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Disclaimer

The information provided here is for informational and educational purposes only. It is not intended as medical advice or for therapeutic purposes. Any discussion of therapy is intended only for purposes of illustration and example and not as a therapeutic guide for any specific individual. Consult with your physician prior to considering any therapies.
How common are hormonal problems?

• Most patients have at least one symptom that may relate to hormonal imbalance.

• Most doctors *don’t recognize these symptoms as being hormonal in origin*. 
### Examples of typical symptoms with hormonal implications

<table>
<thead>
<tr>
<th>Low body temperature</th>
<th>Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>Depression</td>
</tr>
<tr>
<td>Immune dysfunctions</td>
<td>Insomnia/Narcolepsy</td>
</tr>
<tr>
<td>- Infections</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>- Allergies</td>
<td>Headaches</td>
</tr>
<tr>
<td>- Autoimmune Dz</td>
<td>PMS</td>
</tr>
<tr>
<td>Digestive problems</td>
<td>Sexual dysfunctions</td>
</tr>
<tr>
<td>- Acid reflux</td>
<td>Hair loss</td>
</tr>
<tr>
<td>- Poor digestion</td>
<td>Weight problems</td>
</tr>
<tr>
<td>- Gas/bloating</td>
<td>Cold extremities</td>
</tr>
</tbody>
</table>
Your best physician is you
The medical professional is your consultant
If the above is forgotten, you’re the one in trouble
Adrenal-Thyroid-Ovary Connection

- These three all affect each other.
- Estrogen & Progesterone balance
- Thyroid & Adrenal balance
Adrenal Physiology - Structural / Chemical

• Location
  – Rests upon the kidney
  – 3 Glands in 1

• Many hormones produced including: cortisone, adrenaline, mineral corticoids, sex hormones/ Pregnenolone/DHEA
Adrenal Physiology - Functional

• *The main job of the adrenals is to deal with stress.* This means dealing with changes (adaptation) as well as any threat to our survival.

• Dealing with any stress depletes its hormonal or *functional* reserve and ability to handle other stress.

• Maintains
  – Stability
  – Centeredness/grounding
What is **Stress**?

Stress is *anything that threatens our Existence, Survival, Security, Joy, Ability to thrive, Stability or Centeredness*. 

*Or, requires adaptation (emotional, social, thermal, hormonal, chemical, physical etc.)*
Inverse Relationship Between Thyroid and Adrenals:
Patient presentation $\rightarrow$ appearance, chemical, structural, immunological, emotional and functional

A 'low' in one usually looks like a 'high' in the other
Inverse Relationship Between Estrogen and Progesterone:
Patient presentation → appearance, chemical, structural, immunological, emotional and functional

A ‘low’ in one usually looks like a ‘high’ in the other
Inter-relationship of Adrenals-Thyroid-Ovaries

A low ‘one’ looks/acts like a high ‘other’

Adrenal function

Thyroid function

Progesterone

Estrogen

A low ‘one’ looks/acts like a high ‘other’
Why the confusion?
The vast majority of low thyroid conditions are accompanied by stressed adrenals. If the adrenal problem isn’t recognized, the symptoms tend to be attributed to thyroid alone. In a purely thyroid or a purely adrenal condition, the differences become apparent.
The (‘pure’) Hypothyroid Patient

- Warm hands, poor *heat* tolerance
- Low, *stable* body temp
- Heavy Build
- Rubor
- Sparse Outer Eyebrows
- Slower Moving (vs. nervous types)
- Puffy Around the Eyes
- Coarse Hair
The ‘pure’ Hypoadrenal patient

- Cold hands/feet, poor cold tolerance
- Low, unstable temp
- Pallor
- Fine, Thinning Hair
- Hollow eyes and thick eyebrows
- Thin build
  - Ectomorphic vs. Mesomorphric
  - Women: Often flat-chested, mitral valve prolapse (weakly supported valve, weak connective tissues)
  - Men: Thin, joint injury prone, flat feet
Comparison of Characteristics of Low Adrenal ↔ Low Thyroid
Thyroid-Adrenal Comparison

