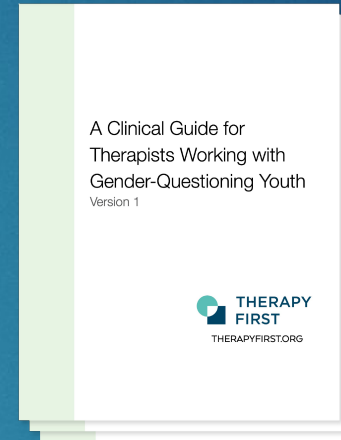
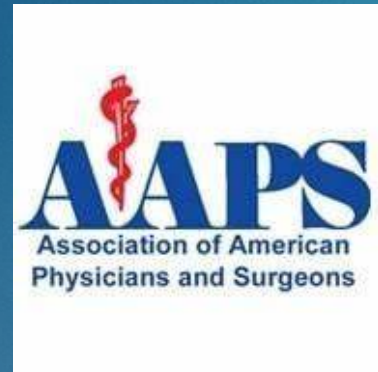


# The Science of Transgender Belief



Michelle Cretella, MD

Chair Adolescent Sexuality Committee, American College of Pediatricians

January 25, 2025 Advocates Protecting Children Best Practices Webinar

*Dr. Michael Bailey*  
*Warned Against Gender Ideology 2007*

- ▶ *Bailey JM & Triea K “What Many Transgender Activists Don't Want You to Know: and why you should know it anyway.” (2007) Perspectives in Biology & Medicine 50(4):521-34.*
- ▶ *A majority of Americans believe male transexuals have a “feminine essence” trapped in their male bodies*
- ▶ *This feminine essence narrative [has led] to the brain-sex theory of transexualism [despite] neither represent[ing] reality.*
- ▶ *This myth is damaging to science and to many transsexuals*

# *Gender Ideology* Continues to Masquerade as *Science*:

- 1) **People are “assigned a sex” at birth**
- 2) **Some are born in the wrong body**
- 3) **Thus, self-professed gender identity overrides biology**
- 4) **Intersex conditions prove sex is a spectrum not binary**
- 5) **Since binary sex is a social construct, “Transwomen = women.”**
- 6) **Safely change sex via social affirmation, drugs, & surgeries**

## Definitions: What is Sex?

- ▶ **Sex is defined by** an organism's **natural reproductive design** as either the donor of genetic material (**male**) or the recipient of genetic material (**female**) during repro act.
- ▶ **Sex is determined at fertilization by** sex-determining **genes** on sex chromosomes.
  - ▶ **Chromosomes neither define nor determine sex!**
  - ▶ **Sex is an innate, immutable & binary trait**



# Disorders of Sex Development (DSD): Deficiencies & Malformations of the Binary

- ▶ **DSD = “intersex conditions”= birth defects**
- ▶ **DSD = deficiencies or malformations of the normal binary male/female reproductive system**
  - ▶ **all forms associated with impaired fertility**
- ▶ **DSD = rare affecting 0.02% of the population**
  - 1) **Infants with ambiguous genitalia (e.g.: CAH) or**
  - 2) **individuals sexual phenotype fails to match genotype (e.g.: AIS)**

# Gender: Masculine v. Feminine, or synonym for sex

1950s -John Money re-defined gender as **“the social expression of an innate sexed identity that may differ from biological sex”**. (Feminine essence myth)

**Gender (DSM-5)** “lived role” of male or female; determined by interaction of cultural & psychological factors with person’s biological constitution.

**Gender identity (DSM-5)** “a category of social identity” determined by interaction of cultural, psychological & biological factors.

**Gender Dysphoria** = formerly GID, emotional distress +/- social impairment due to having a gender identity different from that typically associated with one’s sex

# Transgender vs. Transsexual

- ▶ **Transgender** refers to the *broad spectrum* of individuals who *transiently or persistently* identify with a gender different from that associated with the individual's biological sex (no drugs/surgeries required). [TUMBLR has a list of 112 genders](#)
- ▶ **Transsexual** falling out of use refers to a transgender believing individual who has undergone one or more medical or surgical interventions.



## US Pediatric Myths From 2007 - Present



- 1) *Born with a brain that's on a different page from their body*
  - **Transgenderism is innate and immutable**
- 2) *These youth are not mentally ill*
- 3) *Counseling to help youth embrace their body is universally futile, harmful and unethical*
- 4) *Trans youth will commit suicide without “gender affirming Tx”*



# Opposite-sexed Brains? The Politics of Brain Studies



## Anorexia Nervosa

- Numerous replicated brain studies □ differences

Obese brains trapped in anorexic bodies???

