Guidelines for the Clinical Care of Persons with Gender Dysphoria

Friday, May 27, 2016
2:15 – 5:00 PM
25th Annual Scientific and Clinical Congress
American Association of Clinical Endocrinologist
Orlando, Fla.

WYLIE HEMBREE MD
COLUMBIA UNIVERSITY MEDICAL CENTER
MOUNT SINAI BETH ISRAEL MEDICAL CENTER
ACKERMAN INSTITUTE FOR THE FAMILY
NEW YORK, NEW YORK

DISCLOSURES

No Grant or Financial Support
No Board memberships
No Company Ownership

All Medications Discussed
Do Not Have FDA Approval
for the Indications Discussed

BEGINNING
IMPORTANT ISSUES

1. Develop Effective Conversations with Transgender Persons
2. Address Important Issues for Transgender Care
3. Initiate Core Discussions
4. Prevent Misunderstandings
5. Address Social and Health Issues of Transgender Persons

WHAT IS
GENDER DYSPHORIA?

NOT
GENDER IDENTITY DISORDER

NOT
TRANSSEXUALISM

NOT
GENDER NONCONFORMING PEOPLE

DISCOMFORT WITH THE GENDER PRESCRIBED BY THE NATAL SEX AND THE RESULTING BODY DEVELOPMENT, ESPECIALLY AT PUBERTY

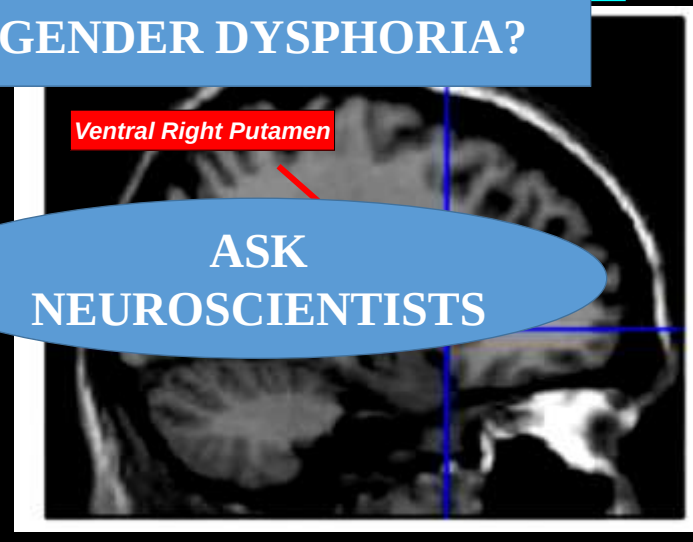
Differential Brain Processing of Audiovisual Sexual Stimuli in men: Comparison positron emission tomography study of the initiation and Mair
Miya

WHY DO PEOPLE HAVE GENDER DYSPHORIA?

rCBF

Regional Cerebral Blood Flo

Oxygen-15 Water Given During Pet Scan



ASK NEUROSCIENTISTS

Differential Brain Processing of Audiovisual Sexual Stimuli in men: Comparison positron emission tomography study of the initiation and Maintenance of penile erection during sexual arousal.
Miyagawa, et al. J.NeuroImage 2007; 3: 2-12.

rCBF

Regional
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Blood
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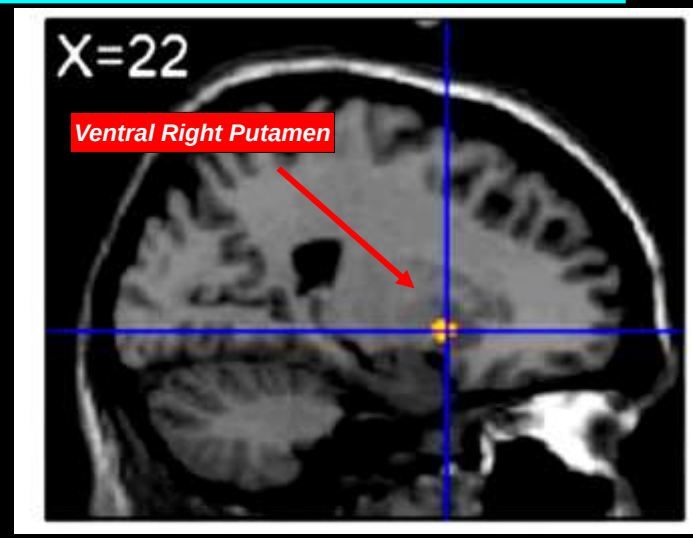
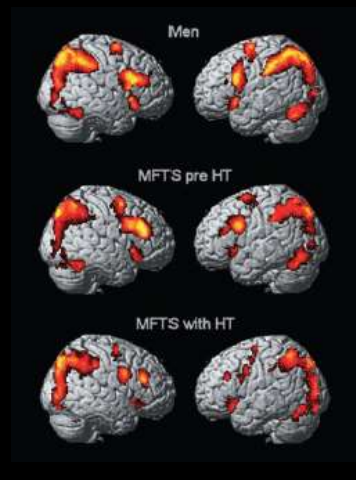


Neuroimaging Differences in Spatial Cognition between Men and Male-to-Female Transsexuals Before and During Hormone Therapy

J Sex Med 2010;7:1858–1867

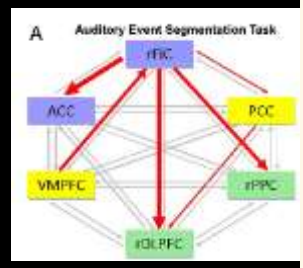
Sonja Schöning, PhD,*† Almut Engelien, MD,*‡§ Christine Bauer,*† Harald Kugel, PhD,¶ Anette Kersting, MD, PhD,* Cornelia Roestel, MD,* Plenie Zwitserlood, PhD,¶ Martin Pyka,*† Udo Dannlowski, MD,* Wolfgang Lehmann, PhD,** Walter Heindel, MD, PhD,¶ Volker Arolt, MD, PhD,* and Carsten Konrad, MD*†‡