Typical Symptoms

<table>
<thead>
<tr>
<th>Low Thyroid</th>
<th>Low Adrenal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance: Heavy, red</td>
<td>Thin, pale</td>
</tr>
<tr>
<td>Mood: Stable</td>
<td>Unstable</td>
</tr>
<tr>
<td>Mood: Depression</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Immune: Hypo-reactive</td>
<td>Hyper-reactive</td>
</tr>
<tr>
<td>Immune: Infections</td>
<td>Allergies</td>
</tr>
<tr>
<td>Lipids: High</td>
<td>Low</td>
</tr>
<tr>
<td>Intolerance: To heat</td>
<td>To cold</td>
</tr>
<tr>
<td>Hands/feet: Warm</td>
<td>Cold</td>
</tr>
</tbody>
</table>
Thyroid and Adrenal Comparison

**Weak thyroid or strong adrenals**
- Heavy build (fat? or stocky?)
- Rubor (rosy)
- Hypo-reactive
  - Slow, doesn’t excite easily (calm or just slow?)
  - Immune: Infections
- Mental/Emotional
  - Depression
  - Calm
- Deep sleeper or narcolepsy

**Excess thyroid or weak adrenals**
- Thin build
- Pale
- Hyper-reactive
  - Jumpy, nervous, startles or excites easily
  - Immune: Allergies, Autoimmune
- Mental/Emotional
  - Anxiety, Panic Attacks
  - Nervousness
- Light sleeper or insomnia
### Thyroid and Adrenal Comparison (con’t)

**Weak thyroid or strong adrenals**
- Cholesterol high / HDL low
- Serum: Na⁺ ↑, low K⁺ ↓
- CBC: WBC↑ Platelets↑
- Retains fluid, wet, good secretions
- Thinned out outer eyebrows
- Thick, coarse, curly hair
- Eyes full or puffy
- Tunnel vision or laser focus

**Excess thyroid or weak adrenals**
- Cholesterol low / HDL high
- Serum: Na⁺ ↓, K⁺ ↑
- CBC: WBC ↓ Platelets ↓
- Can’t hold fluid, dry, poor secretions
- Full, thick eyebrows
- Thin hair, straight
- Eyes hollowed out or bulging
- Wide radar or intuitive
Thyroid and Adrenal Thermal Comparison

Hypothyroid
- Does not tolerate heat
- Low core temp → stable
- Hands warm (in pure hypothyroid)

Hypoadrenal
- Does not tolerate cold
- Low core temp → unstable
- Hands cold (in pure and mixed)
Strong and Weak Adrenals
OR
The Bulls and the Butterflies
<table>
<thead>
<tr>
<th>Typical Characteristic</th>
<th>Weak Adrenals (Butterflies)</th>
<th>Strong Adrenals (Bulls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Skin Tone</td>
<td>Light</td>
<td>Dark</td>
</tr>
<tr>
<td>Fluids: skin, secretions, bowels</td>
<td>Dry: can’t hold on to water, poor secretions, constipated</td>
<td>Moist: good secretions, diarrhea</td>
</tr>
<tr>
<td>Blood Type</td>
<td>A</td>
<td>O</td>
</tr>
<tr>
<td>Constitution</td>
<td>Delicate / Ectomorphich</td>
<td>Resistant / Mesomorphich</td>
</tr>
<tr>
<td>Perseverance: Physical / Mental</td>
<td>Poor</td>
<td>Strong</td>
</tr>
<tr>
<td>Alcohol/Drugs or Supplements</td>
<td>Handles Poorly</td>
<td>Handles Well</td>
</tr>
<tr>
<td>Startle Tendency</td>
<td>Startles Easily</td>
<td>Normal Startle</td>
</tr>
</tbody>
</table>
General Principles of Treatment

- Remove the impediments to proper function
  - Replacement of Nutritional Deficiencies
  - Removal of Stresses
    - Physical, Chemical, Emotional
    - Hormonal (e.g. hyper- or hypothyroidism)
  - Removal of Toxins
General Principles of Treatment (cont.)