## Transgender

- Far fewer, lesser quality, not replicated

Girl brain trapped in a boy's body or vice versa





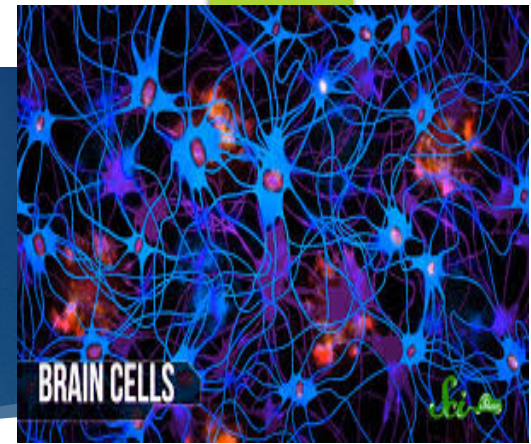
## No Baby Born with “Wrong” Brain



- ▶ **Male & female brain tissue has different genes due to presence or absence of Y chromosome; also male/female brain cells express many shared genes differently!**
- ▶ **Male infant brains are further masculinized by endogenous testosterone, secreted from testes beginning eight weeks’ gestation.**
- ▶ **Female infants lack male genes & male testes, and therefore, do not have “boy” brains.**



# Neuroplasticity:



- ▶ **Trans brain studies likely reflect the result of transgender-identification**
- ▶ **Maternal-infant gaze, behavior, thinking & relationships alter brain microstructure and function**
- ▶ **Transgender subjects have been thinking and acting for months to years in ways that, through learned behavior and associated neuroplasticity, may produce brain changes that could differentiate them from other members of their sex**



# Innate & Immutable? The Politics of Twin Studies



## Anorexia Nervosa

- Identical Twins Concordance Rate □ 44%-70%

## Transgender

- Identical Twins Concordance Rate □ 28%

**GENES DO NOT DETERMINE EITHER DISORDER**

- Genetic **Influence** of Anorexia Nervosa > Transgender



## Basic Behavioral Genetics: Behavior not innate like skin color



- ▶ **Genes influence behavior, they do not hardwire a person to think, feel, or behave in a particular way.**
- ▶ **All human behavior arises from a combination of a person's Vulnerability (genes) + Environment + Agency (free will choices)**





# American Academy of Pediatrics: “Gender Affirming Treatment”

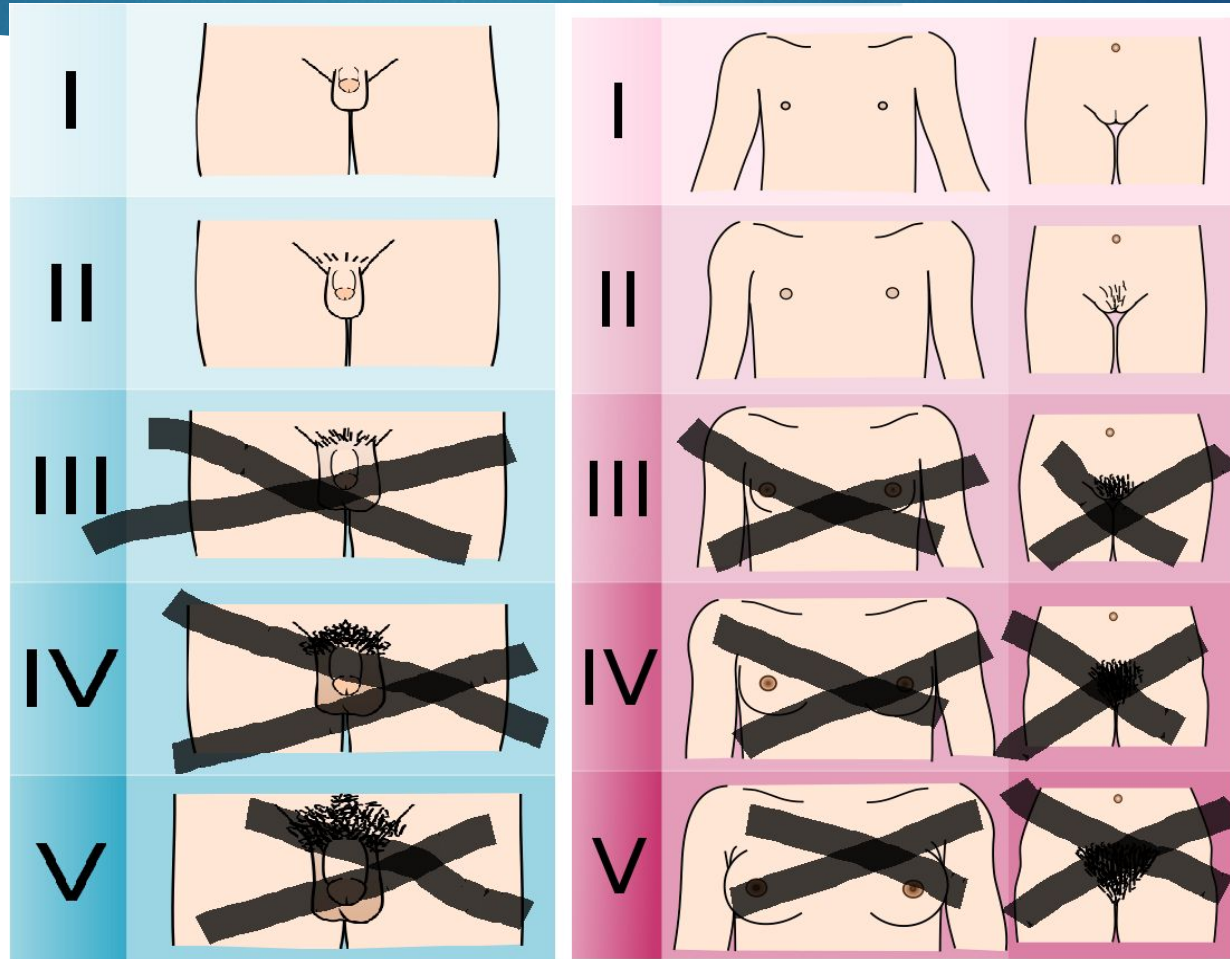
- 1) **Socially Transition (all ages)**
- 2) **Puberty Blockers @ Tanner Stage 2 (or earlier)**
- 3) **Wrong Sex Hormones (as young as age 8)**
- 4) **Wrong Sex Surgeries (under age 18)**