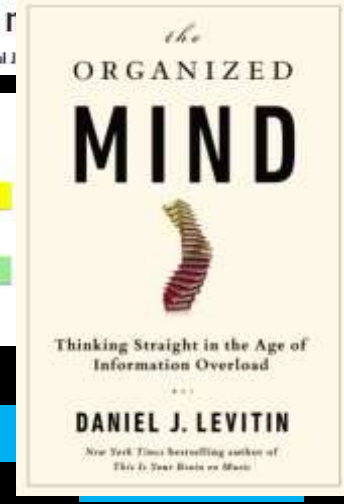
A critical role for the right fronto-insular cortex in switching between central-executive and default-mode r

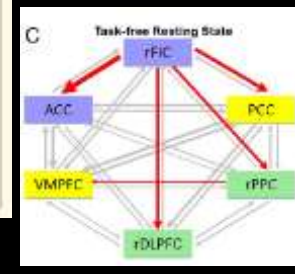
Devarajan Sridharan*[1], Daniel J

el Levitin

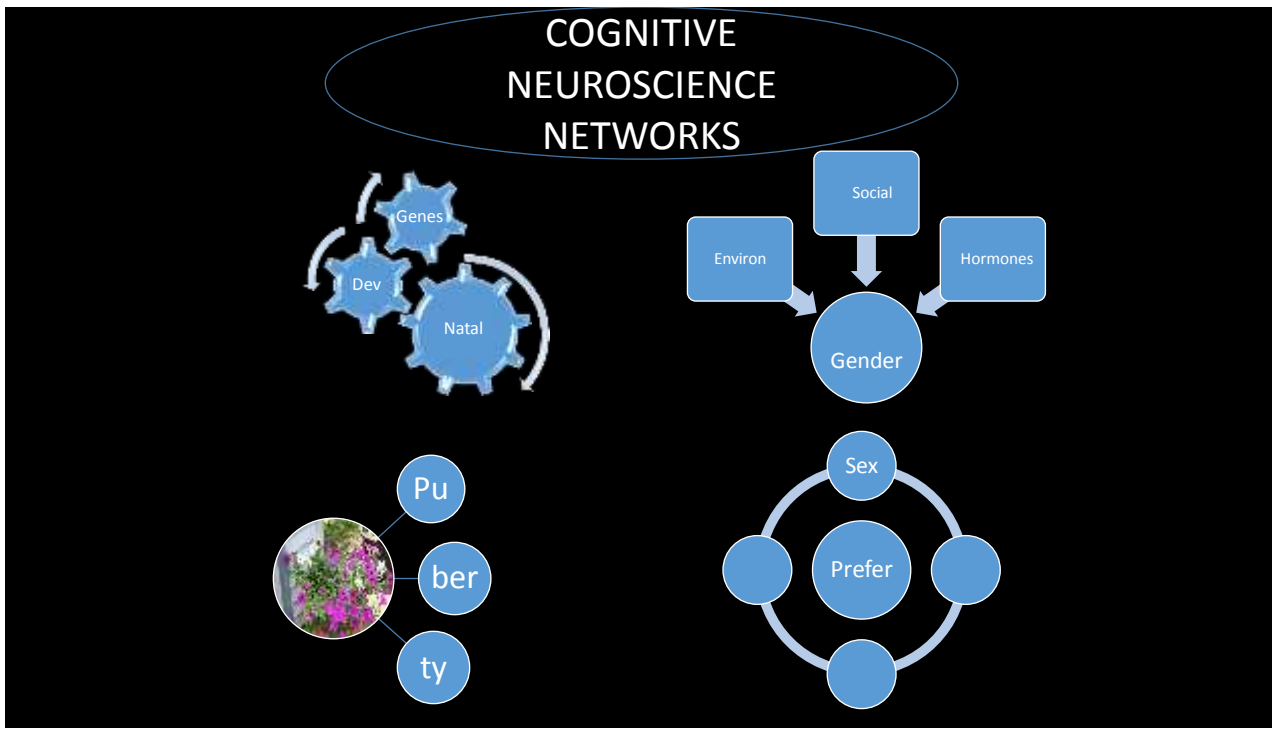


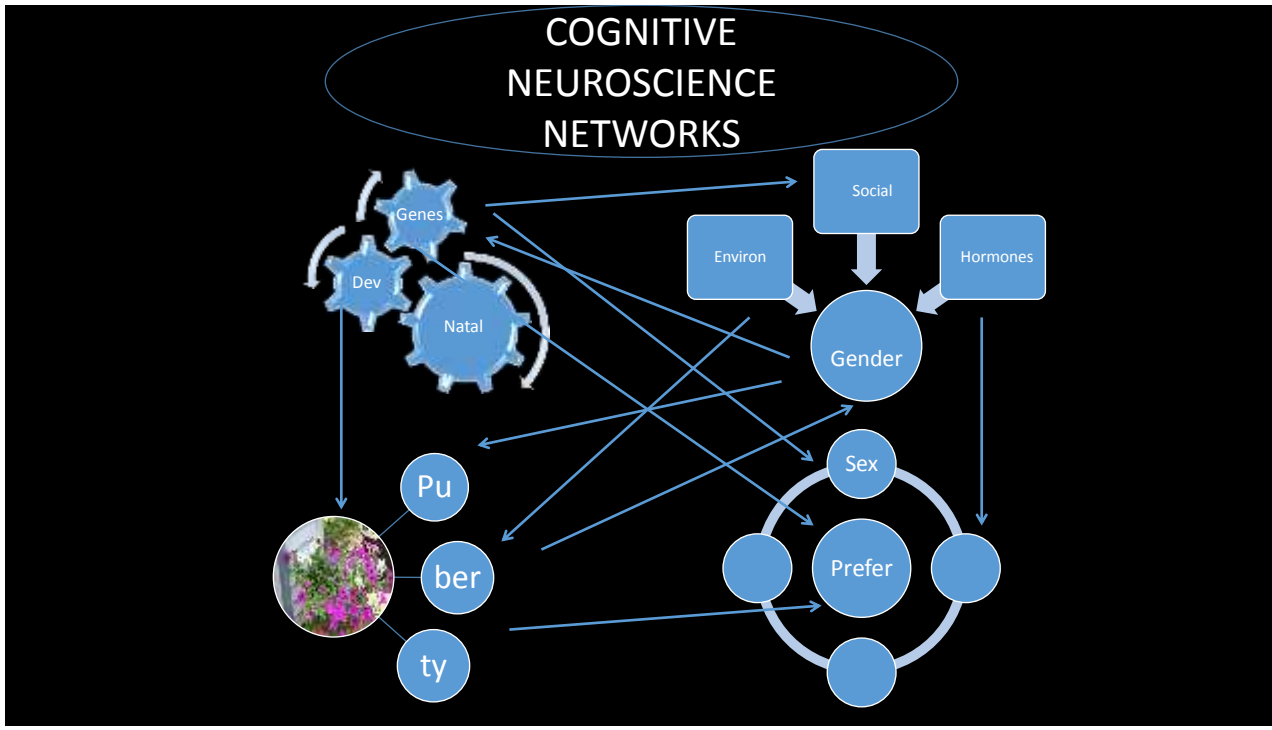
AUDITORY EVENT SEGMENTATION





DEFAULT MODE

