Masculinizing Hormone Therapy  
For Adolescents

Southern California Transgender Care Program
Updated April 2019

<table>
<thead>
<tr>
<th>Effect</th>
<th>Expected Onset</th>
<th>Expected Max Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin oiliness</td>
<td>1-6 months</td>
<td>1-2 years</td>
</tr>
<tr>
<td>Body fat redistribution</td>
<td>1-6 months</td>
<td>2-5 years</td>
</tr>
<tr>
<td>Body hair growth*</td>
<td>1-6 months</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Cessation of menses</td>
<td>1-6 months</td>
<td>n/a</td>
</tr>
<tr>
<td>Clitoral enlargement*</td>
<td>1-6 months</td>
<td>1-3 years</td>
</tr>
<tr>
<td>Vaginal atrophy</td>
<td>1-6 months</td>
<td>1-2 years</td>
</tr>
<tr>
<td>Deepening of voice*</td>
<td>6-12 months</td>
<td>2-5 years</td>
</tr>
<tr>
<td>Increased muscle mass/strength</td>
<td>6-12 months</td>
<td>2-5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-5 years</td>
</tr>
<tr>
<td>Facial hair growth*</td>
<td>12-18 months</td>
<td>4-5 years</td>
</tr>
</tbody>
</table>

* Changes may be irreversible even after hormones are stopped.  
Timing will vary in each individual. Ranges given are based on clinical experience.

Common side effects:
- Acne
- Weight gain
- Headaches
- Mood swings
- Loss of scalp hair slowly leading to male pattern baldness over time
- Swelling of hands, feet and legs (generally if testosterone given too quickly)

Risks may include:
- Polycythemia (increased red blood cells)
- Increased risk of heart disease
- Sleep apnea
- Liver damage or emotional lability (e.g. anger) if abused

* Risk is affected by patient’s personal medical history and family history
Masculinizing Hormones FAQ
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What is testosterone therapy?
- Hormone therapy is a type of gender-affirming medical care that some transgender, nonbinary and gender expansive people use to affirm their identity and bring about physical and emotional changes.

Do I need to take testosterone?
- For some people the changes that come with testosterone can be gender-affirming and support their gender identity and expression. Other people feel that testosterone is not needed to express their gender identity.
- Hormone therapy is not required to change your legal gender marker.

How is it used?
- The type of delivery method, dose and time on hormones is an individual decision and varies based upon each person’s goals and how their body responds. A low dose is started and increased over time.
- No one can predict how fast or how much change will happen for each individual. One person’s experience may be very different from another’s.
- Taking higher doses of testosterone than prescribed does not increase the rate of changes and may increase the risk of serious side effects and excess testosterone can be converted to estrogen.
- Some people take testosterone regularly over a lifetime, others may choose to take testosterone for a shorter period of time or intermittently under their physician’s supervision.

What does testosterone do?
- It may take several months after beginning testosterone to notice changes, though some people may experience changes more quickly or slowly.
- It may take 2-5 years for all physical changes to take place.
- Some changes from testosterone are permanent, even if you stop taking it and other changes are not and will reverse once off the medication.

What doesn’t change from testosterone?
- Chest size and shape. Testosterone may cause chest tissue to shrink slightly but there is typically no significant change.
- Appearance of the genitals. Some enlargement of the clitoris may occur but will not create male genitalia.
- Pelvis/hip bones. Body fat redistribution may give more masculine appearance in this area.

What will testosterone do to my fertility?
- Testosterone can stop or suppress ovulation and decrease egg release
- Testosterone is NOT a reliable form of birth control and pregnancy can occur
- Testosterone should not be taken while pregnant as it can cause birth defects
- Stopping testosterone can result in ovulation/menses after 6-12 weeks
- There is no data currently that indicates harm to the egg or fetus with long-term use of testosterone if it is discontinued before and throughout pregnancy.
- If a puberty blocker and/or testosterone were started prior to onset of menstruation, then a period of discontinuation of blocker and/or testosterone will be needed to allow estrogen driven puberty to mature eggs for reproductive purposes.
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If I am interested in taking testosterone, what’s next?
• Your provider will review both the potential benefits and risks of hormone therapy with you to help you know what changes to expect, address your concerns and answer your questions.
• Your provider will ask you about other prescription medications and substances you take including diet supplements and herbs, alcohol, nicotine, marijuana, recreational/street drugs and other hormones. Letting your provider know about everything you use to will help them take care of you safely.

How is testosterone administered for gender-affirming puberty induction and what are my options?

INTRAMUSCULAR INJECTION
• Delivered via a longer needle into a large muscle group, usually the thigh or buttock areas
• Recommended dose is typically every 1-2 weeks
• Can be self-administered at home or at Kaiser

SUBCUTANEOUS INJECTION
• Delivered via a small needle into the fat under the skin of the stomach
• Recommended dose is typically weekly
• Can be self-administered at home

Once dosing is stable, you may be switched to testosterone gel or patches if clinically appropriate.

What are puberty blockers?
• Puberty blockers like leuprolide (Lupron) and histrelin (Vantas) are medications that block your body’s feminizing hormones. It will not cause masculinizing effects.
• Puberty blockers may be used alone or with testosterone based on your specific needs.
• Menstruation will stop immediately or after one menstrual cycle. There may be vaginal itching or hot flashes that may last for months.

Important tips:
• Testosterone should be kept in a safe location away from children and pregnant people
• Do not share needles with anyone
• Dispose of needles safely after use
• Please take medication only as prescribed and discuss changes in dose, method of delivery and stopping hormones with your provider first.
• Remember to follow through on necessary blood tests and appointments

Patients are expected to continue care with a transgender mental health therapist and/or regularly attend a transgender support group in order to continue hormone treatment.