# Social Affirmation is NOT Okay

- 1) Schumm WR, Crawford DW. **Is Research on Transgender Children What It Seems? Comments on Recent Research on Transgender Children with High Levels of Parental Support.** *Linacre Q.* 2020 Feb;87(1):9-24. **Answer “No.”**  
**When Schumm re-analyzed studies with authors’ missing data accounted for, results showed significantly lower self-worth among wrong-sex affirmed kids**
- 2) **Social affirmation leads to persistence of transgender belief;**  
**5 studies show that social affirmation + blockers  $\square$  wrong-sex hormones**

# Puberty Blockers (Lupron) = FROZEN SEXUAL DEVELOPMENT



# Blockers □ Absence of NORMAL Puberty = Disease (Iatrogenic Hypogonadotropic Hypogonadism)

## Female Menopause-like state

Block normal breast development

Sexual dysfunction

Prevent ovulation - infertility

Disrupt normal bone development =  
Osteoporosis as young adults

Disrupt normal brain development  
**? Memory loss ? Decreased IQ**

## Male *State of chemical castration*

Stunt penile & testicular growth

Sexual dysfunction

Prevent spermatogenesis - infertility

Disrupt normal bone development =  
Osteoporosis as young adults

Disrupt normal brain development  
**? Memory loss ? Decreased IQ**

# Lupron's Neuropsychological Effects

- 1) **Emotional lability, mood changes, nervousness, anxiety, agitation, confusion, delusions, insomnia, depression**
  - 2) **UK study: 34% GD youth deteriorated; 37% no improvement on puberty blockers (71% failure rate!)**
- ~ **McPherson S, Freedman DEP. Psychological Outcomes of 12-15-Year-Olds with Gender Dysphoria Receiving Pubertal Suppression in the UK: Assessing Reliable and Clinically Significant Change. J Sex Marital Ther. 2024;50(3):315-325.**

**FACT CHECK: “Blockers decrease suicide risk”???**

*Jack Turban, et al. Pubertal Suppression for Transgender Youth [sic] & Risk of Suicidal Ideation. Pediatrics (Feb. 2020)*

**Table 3: Gender distressed youth on puberty blockers had double the rates of serious suicide attempts resulting in hospitalization compared to the control group  
(45.5% w/ blockers versus 22.8%)**





# Temporary Lupron Use + Normal Puberty

## ☐ Permanent Damage

*Temporary use can cause permanent damage b/c normal developmental time is forever lost!*

- Normal Bone Density – LOST
- Psychosocial Milestones – LOST
- Sex Steroid Organization of brain – Impaired
- Male fertility – possibly permanently impaired

(Mayo Clinic Pre-print March 27, 2024

<https://www.biorxiv.org/content/10.1101/2024.03.23.586441v1.full#T1>)

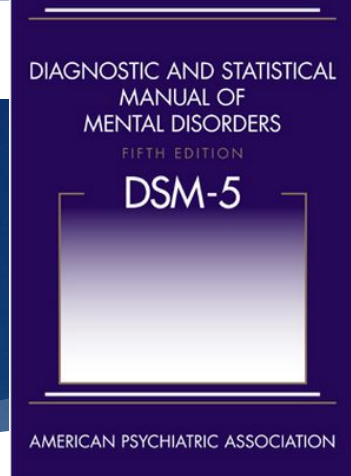


# Suicide Risk for Trans Identified Youth comparable to other at risk groups

- 1) Being trans-identified increases suicide risk by factor of 13
- 2) Anorexia increases risk by a factor of 18
- 3) Depression multiplies it by a factor of 20
- 4) Autism raises the risk by a factor of 8

Anorexia, depression and autism = comorbidities of GD...

