TRANSGENDER MEDICINE 2024 AND BEYOND

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DISCLAIMER

- I have no conflicts of interest or financial disclosures

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ANOTHER DISCLAIMER
FROM 2012

- This presentation WILL NOT discuss the ethics of transgender medicine. Regardless of your stance on the subject, you will encounter patients on hormonal therapy and need to know about the treatment, side effects, and long term health maintenance.

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OBJECTIVES

- Define **terms** related to gender dysphoria
- Identify **which patients are suitable for hormonal transition** to the opposite gender
- Describe the **typical changes** associated with hormonal therapy
- Identify **complications** of hormonal therapy

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- Patients can be started on gender affirming hormonal therapy after informed consent OR meeting WPATH criteria
- Main complication from estrogen is blood clots
- Hormonal therapy drastically decreases suicide in transgender men and women

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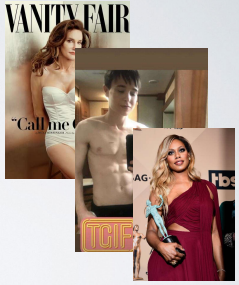
1984 → 2012 → 2015 → 2024



50-70 100 300 1,300

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WHY DO I CARE?

- Most recent estimate is 0.3 to 0.6 percent of the adult population is transgender

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- More than **2,000 scientific studies** on gender affirming care since 1975
- Endocrine Society's Clinical Practice Guideline cites **over 260**

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WPATH WORLD PROFESSIONAL ASSOCIATION for TRANSGENDER HEALTH

ACOG

ACOG COMMITTEE OPINION

Number 823

Committee on Gynecologic Practice and Committee on Health Care for Underserved Women

Health Care for Transgender and Gender Diverse Individuals

center of excellence for TRANSGENDER health

FENWAY HEALTH

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PRESS RELEASE

AMA strengthens its policy on protecting access to gender-affirming care

Chicago, IL | June 12, 2023

Endocrine Society-proposed resolution passes with overwhelming support in House of Delegates

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American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

GLMA Health Professionals Advancing LGBTQ Equality

American Urological Association

ACP American College of Physicians Leading Internal Medicine, Improving Lives

ACOG The American College of Obstetricians and Gynecologists

AACE American Association of Clinical Endocrinology

AMA AMERICAN MEDICAL ASSOCIATION

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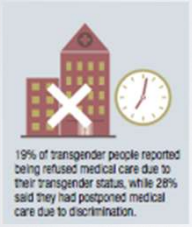
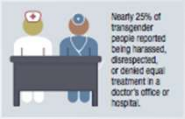
WHY DISCUSS TRANSGENDER MEDICINE?





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TERMINOLOGY

- Gender Identity: Innate sense of feeling male, female, neither, or somewhere in between
- Natal Sex: birth assigned sex, usually designated by genitalia or chromosomes
- Gender Expression: How gender is presented to the outside world
- Gender Dysphoria/Incongruence: Distress or discomfort when gender identity and natal sex are not completely congruent

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GENDER IDENTITY

- Transgender: Umbrella term, used to describe individual with gender diversity – typically used an adjective, NOT a noun, NOT a mental disorder

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TERMINOLOGY

- Transsexual: Fallen out of favor – historically referred to people who sought medical interventions for gender affirmation
- Sexual orientation: Individual pattern of physical and emotional arousal and the gender(s) of whom an individual is attracted
- Nonbinary gender identity: gender identity that is neither masculine nor feminine, is some combination of the two, or is fluid.

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NONBINARY

- Genderqueer
- Gender Creative
- Gender independent
- Bigender
- Non cisgender
- Agender
- Two-spirit
- Third Sex
- Gender Blender

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WHAT DO I CALL MY PATIENTS?

- Ask them
- Preferred name
- Preferred pronoun
- Update the medical record

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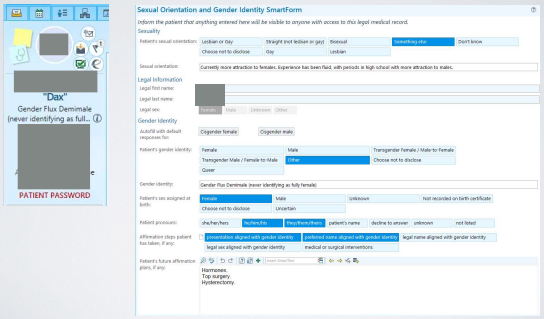
EMR BUILD



