About hormone replacement (FTM)

All humans normally make all three of the major sex hormones: testosterone, progesterone, and estrogen.
These hormones are naturally made by the gonads, and are also produced by the adrenal glands
and elsewhere in the body. The body naturally converts one hormone to another, and back again, as needed.
Varying proportions of these hormones contribute to a person's relative butch- or femme-ness.
Hormones and surgery can modulate the amounts of hormones in your body.
They are not mandatory or required for transitioning, however!
Possible risks and side effects of these medications are elaborated in the Informed Consent information.
This handout is about how hormone replacement therapy is intended to work, and what you might expect.

Masculine characteristics can be enhanced by supplementing testosterone. These characteristics include increased muscle mass and strength, deeper voice, facial and body hair, etc. Other characteristics may include weight gain, acne, and balding. Normal male bodily production of testosterone is about 4-9 mg per day.

Insurance often will not pay for hormone replacement of any kind to any appreciable extent, *regardless of what diagnosis is used* to justify the medication. Often a steep copay is imposed ($50 is typical). Fortunately, old-fashioned compounding pharmacies, which hand-make medications to individual specifications, often can provide the same medication for a cost that is more affordable.

Testosterone can't be taken as a pill, because the liver quickly breaks it down. Most people inject it as a "depot" form, which is then released into the bloodstream over the course of a week, providing relatively stable T levels.

It is also possible to use testosterone as a daily topical cream or gel. This is more expensive, but compounding pharmacies can make it more affordable than buying the mass produced product. Unfortunately, some individuals find they don't absorb testosterone efficiently through the skin, and switch to weekly injection instead.

Other formulations of testosterone are available (patches, subcutaneous pellets, sublingual pills, etc.), but these are prohibitively expensive for most people, especially for long term use.

Changes to expect

The first month:
Voice may begin to change. Skin and muscle texture may begin to change.
Menses may cease. Libido may increase.

The first six months:
Increasing muscular strength. Increasing libido. Genital growth begins.
Acne may occur. Facial and chest hair start to appear. Masculine body odor.
The voice deepens in pitch, with cracking and breaking during the transition.
Menses usually cease. There can be occasional uterine spotting. Persistent bleeding after six months can be treated with low-dose progesterone skin cream, if necessary.

The first couple of years:
Beard growth. (Transmen, like teenage boys, take years to develop full facial hair).
Genital growth reaches maximum at about three years. It's unknown whether fertility is 100% stopped.
If you work out and exercise: muscle growth and sculpting of the body for a more masculine appearance.
If you don't work out: weight gain can be substantial, and must be controlled with careful diet and exercise.

Beyond the first few years:
Scalp hair thinning may occur. This can be treated by transmen the same way other men treat it (example, finasteride/Propecia, minoxidil/Rogaine).
The inner genital structures (vagina, cervix) shrink. This can make pelvic exams and other penetration uncomfortable, but can be reduced by occasional or more frequent use of low-dose estrogen cream applied internally. (This has minimal effects on the rest of the body.)

Surgical considerations

Chest surgery is chosen by many if not most transmen, and eliminates risk of breast cancer.
Removal of the gonads (oophorectomy/"ovary-ectomy") allows you to reduce the amount of testosterone you need to use. Removal of the uterus (hysterectomy) eliminates any uterine bleeding issues or cancer risk.

Resources:

Medical Therapy for Transmen (2005) Nick Gorton MD et al., Lyon-Martin Health Services, www.lyon-martin.org
Hormones: A Guide for FTMs (2006) Vancouver Coastal Health, www.vch.ca/transhealth
Endocrine Therapy for Transgender Adults (2006) Marshall Dahl MD et al., Vancouver Coastal Health, www.vch.ca/transhealth
Long-Term Treatment with Cross-Sex Hormones (2008) Louis J. Gooren et al., J Clin Endocrinol Metab 93: 19–25.

Hormone Replacement Program (FTM) - The first year

Visit 1:

1. Evaluation, medical history.
2. Homework: "Trans Questions" and "Informed Consent for Hormone Treatment."
3. Please plan to formulate a weight-bearing and aerobic exercise program (gym membership or home training), to prevent adverse effects of hormone therapy.

Visit 1, part 2:

1. Review lab results.
2. Review "Trans Questions" and "Informed Consent for Hormone Treatment."
3. Physical exam, including chest and pelvic with Pap/HPV, unless documented as normal in past year (approximately $75 out of pocket).
4. Prescription: testosterone cypionate in sesame oil, 200mg/mL, 10-mL vial; 1mL syringes, 23g needles 1" long (cost about $60 for 4-6 months, out of pocket).
5. Homework: "How to Self-Inject," lab slip for week 6 labs.

Basic injection schedule:

Wk 1: 25mg/wk (0.13mL).

Wk 2: 50mg/wk (0.25mL).
Wk 3: 50mg/wk (0.25mL).
Wk 4: 50mg/wk (0.25mL).

Wk 5: 75mg/wk (0.38mL).
Wk 6: 75mg/wk (0.38mL);

Lab tests (approximately $50 out of pocket):

- Complete blood count.
- Complete metabolic panel (kidney and liver function, electrolytes and fasting blood sugar).
- Fasting lipid panel (cholesterol).

("Fasting" means nothing with calories by mouth for 8 hours before the blood is drawn. Other lab tests may be needed, depending on the individual. For example, if overweight, there may be a concern for high blood sugar, and you may need a glucose tolerance test [$30] and/or thyroid check [$30]; any previously abnormal labs may need to be repeated; etc.)

Wk 7: 75mg/wk (0.38mL);

Doctor visit; review lab results, brief physical exam (no chest/pelvic unless symptoms).
Please bring kit and plan to show how you draw up (to doublecheck correct dosage).

Wk 8: 75mg/wk (0.38mL).
Wk 9-11: 75mg/wk (0.38mL).
Wk 12: **Doctor visit**, brief physical exam (no chest/pelvic unless symptoms);
Consider increasing dose to 100mg if desired.

6 months: **Doctor visit**, physical exam (no chest/pelvic unless symptoms).
May consider switching to injection every 2 weeks, if necessary. However, I advise against two-week schedules, because they produce more hormone fluctuation and side effects.

9 months: **Get blood tests drawn before injecting** (approximately $125 out of pocket):

- Complete blood count.
- Complete metabolic panel (kidney and liver function, electrolytes and fasting blood sugar).
- Fasting lipid panel (cholesterol).
- Testosterone level.

(Other lab tests may be needed, depending on the individual.)

Doctor visit; review lab results, physical exam (no chest/pelvic unless symptoms).

12 months: **Doctor visit**, physical exam (no chest/pelvic unless symptoms).

Yearly doctor visit thereafter (chest/pelvic with Pap/HPV every 2-3 yrs, unless symptoms).

Updated 7/2012 by Leigh Saint-Louis MD