<https://www.transgendertrend.com/suicide-by-trans-identified-children-in-england-and-wales/>



## Is suicide inevitable absent social & medical intervention?

- ▶ **>75%** of GD children resolve by adulthood (Handbook Sexuality & Psych)
- ▶ **50 – 88% of GD girls; 72-98% of GD boys** resolve by adulthood (DSM-5)
- ▶ **roughly 60–90% of GD children desist by adulthood** (Cantor)

[http://www.sexologytoday.org/2016/01/do-trans-kids-stay-trans-when-they-grow\\_99.html](http://www.sexologytoday.org/2016/01/do-trans-kids-stay-trans-when-they-grow_99.html)

**Without social indoctrination & drugs:**

**Most Kids Get Better Before or After Natural Puberty!**

# Rational & Compassionate Medicine is Not Driven by Threat of Suicide

- 1) **GD children with SI are no different than other youth with SI**
- 2) **>90 percent suicide victims have diagnosed mental disorder.** (No evidence GD children who commit suicide are any different. )
- 3) **Suicide prevention = tx of psychological co-morbidities.**
- 4) **16 case series of counseling success among teens & adults**

# Effects of Wrong Sex Hormones

## Males on oral estrogen

## Females on testosterone

Increased Risk for HEART ATTACKS

Increased risk for HEART ATTACKS & STROKE

BLOOD CLOTS = 5X risk

Erythrocytosis (over production rbcs)

STROKES 2X risk

Severe liver dysfunction

Gall stones

High Blood Pressure

Hypertriglyceridemia

Breast Cancer

Breast Cancer

Uterine & ovarian cancer

Gynecomastia

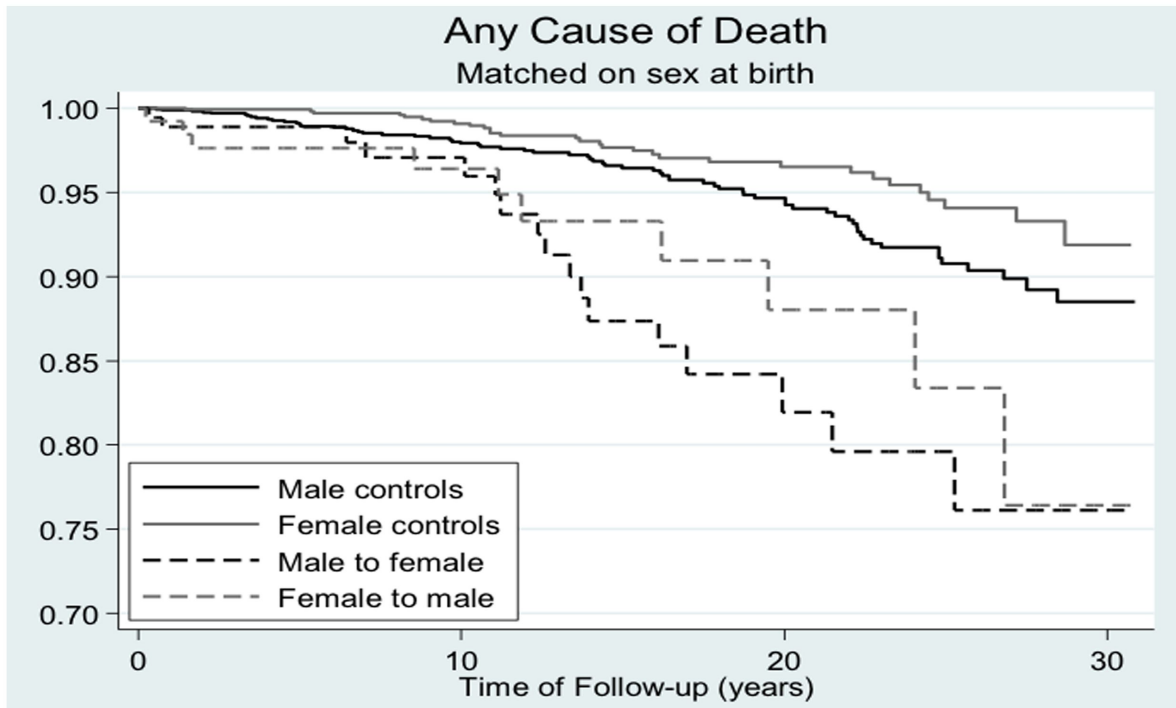
Hirsutism, Adam's apple, low voice



# Wrong Sex Surgeries

- ❑ **Females age 13**
  - **Double mastectomies for ‘male chest dysphoria’**
- ❑ **Females age 16**
  - **Hysterectomies**
- ❑ **Males ages 16-17**
  - **Castration**
  - **Penectomy**
  - **Creation of Genital Wound (“neovagina”)**