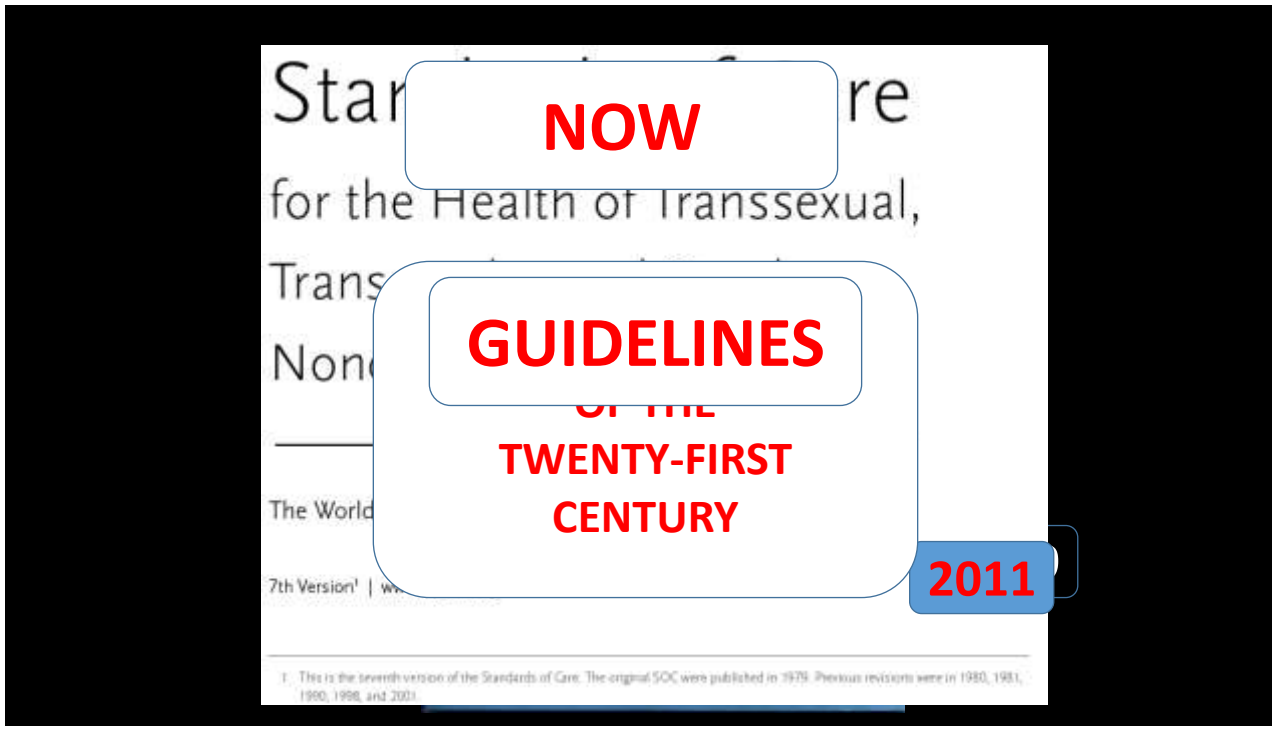




PROTOCOL
(Dutch, French, Greek)

A Dictionary of the English Language
A History of the Language
and an
English Grammar
By Samuel Johnson A.M.

"The original copy of any writing
An original is stiled the protocol, **scriptura matrix;**
And if the Protocol, which is the root and the
foundation of the instrument, does not appear,
the instrument is not valid."