• Oxygenation
  – Thoracic/Rib Adjustments, Postural Correction
  – Environment/location
  – Supplements (e.g. Co Q 10)

• Rest and Sleep
General Principles of Treatment (cont.)

• Support the Body’s physiology and healing process or efforts
  – Nutritional (whole or real food)
  – Endocrine/Hormonal support
    • Glandular extracts (thyroid/adrenal, etc.)
    • Rx (natural) hormone replacement as needed
    • Herbs to suppress or support glandular functions
    • Iodine: can help if thyroid weak, hurt if thyroid is ‘hyper’
Estrogen Dominance

Estrogen dominance is a condition in which a woman can have excessive, normal, or deficient levels of estrogen, but has too little progesterone to balance the estrogen level. It means a predominance of estrogenic effect as opposed to progesterone effects.
Estrogen Dominance

The balance between the estrogen and progesterone matters more than how much (of these) we have. A woman can have a low estrogen but a lower progesterone (re. effects) and be estrogen dominant.
Inter-relationship of Adrenals-Ovaries-Thyroid

A low ‘one’ looks/acts like a high ‘other’

Adrenal function

Thyroid function

Progestosterone

Estrogen

A low ‘one’ looks/acts like a high ‘other’
## Estrogen Dominance Symptoms

| Anxiety, irritability, anger, agitation, | Irregular periods |
| Cramps, heavy bleeding, prolonged bleeding, clots | Problem with sex drive: decreased, excessive, or fluctuating |
| Water retention/weight gain, bloating | Gall bladder problems |
| Breast tenderness, lumpiness, enlargement, fibrocystic breasts | Infertility |
| Mood swings, depression, weepiness | Insomnia |
| Headaches/migraines | Osteoporosis |
| Food cravings, sweet cravings, chocolate cravings | Endometriosis |
| Muscle pains, joint pains, back pain | Polycystic ovaries |
| Acne | Uterine fibroids |
| Foggy thinking, memory difficulties | Cervical dysplasia (abnormal cells on PAP smear) |
| Fat gain, especially in abdomen, hips and thighs | Allergic tendencies |
| Cold hands and feet (i.e., stressed adrenals) | Autoimmune disorder |
| Breast, uterine, cervical, or ovarian Ca. | Blood sugar instability, Insulin Resistance |
**Estrogen-Progesterone Relationship**

Like dancing partners, the relationship can be opposite or complimentary.

<table>
<thead>
<tr>
<th>Function/Tissue</th>
<th>Estrogen</th>
<th>Progesterone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep</td>
<td>Insomnia</td>
<td>Sleep</td>
</tr>
<tr>
<td>Mood</td>
<td>Agitation</td>
<td>Calm</td>
</tr>
<tr>
<td>Mood</td>
<td>Weepy</td>
<td>Stable mood</td>
</tr>
<tr>
<td>Mind</td>
<td>Poor focus/ overactive</td>
<td>Focused, calm</td>
</tr>
<tr>
<td>Cellular Proliferation (division)</td>
<td>Increased in cervical, uterus, breast</td>
<td>Decreased</td>
</tr>
<tr>
<td>Fatty Tissue</td>
<td>Increased</td>
<td>Estrogen effect blocked</td>
</tr>
<tr>
<td>Bone</td>
<td>Decreases Loss</td>
<td>↑Build up</td>
</tr>
</tbody>
</table>
Overview
Balance with other Hormones: E.D.

• Estrogen Dominance is usually due to a deficit of progesterone. Correcting this greatly facilitates adrenal repair since progesterone supports adrenal function.

• Conversely, strengthening the adrenals helps correct E.D.
Estrogen Dominance is Very Common

Most women today have *estrogen dominance*. It ranges from mild to severe. When its noticeable for a short time, the condition is called *PMS*.
Common causes of Estrogen Dom.