# Long Term Mortality in Adults Wrong Sex Hormones and Surgery



- ▶ **Transitioned adults were 19 X more likely to commit suicide compared to adults in the general population**

Dhejne C, Lichtenstein P, Boman M, Johansson AL, Långström N, Landén M. **Long-term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden.** PLoS One. 2011;6(2):e16885.

# Psychopathology Precedes Trans Identity

Becerra-Culqui et al (2018) - Kaiser Permanente Peer Matched Trans Youth Study

- ▶ Psychological disorders **7X's higher overall**
- ▶ Psychological hospitalizations **22-44 X's higher**
- ▶ Self-harm **70-144 X's higher**
- ▶ Suicidal ideation **25-54 X's higher**
- ▶ **(All PRIOR to Trans belief/identity in adolescent youth)**

# Contributing Factors □ Pediatric/Young Adult Transgender Belief

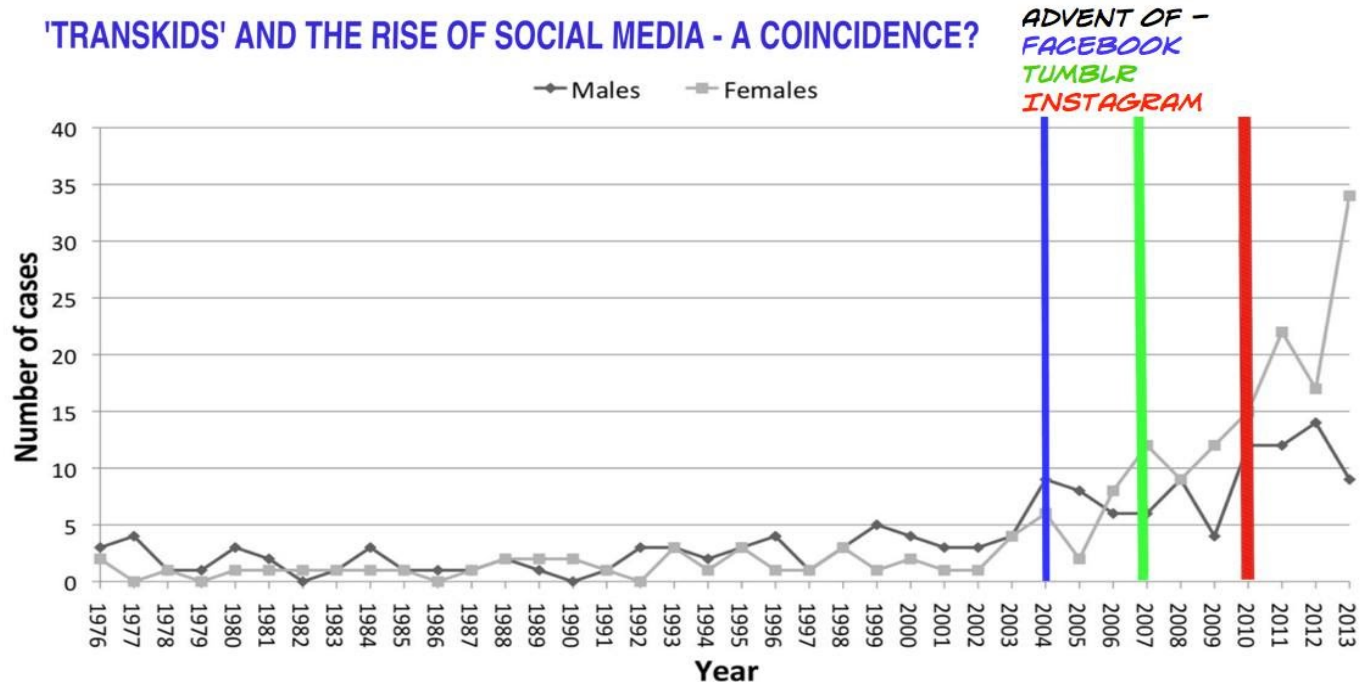
- 1) **Reactive Attachment Disorder**
- 2) **Adverse Childhood Events (PTSD from abuse/bullying)**
- 3) **Autism/ADHD**
- 4) **Porn addiction (esp. “sissy porn”/OCD -- ruminations/obsessions re sex/gender change)**
- 5) **Major Depression +/- Psychotic Features**
- 6) **Generalized Anxiety/Social Anxiety/”internalized homophobia”**