NOW
GUIDELINES
TWENTY-FIRST
CENTURY
2011


ENDOCRINOLOGIC TREATMENT
OF GENDER IDENTITY DISORDERS
(Endocr Pract. 2003;9:12-21)
2003
Endocrine Treatment of Male-to-Female Transsexuals Using Gonadotropin-Releasing Hormone Agonist
Dittrich R, et al Exp Clin Endocrinol Diabetes 113: 586-592, 2005
Erlangen, Germanv
2005
Long-Term Administration of Testosterone Undecanoate
Care of Transsexual Persons
Louis J. Gooren, M.D., Ph.D.
Long-Term Evaluation of Cross-Sex Hormone Treatment in Transsexual Persons
2012
Care of Transsexual Persons
Louis J. Gooren, M.D., Ph.D.
1997-2011

5. Medications
   a. Estrogens

Antiandrogens
- Spironolactone
- Cyproterone acetate**
- Goserlin acetate
- Finasteride
- Dutasteride

Progestins
- Medroxyprogesterone
- Micronized progesterone

…ne
…ogens)
(GnRH agonist),
…nists

Two Phases?

WHY?

Why not just initiate cross-gender Hormones?

Treatment Plan for Adolescents

TRANS ADOLESCENTS

- Diagnostic evaluation
- PHASE ONE
- Begin pubertal delay with GnRH blocker
  - Females at Tanner breast stage 2-3
  - Males at testicular size 6-8 ml
- Triptorelin Therapy for Adolescents
  - 3.75 mg IM monthly, after 2 weeks
- PHASE TWO
- Age 16 begin cross sex hormones
- Age 18+ consider for surgery

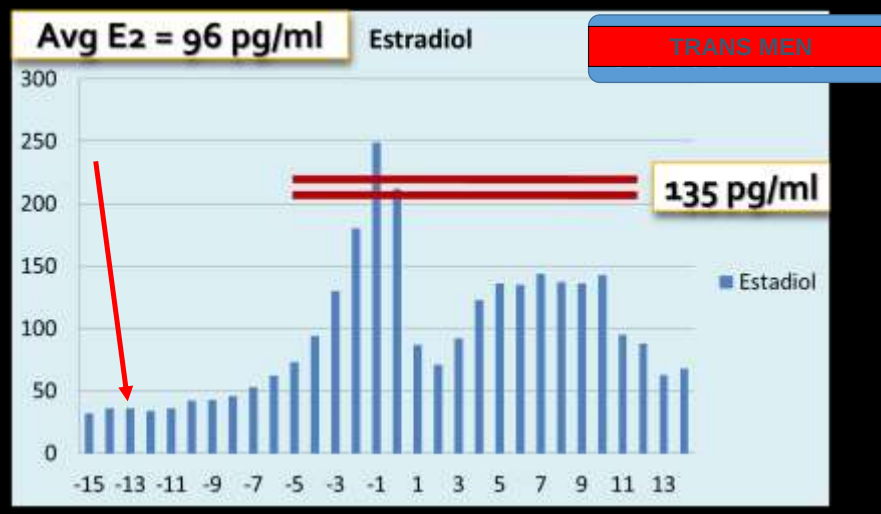
TRANS MEN

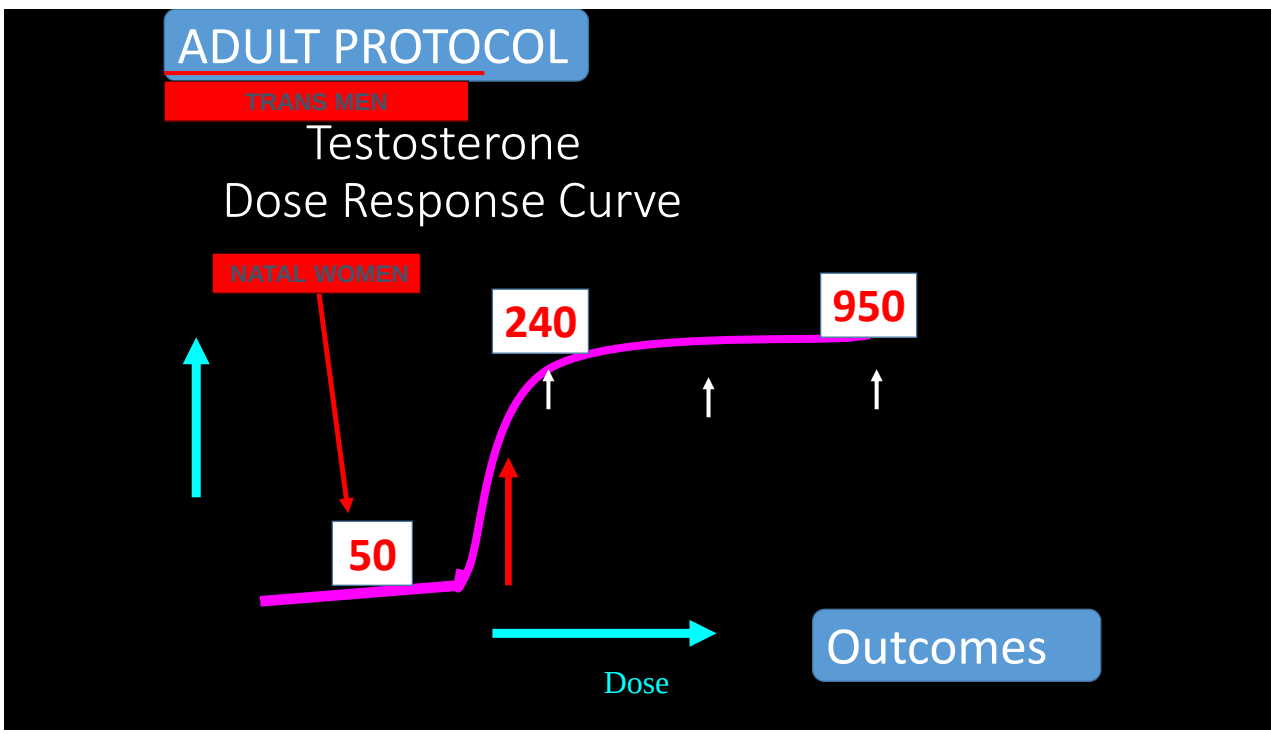
Why Two Phases?

