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## Clinical Overview of Gender Transition

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## Disclosures

- We have no financial disclosures or conflicts of interest
- We will be discussing off-label medication use (there is no on-label use of medication in transgender care).

### Objectives

- Understand what is gender dysphoria.
- Understand the medical and surgical treatment options for people who are transgender.



## Gender Dysphoria and Treatment

### Dysphoria

Gender dysphoria is condition where a person experiences discomfort or distress because there's a mismatch between their biological sex and gender identity.

@trans.gender.ftm

The **goal of treatment** is to eliminate/decrease gender dysphoria and it's negative effects in a person's life. We are NOT treating the person for being transgender.



## Does treatment work?

The Public Policy Research department at **Cornell University** conducted a systematic literature review of all peer-reviewed articles published in English between 1991 and June 2017 that assess the effect of gender transition on transgender well-being.

This search found a **robust international consensus** in the peer-reviewed literature that:

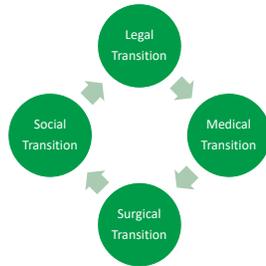
- gender transition, including medical treatments such as hormone therapy and surgeries, **improves the overall well-being** of transgender individuals. (93% of studies)
- indicates that **greater availability** of medical and social support for gender transition **contributes to better quality of life** for those who identify as transgender
- Zero studies concluded that gender transition causes overall harm.



## Individualized Treatment and Paths of Transition

Care is very individualized, depending on the degree of gender dysphoria manifested by various aspects of a person's mental and medical health, resulting in a wide variety of bodies and expressions.

- Some patients need hormones, no surgery
- Some patients need surgery, no hormones
- Some patients need neither
- Some patients need both



## Social Transition

- **Social transition** is the process by which the person alters their outward gender presentation, usually supported by psychotherapy (dress, behavior, gender markers, pronouns)
- This is often a time when people “come out” in different ways to people in various areas of their lives: partners, children, parents, extended family, work, school, home.



## Legal Transition

- **Legal name change**
- **Gender marker change**
  - Gender marker = the “M” for male or “F” for female on driver’s licenses, passports, birth certificates, social security cards, marriage licenses, insurance cards...
- The patient must provide proof of their legal name change and gender marker change before we can change the record. Acceptable documentation includes:
  - Picture ID
    - An ID issued by the state, such as a driver’s license
    - Passport
  - A court order documenting change
  - A birth certificate
- We highly encourage them to have insurance cards changed with correct name as well.



## Medical Transition

- Medical transition is the process by which cross-gender hormones (masculinizing or feminizing) and/or gender affirming surgery are used to change outward appearances, enabling a more congruent gender presentation
- Medical treatment is **medically necessary** for those with significant dysphoria.
  - Standards of Care and ethical guidelines are published by WPATH: [www.wpath.org](http://www.wpath.org)
  - WPATH Standards of Care indicate surgery should be for ages 18 and older



## Protocol for Trans Women

Feminizing Medical Treatment Options  
Assigned Male at Birth (AMAB), Male-to-Female (MTF)



<p><b>Hormone Therapy*</b> Goal is for testosterone to be in the normal female range or below with estradiol levels in the normal female pre-menopausal range</p> <ul style="list-style-type: none"> <li>• <b>Anti-androgens:</b> spironolactone 50-200 mg daily with or without finasteride 5 mg daily</li> <li>• <b>Estradiol:</b> Transdermal 0.2 to 0.3 mg; Oral 6-8 mg daily; Injectable Estradiol Valerate 4-8 mg or Estradiol Cypionate 2-4 mg weekly</li> <li>• <b>Progesterone</b> is optional: Micronized Progesterone 200 mg daily for 3-4 years, onset 1-2 years after starting Estradiol</li> </ul>	<p><b>Body Changes</b></p> <ul style="list-style-type: none"> <li>• Scalp hair growth varies</li> <li>• ↓ muscle mass</li> <li>• Softer skin, ↓ oil</li> <li>• ↓ libido</li> <li>• <b>Breast growth</b></li> <li>• ↓ testes, ↓ sperm</li> <li>• ↓ body hair</li> <li>• Redistribution of body fat</li> </ul> <p><small>* Many hormonal protocols exist. Park Nicollet clinicians have not seen more feminizing change obtained by higher doses.</small></p>	<p><b>Surgeries</b></p> <p>“Top” surgery Breast augmentation</p> <p>“Bottom” surgery Orchiectomy Vaginoplasty</p> <p>Additional procedures/surgeries</p> <ul style="list-style-type: none"> <li>• Facial feminization (various procedures that can include brow lift, hairline advancement, blepharoplasty, rhinoplasty, etc.)</li> <li>• Mechanical Hair removal</li> <li>• Tracheal shave</li> <li>• Voice (shortening of vocal chords – rare and risky)</li> </ul>	<p><b>Labs</b> Hormone goals: suppressed testosterone to normal female testosterone levels &amp; normal female estradiol levels</p> <p>Baseline: Lipids, Glucose Consider BMP, ALT</p> <p>With each dose change or yearly: • BMP, ALT, Prolactin, Free Testosterone, Estradiol • Labs above with Lipids at one year, then as indicated</p>
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## Gender Affirmation Surgeries Male-to-Female (Feminizing surgeries)