# Indoctrination & Soc. Contagion



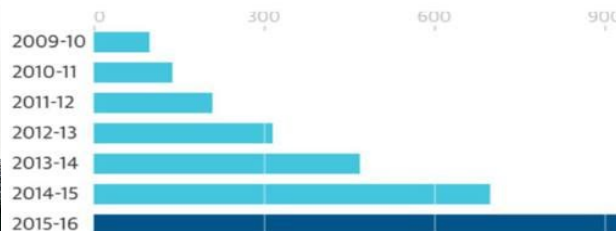
'TRANSKIDS' AND THE RISE OF SOCIAL MEDIA - A COINCIDENCE?



ADVENT OF -  
FACEBOOK  
TUMBLR  
INSTAGRAM



As reported in a 2015, in an article in the *Journal of Sexual Medicine*, researchers in Canada and the Netherlands examined data from 748 referrals of children to gender clinics in the two countries across several decades. There has been a huge increase in the number of girls presenting, and this coincides with the advent of social media.



A graph on the 4thwavenow website shows that the increase in 'trans identification' in young people continues to rise at an astonishing rate. At the same time, more and more youngsters are spending more and more time on social media. Is this a coincidence?





**\*\*Psychosocial Factors Predominate\*\***  
**Vulnerability (genes) + Environment + Agency**

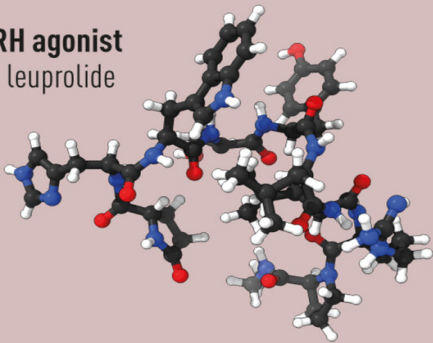
- ▶ **Social reinforcement/contagion (family, schools, clubs, internet, all media, Literature)**
- ▶ **parent psychopathology, family dynamics**
- ▶ **Adverse childhood events including sexual abuse**
- ▶ **Psychopathology and/or Autism in teens**
- ▶ **Free will choices (eg: binges on internet/soc media; porn)**

# International Systematic Reviews: “GAT” is Experimental

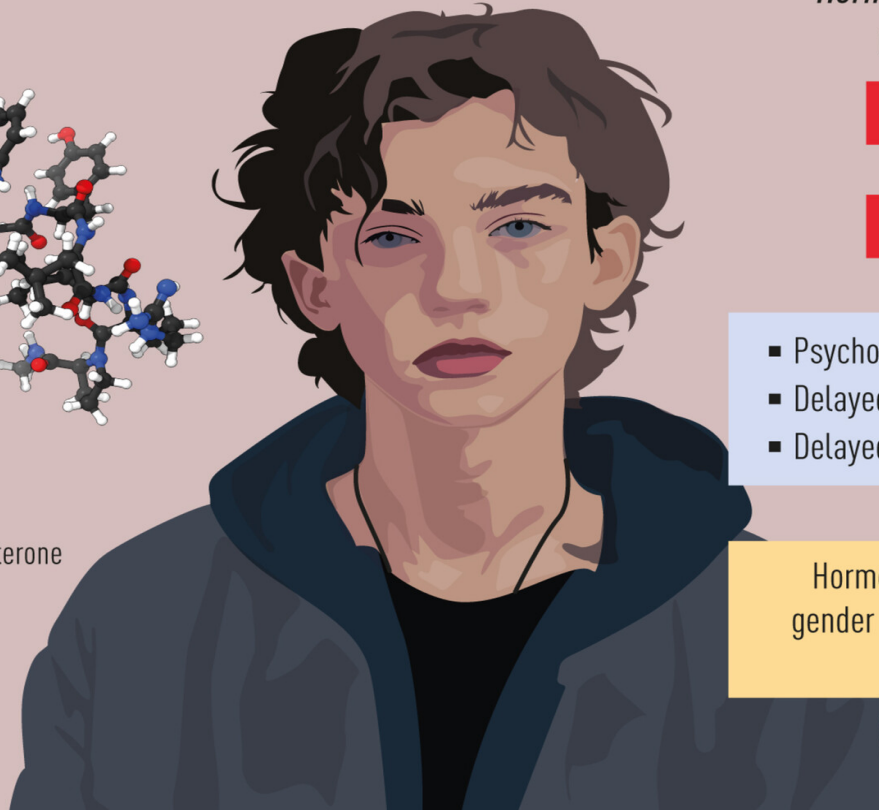
## Hormone treatment in children with gender dysphoria:

A systematic review and recommendations for research

GnRH agonist  
e.g. leuprolide



Gender identity  
affirming hormones  
e.g. estrogen and testosterone



*Hormonal treatment in children  
with gender dysphoria*

9934 abstracts

24 relevant articles

- Psychosocial health is unknown
- Delayed bone maturation
- Delayed gain in bone mineral density

Hormone treatment in children with  
gender dysphoria should be considered  
experimental treatment

# Multiple Systematic Reviews of Literature

## Blockers & Wrong Sex Hormones Experimental

**United Kingdom**

(England, Scotland, Wales, N. Ireland)

**Sweden**

**Finland**

**Denmark**

**Restricted Pedi Trans Interventions to RCTs**

# EUGENICS:

Sterilizing, Diseasing & Mutilating Troubled Youth

Gaslighting

+

Puberty Blockers

+

Wrong Sex Hormones

or

Bottom Surgeries



Permanent



Sterilization

# COGNITIVE DEVELOPMENT OF CHILDHOOD

## Piaget's Stages of Cognitive Development



**Sensorimotor Stage**

Birth to 2 yrs

**Preoperational Stage**

2 to 7 yrs

**Concrete Operational Stage**

7 to 11 yrs

**Formal Operational Stage**

12 and up



# DR. LAWRENCE KOHLBERG:

## NORMAL GENDER IDENTITY DEVELOPMENT (2-7 Y.O.)

Stage	Age (approx.)	Cognitive Prerequisite	Characteristics
Gender Identity	3-4 years old	Pre-operations	<ul style="list-style-type: none"><li>• Child recognizes biological and external appearance differences in people of different genders</li><li>• Child thinks that gender is mutable</li></ul>
Gender Stability	4-6 years old	Late pre-operations; early concrete operations	<ul style="list-style-type: none"><li>• Child begins to understand that gender does not change over time (e.g., a little boy will grow up to be a man, and a little girl will grow up to be a woman)</li></ul>
Gender Constancy	6-7 years old	Concrete operations	<ul style="list-style-type: none"><li>• Child understands that gender does not change, despite the individual's appearance or activities</li></ul>

# MAGICAL THINKING (AGES 2-7 YEARS)

- ▶ **According to Developmental Psychologist Jean Piaget, 2 -7 year olds engage in magical thinking b/c they have not yet developed the ability to think logically about cause and effect.**
- ▶ **They tend to attribute events that happen around them as being caused by their own thoughts, and/or changes in external features.**

# TRUTH

## about the Primacy Effect

People firmly believe and remember the first thing they see or hear about a subject.



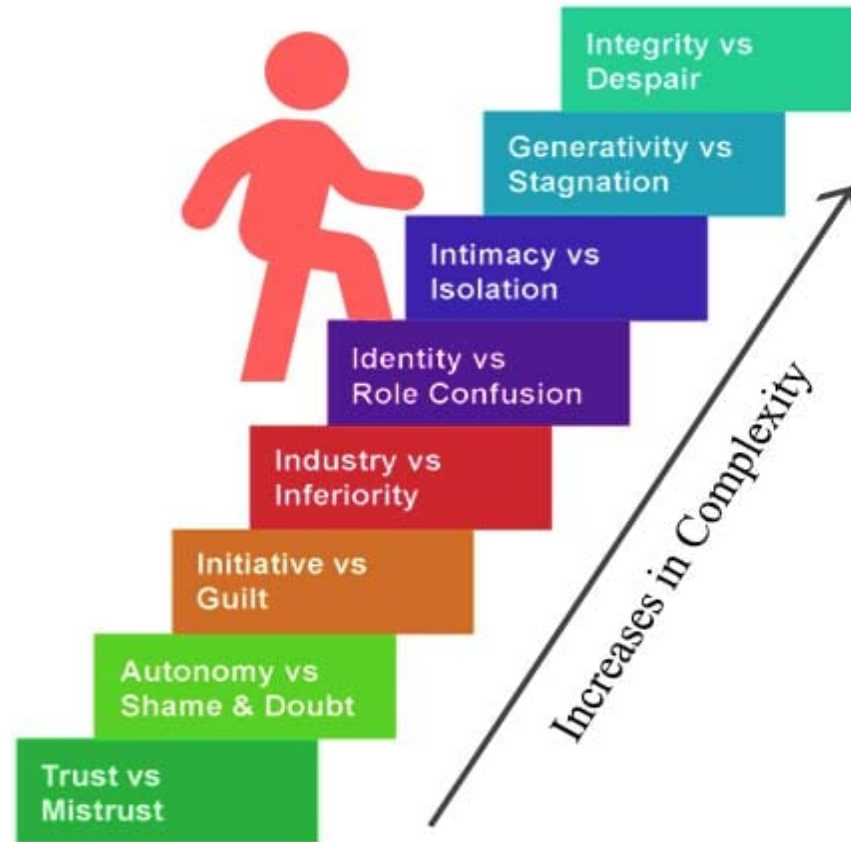
The Primacy Effect is why gender activists go after the youngest children-- to program kids' first beliefs about sex & gender.