Why not just initiate cross-gender Hormones?

Establishment of detailed reference values for luteinizing hormone, follicle stimulating hormone, estradiol, and progesterone during different phases of the menstrual cycle on the Abbott ARCHITECT® analyzer

Clin Chem Lab Med 2006;44(7):883–887





Protocol: Transition Female to Male

Phase 1 (Infrequent) Cessation of Menses SOC

- Medroxyprogesterone
- Cyproterone Acetate
- ± GnRH Agonist
- Testosterone

Phase 2 – Testosterone (Gradual)

- Transdermal Testosterone
- Weekly IM Testosterone
- Testosterone Undecanoate q 3 months (Europe)
- Testosterone pellets implant

GOAL: Testosterone – 240 – 950 ng/dl

Protocol: Transition Female to Male

1. **Testosterone Undecanoate 1000 mg IM q 12 weeks**
2. **Increase BP: 129/81 to 134/84 p= 0.04**
3. **All patients reported one additional menses; none thereafter**
4. **Acne ("troublesome") 14.3%**
5. **Shaving in 12 months - 77%**

R. Dittrich*

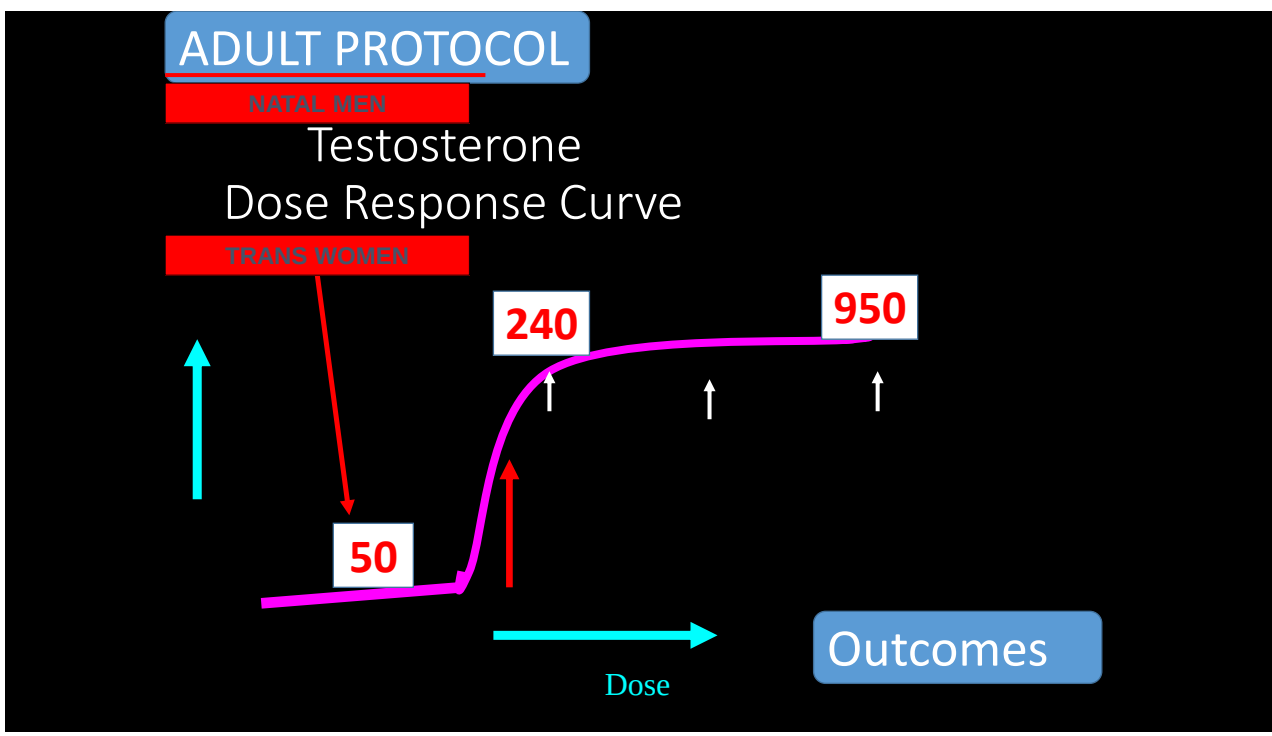
The dose of Testosterone required to achieve average male levels, free and total, will vary over time due to changes in metabolism, SHBG binding and aromatase activity. In addition, transdermal absorption changes with time.
The Dose should be adjusted based on serum levels.

Wylie C. Hembree,

TRANS WOMEN

Why Two Phases?

Why not just initiate cross-gender Hormones?