- **Stress** (excess cortisol displaces progesterone)
- **Xenohormone exposure**
- Use of oral or injected contraceptives
- **Conventional HRT** (using horse hormones and/or synthetic/non—bio-identical hormones)
- **Adrenal Fatigue**
- **Poor diet** (usually high in carbs, low fat)
- Consumption of **trans-fats**
- Nutritional **deficiencies** (esp. Mg, Zn, Cu, B’s)
- **Luteal Insufficiency** (low ovarian progesterone production)
- **Anovulatory cycles** (cycle/menstruation w/o ovulation, and therefore no ovarian progesterone is produced)
- **Obesity** (estrogen is made in the fat cells; excess fat cells make excess estrogen.)
Effect of Estrogens on thyroid

- Can mimic hypothyroidism (fat deposit, fluid retention)
- Can mimic thyroid function (agitation, insomnia…)
- Thyroid Lab testing: Raises TBG (the protein reservoir in the blood which binds to T4 and T3) thus raising the Total T4 and Total T3 levels (producing an artifact that looks like the thyroid level is higher than it actually is). Free T3 and Free T4 and unaffected.
Dr. A P Weetman, professor of medicine, wrote in the article "Fortnightly review: Hypothyroidism: screening and subclinical disease," which appeared in the 19 April 1997 issue of the British Medical Journal, the following groundbreaking statement…
even within the reference range of around 0.5-4.5 mU/l, a high thyroid stimulating hormone concentration (>2 mU/l) was associated with an increased risk of future hypothyroidism. The simplest explanation is that thyroid disease is so common that many people predisposed to thyroid failure are included in a laboratory's reference population, which raises the question whether thyroxine replacement is adequate in patients with thyroid stimulating hormone levels above 2 mU/l."
4 yrs after the BMJ article…(cont)

In what constitutes a fairly dramatic reversal of its previous doctrine regarding how hypothyroidism should be diagnosed, the American Association of Clinical Endocrinologists (AACE) has said in its January 2001 Thyroid Awareness Month materials that a "TSH level between 3.0 and 5.0 uU/ml ...should be considered suspect."
On March 2003…

AACE (American Association of Clinical Endocrinologists) revised its position and stated that the new normal values for TSH should be between 0.3 and 3.0
Normal vs. Optimal

Low  Normal  High

Optimal Zone
Thyroid Scale Diagram

• Plots TSH, T4, and T3 values on a relative scale

• Values are viewed relative to optimal rather than normal
  – optimal is (usually) roughly the midpoint of the normal range for the T3 and T4 but 1-2 (or 1.3-1.8) for the TSH
  – goal is to be optimal

• Values are viewed relative to one another
  – TSH Feedback
  – T4 conversion to T3 and RT3

• Available on www.DRRIND.com
(continued) Role of the Pituitary

• Decides how much energy to produce by generating TSH (based on T4 and/or T3 → need, availability, and tolerance)

• The more TSH in circulation, the more the thyroid gland generates T4
Typical Temperature Graph Patterns

- **Excellent Health**
  - 98.6 - 96.7
- **Improving**
  - More Stable at Lower Temp
- **Hypothyroid**
  - 97.8
- **Worsening**
  - LES-adrenal or Adrenal Stress
- **Fever**
Common Thyroid Tests

- Thyroid Stimulating Hormone (TSH)
- T-3 Uptake (T3U)
- Free T-3 (FT3) and Free T-4 (FT4)
- Total T-3 (TT3) and Total T-4 (TT4)
Interpretation of Thyroid Lab Tests