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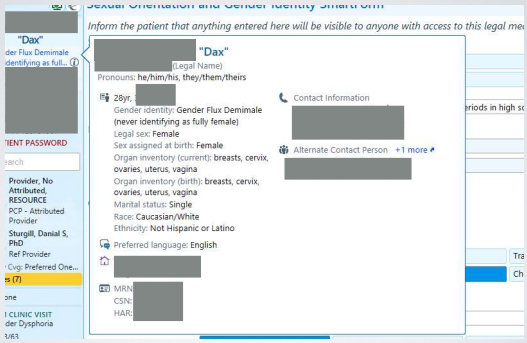

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3 AREAS TO TREAT

- Psychosocially
- Hormonally
- Anatomically







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COMMUNITY SUPPORT

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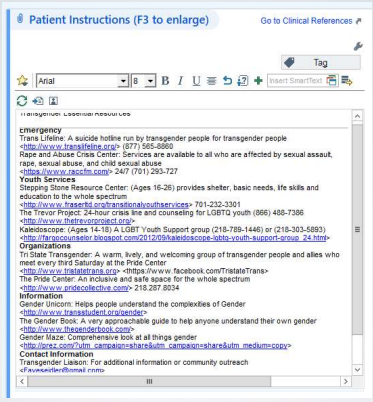

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HORMONES

WPATH WORLD PROFESSIONAL ASSOCIATION for TRANSGENDER HEALTH

- Persistent, well documented gender dysphoria
- Capacity to make a well-informed choice
- Of legal age
- Medical or mental issues are well-controlled

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STANDARD VS. INFORMED CONSENT

Standard	Informed Consent Model
•Initiation of hormonal therapy after psychosocial assessment by "qualified mental health professional" •Psychotherapy not required •Experienced hormone prescribing medical provider may meet requirement	Hormonal therapy initiated by prescribing provider based on: •Clinical judgment •Lack of contraindications •Patient capacity to give informed consent •Informed consent

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INFORMED CONSENT MODEL

- Requires healthcare provider to effectively communicate benefits, risks and alternatives of treatment to patient
- Requires healthcare provider to judge that the patient is able to understand and consent to the treatment
- Does NOT preclude mental health care
- Prescribing decision ultimately rests with clinical judgment of provider
- Informed consent is not equivalent to treatment on demand

(Deutsch, 2012)

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WHEN TO REFER

- Behavioral Health: When the diagnosis is uncertain
- Endocrinology: When you are uncomfortable with treatment
  - Disorder of sexual development (DSD)
  - Clotting disorder
  - Progression has plateaued
  - Insurance barriers

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DISORDERS OF SEX DEVELOPMENT

- Replaces terms "intersex," "hermaphrodite," and "psuedohermaphrodite"
- DSD term sometimes not supported by patient advocacy groups
- Chromosomal, Gonadal, or anatomical

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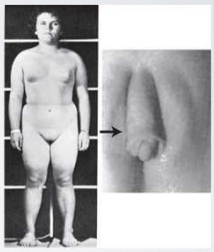
DSD



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BASIC REFRESHER

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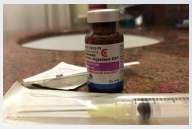
HORMONAL TREATMENT: FTM

- Testosterone
  - Intramuscular
  - Topical
  - Implantable pellets



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Androgen	Initial - low dose[b]	Initial - typical	Maximum - typical[c]	Comment
Testosterone Cypionate[a]	20 mg/week IM/SQ	50mg/week IM/SQ	100mg/week IM/SQ	For q 2 wk dosing, double each dose
Testosterone Enthanate[a]	20mg/week IM/SQ	50mg/week IM/SQ	100mg/week IM/SQ	"
Testosterone topical gel 1%	12.5-25 mg Q AM	50mg Q AM	100mg Q AM	May come in pump or packet form
Testosterone topical gel 1.62%[d]	20.25mg Q AM	40.5 - 60.75mg Q AM	103.25mg Q AM	"
Testosterone patch	1-2mg Q PM	4mg Q PM	8mg Q PM	Patches come in 2mg and 4mg size. For lower doses, may cut patch
Testosterone cream[e]	10mg	50mg	100mg	
Testosterone axillary gel 2%	30mg Q AM	60mg Q AM	90-120mg Q AM	Comes in pump only, one pump = 30mg
Testosterone Undecanoate[f]	N/A	750mg IM, repeat in 4 weeks, then q 10 weeks ongoing	N/A	Requires participation in manufacturer monitored program[f]

