted to a more potent form called DHT (Dihydrotestosterone), and it is DHT that attacks scalp hair follicles.

If you have genital surgery that involves removing the testes (gonadectomy/orchiectomy), you will no longer need the anti-androgen component of your treatment.

Most of the changes are reversible (ie: they will reverse if you stop taking the medication). There are two types of changes that may be permanent: breast growth and sterility (infertility).

Both anti-androgens and oestrogen affects your production of sperm. The long-term effects on fertility are not fully understood and the ability to make sperm may or may not come back even if you stop taking the medication. You will still need to consider the use of contraception if this is relevant to you.

**Typical changes from anti-androgens:**

**After 1-3 months**

- Decrease in sex drive
- Fewer instances of waking up with an erection or achieving an erection
- Decreased ability to make sperm and ejaculatory fluid (this becomes clearer)
- Slowed growth of facial and body hair – maximal after 4 months of treatment
Gradual changes (over at least 2 years)

- Further reduced growth of facial and body hair
- Slowed or stopped “male-pattern” balding
- Slight breast growth (reversible in some cases, not in others)

Anti-androgens affect the entire body. It is not possible to pick some changes and not others. Scalp hair loss will stabilise, but it will not re-grow. Anti-androgen treatment does not alter your voice, so you may wish to access voice modification and re-training though a Speech and Language Therapist. Facial hair laser or electrolysis treatments are usually required to remove facial hair.

**Negative effects of taking anti-androgens:**

GnRH analogue injections have a very good side effect profile and are considered both safe and effective, which is why they are most commonly used. For most people, they are given alongside oestrogen which means that the menopausal side effects (hot flushes, tiredness, thinning of the bones) do not occur. Some people report aches in the muscles and joints when they first start treatment.

If your testosterone level falls very low or to zero, you may feel extremely flat in terms of energy and drive. Your levels will be monitored through the use of blood tests, but it is important to report these symptoms so that you can be considered for replacement therapy as guided by a specialist endocrinologist.

Finasteride can cause liver disturbance and depression in some people, but these side effects are not as prominent as with other anti-androgen medicines.