- **TSH (Thyroid Stimulating Hormone)** → A hormone secreted by the pituitary gland whose functions it is to signal the thyroid gland to make a thyroid hormone (called thyroxine or T4). TSH represents the ‘desire of the pituitary’ for thyroid hormone. Thus a high TSH means the pituitary wants more thyroid hormone (T4 or T3). The pituitary senses
  - The available level of thyroid hormones (T4 and T3)
  - The body’s need for thyroid hormones
  - The body’s (usually the adrenal gland’s) ability to handle thyroid hormones
  - The end result of this evaluation is the TSH which is the expression of this need.
- **T4** → This is the ‘pro-hormone’ that is either made by the thyroid gland or taken in as a pill. It is a pro-hormone because it doesn’t do anything on its own but will become either a stimulant to energy production (T3) or inhibitor to the energy production (RT3)
- **T3** → The ‘business end’ of thyroid hormone production. It generates energy (in the form of ATP). Normally, the amount of T3 is the same (in a relative sense) as T4. A healthy person has mid-range values of T4 and T3 (according to the scale the particular lab is using). A T3 that is relatively lower than the T4 is a sign that the body is holding back on making T3 from T4 and usually occurs when the body is putting the brakes on energy production such as occurs in weak adrenals because the adrenals are unable to handle all the metabolic energy coming at them. The opposite occurs when the body either needs more energy (e.g., fever) or is able to utilize more energy (e.g., adrenals became healthier).
T-3 Uptake (T3U) - *AVOID!*

- Indirect test used to measure ‘T4’!
- Measures how saturated serum protein is
- The more it takes up, the less (one ‘assumes’) saturated with T4 it is and therefore we assume there is a low T4 level in the serum.
- Thus a high uptake means low T4 and a low uptake means high T4.
- It is an ‘indirect’ test that does not even measure T3. It is *almost* as accurate as a flip of a coin!
Free T3 and Free T4

• FT3 and FT4 measure the unbound (biologically active) levels of these hormones – It reflect the bio-available, not the total level of the hormones.
Total T3 and Total T4...

- TT3 and TT4 measure the total production of thyroid hormone, shows both the bound (inactive or stored) and unbound (biologically active/available) T4 and T3.
...Total T3 and Total T4

• Inaccurate in E.D. Thus it is often elevated in (estrogenic) women on BCP, HRT, and also in women who are pregnant. The estrogen effect increases serum proteins (TBG) and therefore the reservoir to which thyroid hormones are bound. Thus one can have a high (protein bound) TT3 with a much lower (unbound) FT3
Perioral pink: 0% and 30%
Perioral pink: 50% and 80%
Perioral pink: 100%
Perioral pink: 0% and 0% with sinusitis
20 yr old male, 70% pink. H/O Addison’s: After 10 months Tx

Unaltered photo

Enhanced contrast

Pink ➔ Pale ➔ Pale ➔
Peri-oral shading in adrenal stress in people with dark skin
Adrenal stress: Dark skin ➔ Pale outline around lips is common
Sinusitis Pattern

Zone of redness:

- Around nostrils
- Wedge
Mrs. J.

→ 50% pink
→ Wrinkles exist only in the pale zone
→ Puckering the lips accentuates the color and the wrinkles
Mrs. J’s finger/thumb prints: Shallow with cross creases
Looking at Finger Prints

• There is a correlation between Adrenal health and Connective tissue quality
  – Mesomorphs → strong adrenals
  – Ectomorphs → weak adrenals

• Connective tissue quality = collagen or tissue protein quality

• The protein quality an any part of the body reflects the rest of the proteins in the body
Fingerprints cont.

• The collagen/protein of the skin (skin/hair/nails) is easy to observe in looking at fingerprint quality
  – Depth and quality of the grooves
    • Deep $\rightarrow$ Shallow $\rightarrow$ Flat and shiny
  – Cross creases

• Color: Pink-Pale-Dusky

• Opacity: Opaque vs. Translucent (e.g., veins)
Good Fingerprints
Shallow Fingerprints & Cross Creases
Shallow, shiny fingerprints, mottled, thin ‘transparent’ skin with vein portions showing through
Before Tx: Poor connective Tissues