UCSF Transgender Care

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WHAT TO EXPECT: FTM

Effect	Onset (months)	Maximum (years)
Skin oiliness/acne	1 - 6	1 - 2
Facial/body hair growth	6 - 12	4 - 5
Scalp hair loss	6 - 12	
Increased muscle mass/strength	6 - 12	2 - 5
Fat redistribution	1 - 6	2 - 5
Cessation of menses	2 - 6	
Clitoral enlargement	3 - 6	1 - 2
Vaginal atrophy	3 - 6	1 - 2
Deepening of voice	6 - 12	1 - 2

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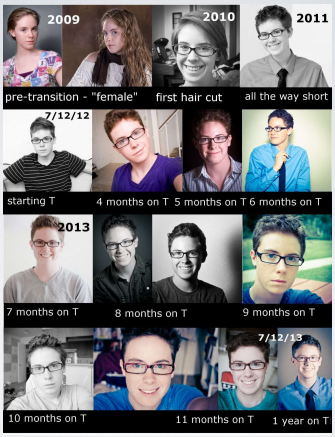

https://parkerkierce.wordpress.com/tag/hrt/

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CHAZ BONO

http://www.timetotolerate.com/147711/13-famous-transgender-celebrities/4/

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SURGICAL REASSIGNMENT: FTM

- Mastectomy (Top)
- Hysterectomy and bilateral salpingo-oophorectomy (Bottom)
- Addition of phallus (Bottom)

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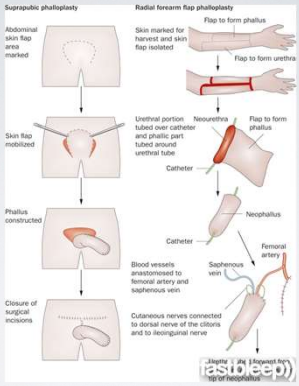

http://www.fastlikeep.com/assets/notes/image/7055_1.jpg

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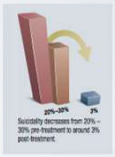
COMPLICATIONS: FTM

- Heart Disease: uncertain
- Breast, uterine, and ovarian cancer: uncertain, but possibly increased
- Erythrocytosis
- LFT abnormalities
- Mortality is comparable to the general population



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- https://www.trulygeeky.com/wp-content/uploads/2017/05/transgender-woman-to-man-10.jpg

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HORMONAL TREATMENT: MTF

- Spironolactone —> blocks synthesis of testosterone and androgen receptor
- Estrogen
  - Oral/sublingual – don't use ethinyl estradiol (oral contraceptive pill)
  - Patch
  - Injections
- Progesterone

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Hormone	Initial-low[b]	Initial	Maximum[c]	Comments
Estradiol oral/sublingual	1mg/day	2-4mg/day	8mg/day	if >2mg recommend divided bid dosing
Estradiol transdermal	50mcg	100mcg	100-400 mcg	Max single patch dose available is 100mcg. Frequency of change is brand/product dependent. More than 2 patches at a time may be cumbersome for patients
Estradiol valerate IM[a]	<20mg IM q 2 wk	20mg IM q 2 wk	40mg IM q 2wk	May divide dose into weekly injections for cyclical symptoms
Estradiol cypionate IM	<2mg q 2wk	2mg IM q 2 wk	5mg IM q 2 wk	May divide dose into weekly injections for cyclical symptoms

Hormone	Initial-low[b]	Initial	Maximum[c]
Spironolactone	25mg qd	50mg bid	200mg bid
Finasteride	1mg qd		5mg qd
Dutasteride			0.5mg qd

Hormone	Initial-low[b]	Initial	Maximum[c]
Medroxyprogesterone acetate (Provera)	2.5mg qhs		5-10mg qhs
Micronized progesterone			100-200mg qhs

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WHAT TO EXPECT: MTF

Effect	Onset	Maximum
Redistribution of body fat	3 - 6 months	2 -3 years
Decrease in muscle mass and strength	3 - 6 months	1 - 2 years
Softening of skin/decreased oiliness	3 - 6 months	unknown
Decreased libido	1 - 3 months	3 - 6 months
Decreased spontaneous erections	1 -3 months	3 - 6 months
Male sexual dysfunction	Variable	Variable
Breast growth	3 - 6 months	2 - 3 years
Decreased testicular volume	3 - 6 months	2 - 3 years
Decreased sperm production	Unknown	> 3 years
Decreased terminal hair growth	6 - 12 months	> 3 years
Scalp hair	No regrowth	
Voice changes	None	