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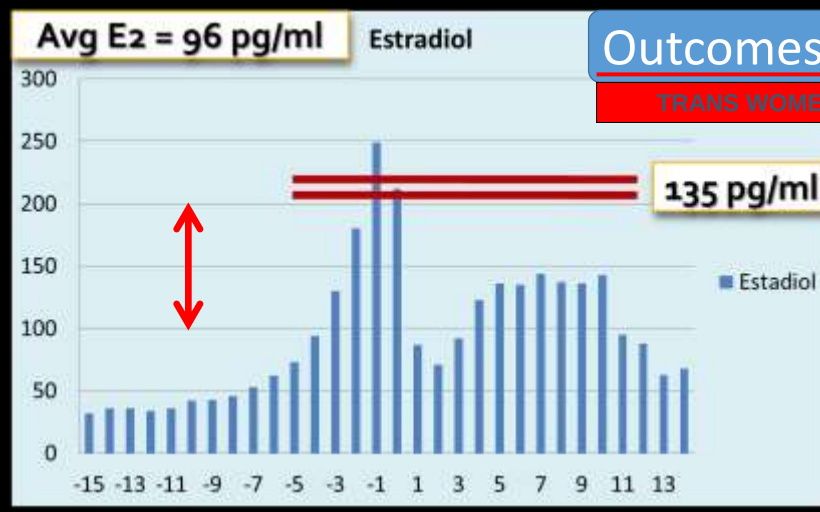
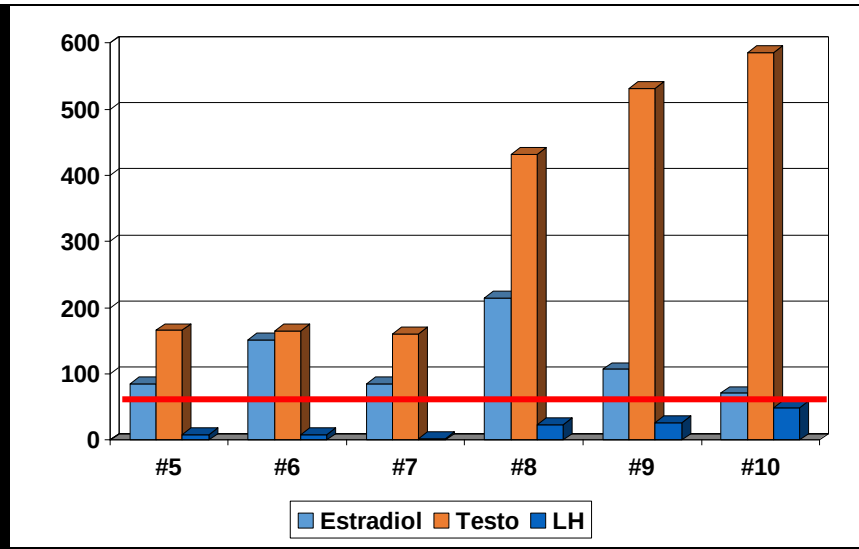


Outcomes

TRANS WOMEN

Testosterone Suppression by Estradiol



Protocol: Transition Male to Female

Phase 1 (OR Simultaneously)

Two–Three (12) Months Androgen Suppression

1. Cyproterone Acetate – 50 mg/day
2. Spironolactone 100 – 200 mg/day
3. GnRH Analog
4. Medroxyprogesterone + GnRH Agonist
   - Gradual Increase MP – 10-40 mg/day
   - GnRH Agonist Monthly x2
5. Finasteride - ? Anti-Androgen; Hair Loss

GOAL: Testosterone < 50 ng/dl

Protocol: Transition Male to Female

Phase 1

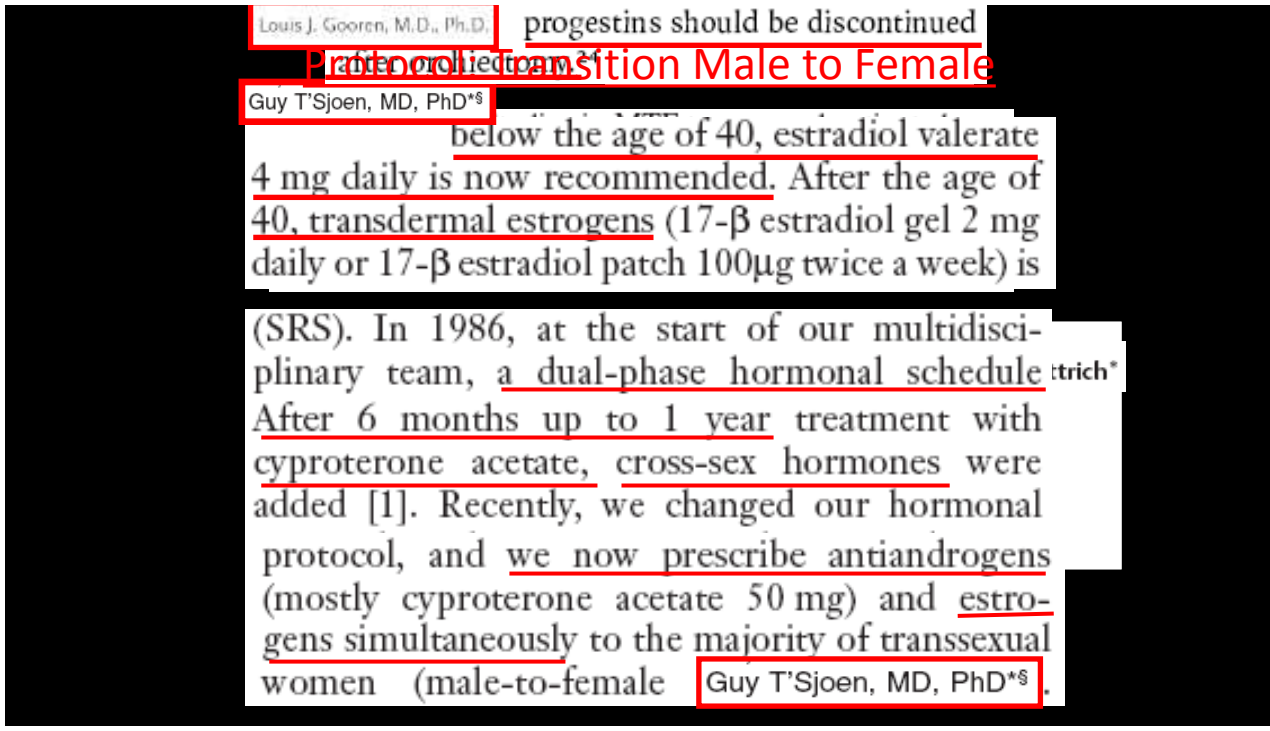
- Long Term Suppression
  - Progestin/Anti-androgen
  - GnRHa (Europe)
  - Histrelin Implant (Adolescent)