# Erikson's 8 Stages of Psychosocial Development

- Infant
- Toddler
- Pre-Schooler
- Grade-schooler
- Teenager
- Young Adult
- Middle-age Adult
- Older Adult



*Proposed by Erik Erikson*

# TRUTH

## about Love-Bombing

Cults love-bomb new recruits to make them amenable to doing whatever the cult wants.



Young people are especially vulnerable to love-bombing, because they are searching for identity and community, which may explain the 5000% increase in young girls identifying as transgender.





# TRUTH

## about Autism & Gender

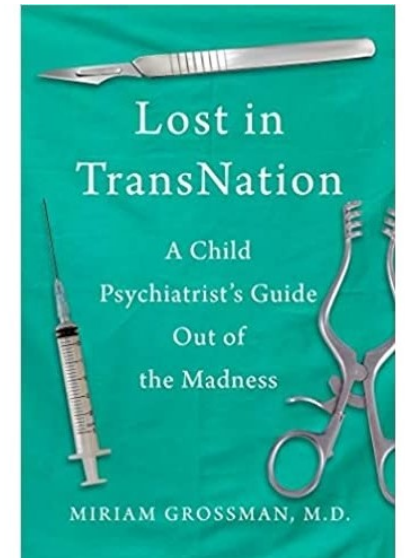
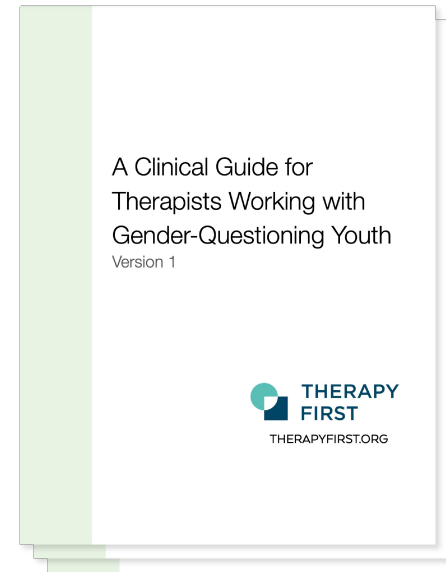
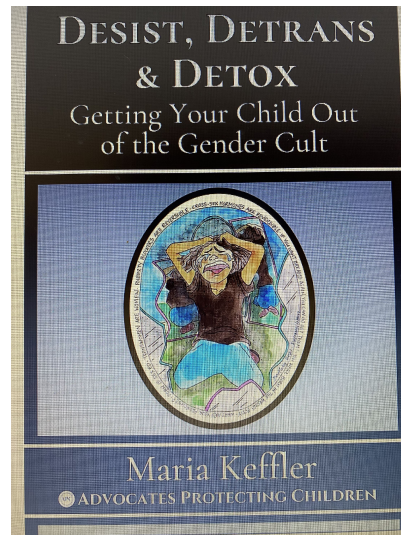
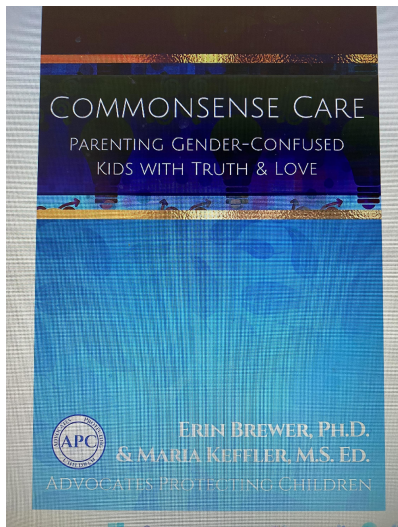
Autistic people struggle socially, they often experience sensory discomforts, and they tend to think in black-and-white absolutes.



All of these characteristics make it especially easy for autistic people to believe gender industry lies like, “Puberty is uncomfortable for you because you’re actually trans. You need to transition to feel better.”



# Resources for Clinicians & Parents







**ADVOCATESPROTECTINGCHILDREN.ORG**

**BIOLOGICALINTEGRITY.ORG**