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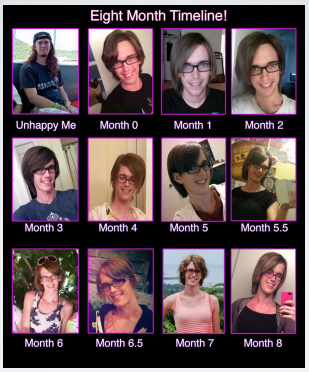

http://i.imgur.com/BS0ad27.jpg

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ISIS KING

http://www.timetobreak.com/147711/13-famous-transgender-celebrities/2/

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LEA - T

http://www.timetobreak.com/147711/13-famous-transgender-celebrities/7/

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SURGICAL REASSIGNMENT: MTF

- Orchiectomy and/or
- Vaginoplasty
- Facial feminization
- Vocal cord surgery
- Breast augmentation
- Tracheal shave
- Buttock augmentation

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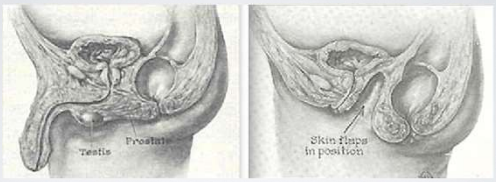

https://genderbrender.files.wordpress.com/2014/08/srs-male.jpg

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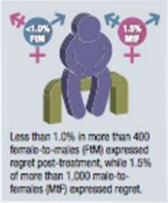
COMPLICATIONS: MTF

- Venous thromboembolism: Increase
  - Discontinue estrogen three to four weeks before surgery
- Coronary Artery Disease
  - Familial hypertriglyceridemia
- Mortality: Increased (no adjusted data)
- Elevated prolactin
- Electrolyte issues



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https://i.pinimg.com/736x/ae/0c/d8/ae0cd8f91e2c472ad84589ba1f3adfa3c--transgender-mtf-mtf-transition.jpg

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- https://i.pinimg.com/564x/cf/36/f7/cf36f795bc05b7886fcf8af2cb18f36d--mtf-transition-transgender.jpg

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MYA TAYLOR

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HORMONE PEARLS

- Maximum effect dose not necessarily require maximum dose
- Check with insurance prior, use term "medically necessary" in documentation
- Don't forget syringes and education for intramuscular/subcutaneous medications
- Hormonal therapy is not great birth control

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LAB MONITORING

- Transgender male: Testosterone in cisgender male range, estrogen levels not very useful
- Transgender female: Testosterone under 55, estrogen in cisgender female range but under 300
- Non binary: Labs based on patient centered goals

Table 3. Lower and upper limits of normal to use when interpreting selected lab tests in transgender men using masculinizing hormone therapy

Lab measure	Lower Limit of normal	Upper Limit of normal
Creatinine	Not defined	Male value
Hemoglobin/Hematocrit	Male value if amenorrheic*	Male value
Alkaline Phosphatase	Not defined	Male value

* If menstruating regularly, consider using female lower limit of normal.

Table 5. Lower and upper limits of normal to use when interpreting selected lab tests in transgender women using feminizing hormone therapy

Lab measure	Lower Limit of normal	Upper Limit of normal
Creatinine	Not defined	Male value
Hemoglobin/Hematocrit	Female value	Male value
Alkaline Phosphatase	Not defined	Male value

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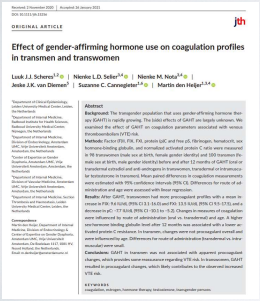
CLOTTING



ORIGINAL ARTICLE

jth

Effect of gender-affirming hormone use on coagulation profiles in transmen and transwomen

Lusk J.J. Scheres[1,2] | Nienke L.D. Seller[3,4] | Nienke M. Nota[3,4] | Jeske J.K. van Diesen[5] | Suzanne C. Cannegieter[3,4] | Martin den Heijer[1,3,4]

- Increased risk with estrogen, not with testosterone
- Tobacco cessation
- ? Aspirin
- NOT an absolute contraindication
- ? Stop estrogen for a few weeks preoperatively or before immobilization

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HEALTH MAINTENANCE

- Bone Density
- Prostate
- Mammograms
- HIV
- Cervical/Uterine/Ovarian Health
- Fertility

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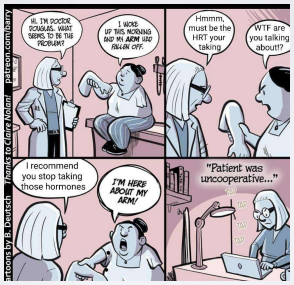
TRANSGENDER BROKEN ARM SYNDROME



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WHAT SHOULD I DO?

- What would you do for any other patient of their age?
- Referral to psychology or endocrinology if you are uncomfortable
- Routine Health Maintenance
  - Refer as necessary
- Be aware of complications

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QUESTIONS?

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