Phase 2

- Gradual Addition of Estradiol
- Oral, IM, Patches

GOAL: Estradiol 100 – 200 pg/ml

Maintain Testosterone Suppression



Protocol: Transition Male to Female

1998 - 2013

Two – Three Months

Medroxyprogesterone

Gradual Increase MP – 10-40 mg/day

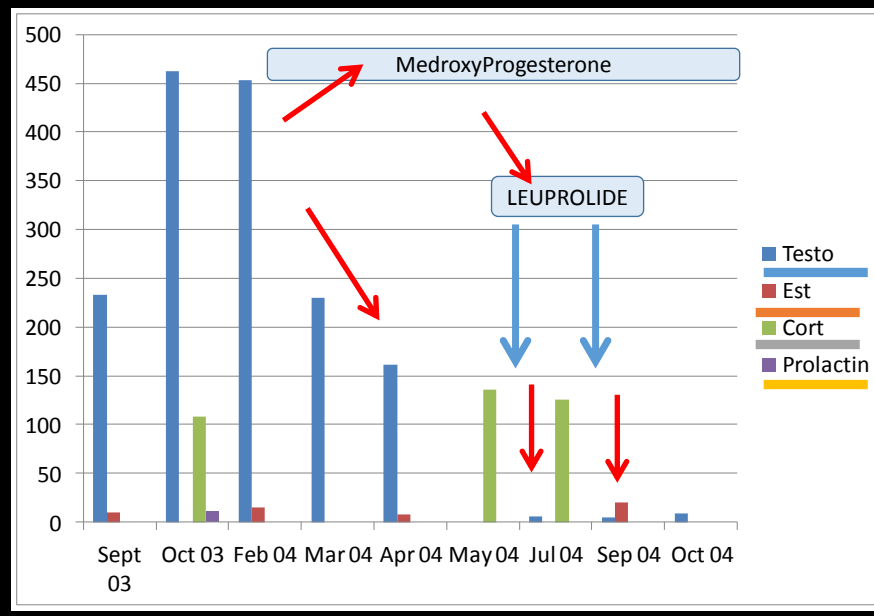
GnRHa x 2 months

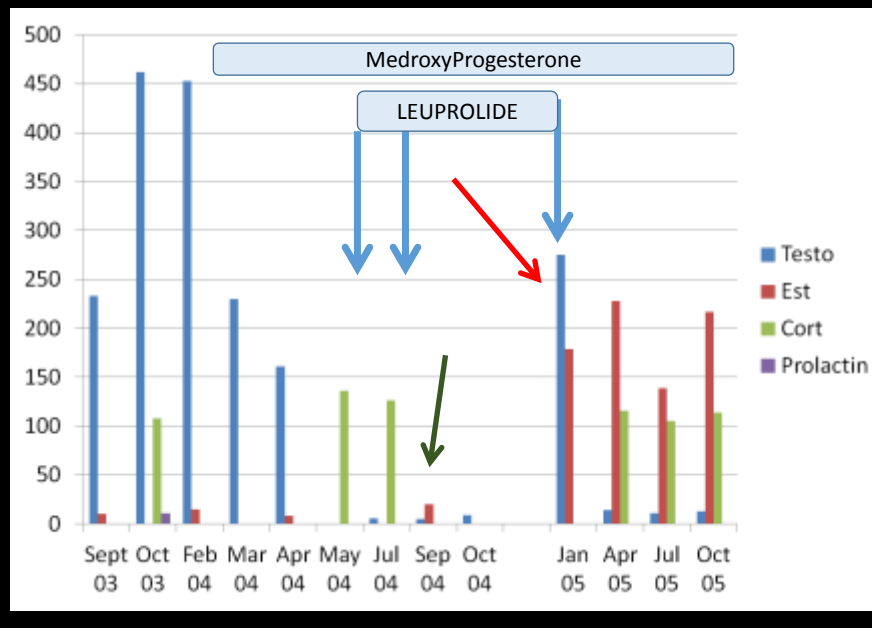
Gradual Addition of Estradiol

Oral, IM, Patches

Check LH and Testo 6-8 weeks

After GnRHa agonist


500
450
400
350
300
250
200
150
100
50
0
MedroxyProgesterone
LEUPROLIDE
Testo
Est
Cort
Prolactin
Sept 03
Oct 03
Feb 04
Mar 04
Apr 04
May 04
Jul 04
Sep 04
Oct 04