- **Breast augmentation-** A surgical procedure to increase the breast size through implants into the breast.
- **Facial feminization surgery-** Plastic surgery techniques in which the jaw, chin, cheeks, forehead, nose, and areas surrounding the eyes, ears or lips are altered to create a more feminine appearance.
- **Voice feminization-** Surgery to raise the pitch of the voice.
- **Tracheal shave-** Surgery to minimize the thyroid cartilage or Adam's apple.
- **Hair removal-** Laser hair removal - an intense, pulsating beam of light to remove unwanted hair. Electrolysis- inserting a tiny needle into each hair follicle, emitting a pulse of electric current to damage and eventually destroy the follicle.
- Genital surgeries:
  - **Orchiectomy-** to remove the testicles
  - **Vaginoplasty** (create a vagina using penile or colon tissue), **Vulvoplasty** (create a vulva), **Clitoroplasty** (create a clitoris), **Labiaplasty** (create labia)

From Mayo Clinic <https://www.mayoclinic.org/tests-procedures/feminizing-surgery/about/pac-20385102>



## Medication Side Effects- MTF Transition

- Spironolactone- dry mouth, thirst, headache, dizziness, vomiting, diarrhea (usually in the first 1-3 months of use)
- Estrogen-
  - hot flashes, headaches, mood swings (usually in the first few weeks of use)
  - Blood clots
  - Weight gain
  - Elevated blood pressure
  - Elevated triglycerides
  - Diabetes



## Protocol for Trans Men

Masculinizing Medical Treatment Options  
Assigned Female at Birth (AFAB), Female-to-Male (FTM)



<p><b>Hormone Therapy</b> Goal is for testosterone to be in the physiologic male range</p> <ul style="list-style-type: none"> <li>• <b>Injectable Testosterone Cypionate or Enanthate</b> – typical dose of 60-80 mg IM weekly</li> <li>• Topical Testosterone Gels in 1, 1.62 or 2%</li> <li>• <b>Testosterone Undecanoate (Aveed)</b> every 10 weeks (EXPENSIVE!)</li> <li>• <b>Testosterone Pellets (Testopel)</b> inserted every 4 months (EXPENSIVE!)</li> <li>• May add DepoProvera or Mirena IUD for menstrual management or contraception</li> </ul>	<p><b>Body Changes</b></p> <ul style="list-style-type: none"> <li>• ↑ facial/body hair, ↓ scalp hair</li> <li>• ↑ muscle mass</li> <li>• Oily skin, acne</li> <li>• ↑ libido</li> <li>• ↓ breast size <small>Binders are used by some to minimize breasts</small></li> <li>• Vaginal atrophy</li> <li>• Cessation menses</li> <li>• <b>Clitoral enlargement</b></li> <li>• ↓ voice</li> <li>• Stand-to-pee devices are available and used by some transmen.</li> </ul>	<p><b>Surgeries</b></p> <p>“Top” surgery male chest contouring with subtotal mastectomy and usually nipple/areolar positioning and re-sizing. (Binders are used to minimize breasts before or in place of top surgery.)</p> <p>“Bottom” surgery</p> <ul style="list-style-type: none"> <li>• <b>Hysterectomy</b> (removal of uterus)</li> <li>• <b>Oophorectomy</b> (removal of ovaries)</li> <li>• <b>Metoidioplasty with or w/o scrotoplasty</b> (informally meto or meta – separates enlarged clitoris from labia minora, severs suspensory ligament of clitoris, lengthening &amp; positioning it as it would be for a natal male.) <small>Vaginectomy is an option with this surgery.</small></li> <li>• <b>Phalloplasty</b> (fabrication of neopenis, sometimes followed by second surgery for erectile prosthesis implant)</li> </ul>	<p><b>Labs</b> Goal: normal male range of testosterone</p> <p>Baseline: Lipids, Glucose, ALT Consider baseline CBC, LFTs</p> <p>With each dose change or yearly: • CBC, ALT, Testosterone • If testosterone levels get too high, they start metabolizing the testosterone to estrogen via aromatase. If hysterectomy hasn't been done, they can start bleeding. • Lipids, glucose at 1 year, then as indicated</p>
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## Gender Affirmation Surgery Female-to-Male (Masculinizing Surgery)

- **Masculinizing chest surgery**- Surgical removal of the breast tissue (mastectomy) and placement of implants behind the pectoral muscles to create the appearance of a defined male chest (pectoral implants), move the placement of the nipples (nipple graft).
- Genital surgeries:
  - **Hysterectomy**- to remove the uterus (hysterectomy), or uterus and cervix (total hysterectomy)
  - **Salpingo-oophorectomy**- to remove the fallopian tubes and ovaries
  - **Vaginectomy**- to remove all or part of the vagina
  - **Scrotoplasty**- to create a scrotum and place testicular prostheses
  - **Metoidioplasty**- to increase the length of the clitoris
  - **Phalloplasty** - to create a penis

• From Mayo Clinic <https://www.mayoclinic.org/tests-procedures/masculinizing-surgery/about/pag-20385105>



## Medication Side Effects- FTM Transition

- Decreased estrogen- hot flashes, headaches, mood swings (in the first few months), vaginal dryness (can last years).
- Testosterone-
  - Mood swings- especially with bipolar, schizophrenia, other mood disorders.
    - Worsen ADHD symptoms
  - Irregular vaginal bleeding
  - Acne
  - Blood clots
  - Weight gain
  - Diabetes
  - Elevated blood pressure
  - Elevated cholesterol