500
450
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300
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200
150
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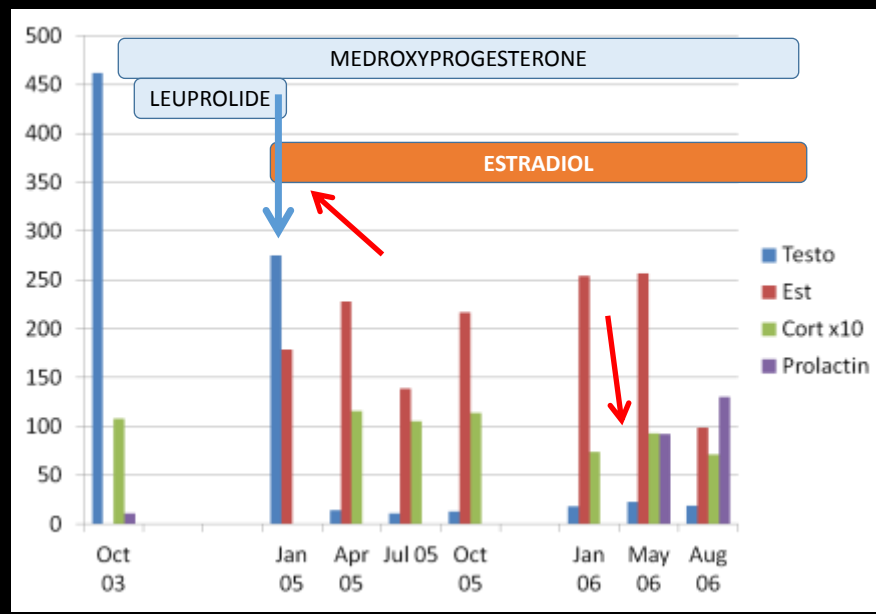
50
0
MedroxyProgesterone
LEUPROLIDE
Testo
Est
Cort
Prolactin
Sept 03
Oct 03
Feb 04
Mar 04
Apr 04
May 04
Jul 04
Sep 04
Oct 04
Jan 05
Apr 05
Jul 05
Oct 05



PHASE/STEP TWO

Male-to-Female

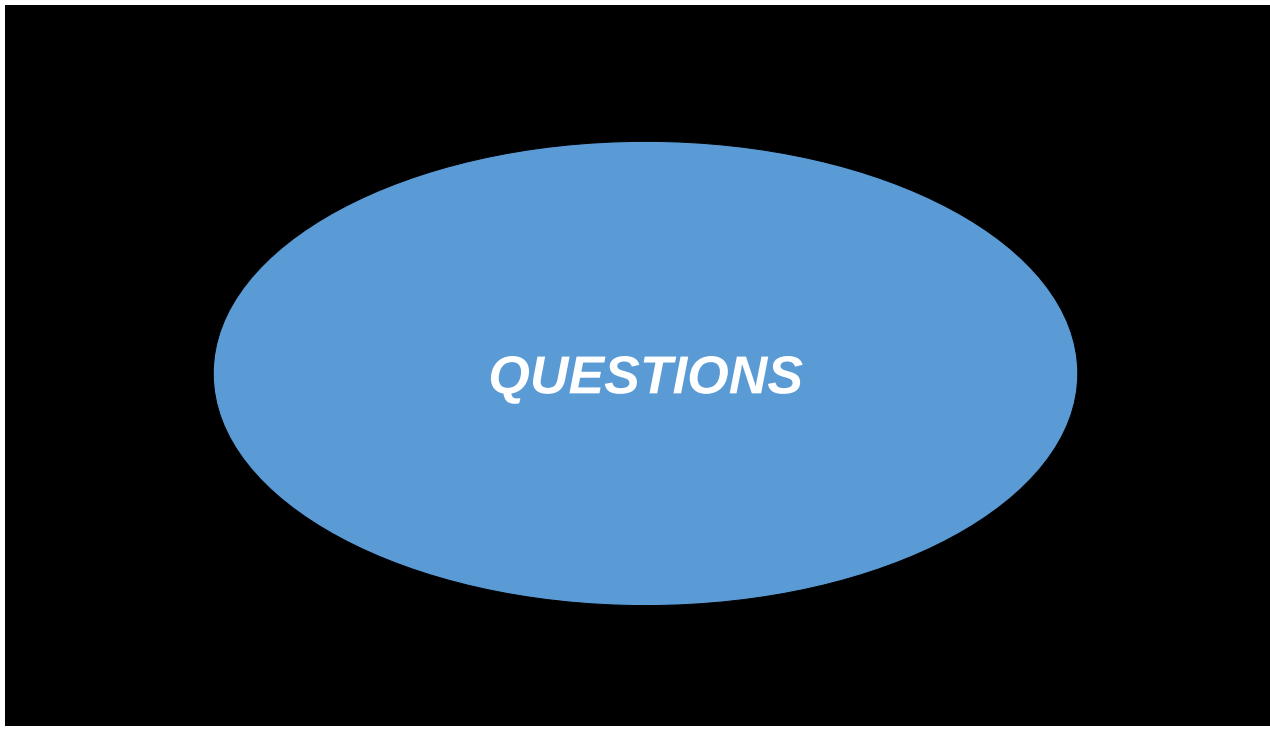
Estrogen therapy options

- Estradiol 2.0-6.0 mg PO daily
- Estradiol patch 0.1-0.4 mg TD twice weekly
- Estradiol valerate 5-30 mg IM every 2 weeks

PHASE/STEP ONE

PROGESTINS GnRH ANALOGS

- Progesterone 20-60 mg PO daily
- Medroxyprogesterone acetate 150 mg IM every 3 months
- Cyproterone acetate 50-100 mg PO daily[a]
- GnRH agonist (leuprolide) 3.75-7.5 mg IM monthly
- Histrelin Implant 50mg implanted every 12 months
- Spironolactone 100-200 mg PO daily
- Finasteride 1 mg PO daily


QUESTIONS