After 5 mos. of adrenal repair (same pt.): Good connective tissues

↑ Deeper Prints, less cross-creasing, better color

← Dusky color, shallow/shiny prints and cross-creases
<table>
<thead>
<tr>
<th>Adrenal <strong>Do’s</strong></th>
<th>and <strong>Don’ts/Avoid</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat whole, healthy food</td>
<td>Junk food (➔ an oxymoron)</td>
</tr>
<tr>
<td>Drink water, herbal tea, veg. juices</td>
<td>Caffeine, alcohol, fruit juice</td>
</tr>
<tr>
<td>Eat fat (not oils) and protein</td>
<td><strong>Sugars</strong> and (+/-) starches (especially w/o fat/protein)</td>
</tr>
<tr>
<td>Frequent meals (every 2-3H)</td>
<td>Skip meals, go hungry</td>
</tr>
<tr>
<td>Sleep (to bed early, same time, up without alarm clock)</td>
<td>Cut sleep, go to bed late, wake up to an alarm clock</td>
</tr>
<tr>
<td>Be in a clean environment</td>
<td>Toxic environment or people</td>
</tr>
<tr>
<td>Joy, comedies, hobbies</td>
<td>Work or relationship you hate</td>
</tr>
<tr>
<td>Pace your exercise, mild to moderate</td>
<td>Avoid excessive exercise leading to temp drop or subsequent fatigue</td>
</tr>
</tbody>
</table>
1→Crutch: Immediate (or short term) The immediate replacement of hormones the adrenals can’t adequately make. This gives an immediate lift by removing some of their burden and providing the rest of the body with support. An example of this is desiccated adrenal (glandular), DHEA, Pregnenolone, 7-Keto DHEA, Cortisol (or Licorice which helps maintain higher cortisol levels by interfering with the destruction of existing cortisol)
2 Facilitate: Intermediate  We can ‘grease the wheels’ and make it easier for the adrenals to do their job by supporting the adrenal gland’s function with substances such as Amino Acids, Rhodiola, Ginseng, Cordyceps.
3→ **Rebuild:** Long Term To help the gland repair itself, the body needs raw materials to rebuild itself and the damaged glands. These include **amino acids** (the stuff proteins are made of), healthy fats such as animal source [butter etc] and phosphatidyl choline vitamins and minerals. Also, it is imperative to stop the old habits that contributed to adrenal fatigue e.g., sleep, overwork, poor nutrition etc.
Principles of Thyroid Repair

• Understand the problem first
• Make sure the adrenals can tolerate the thyroid energy
• Give the body what it needs
  – If only T4 is missing, then just give T4
  – If conversion of T4 to T3 is poor, give support for this or use a thyroid support with T4 such as Armour Thyroid (80% T4, 20% T3) or small amounts of slow release T3 (from a compounding pharmacy).
  – Any support with T3 should be given as a 2x or 3x daily dosage, not once daily as T3 is short lived.
Principles of Thyroid Repair

• Check the thyroid levels (FT3, FT4, TSH) as often as needed (usually every 6 weeks) and keep adjusting the dosage as needed. In most cases, if the pituitary is working well, I try to keep the TSH between 1.3 and 1.8 for optimal function. Some doctors try to keep the TSH between 1 and 2.

• It’s important to monitor the symptoms, not just the lab work. Some people feel best with a higher or lower TSH. Make sure the adrenals are tolerating the thyroid support.
Fixing Estrogen Dominance
Fixing the ED in Menopause
Replace Progesterone as needed:
May need estrogen as well as progesterone. For Progesterone alone can use capsules, Troches, or Cream. Each has Pros+Cons
Fixing the ED in Menopause

Progesterone will temporarily up-regulate (sensitize) the estrogen receptors. Starting at a normal dose can create many estrogenic effects (breast tenderness, fluid retention, agitation, insomnia, depression etc) for 2-3 weeks. To avoid this, start at a tiny dose (about 1mg) and build up over 2-4 weeks as tolerated. Benefits are then seen within 1-2 weeks without the estrogenic side effects.
Fixing the E.D. in Menopause

• If progesterone is needed, you can use Progesterone + Phytoestrogens or you can use Progesterone and a compounded Rx estrogen such as Biestrogen (Estriol + Estradiol).

• I no longer recommend Triestrogen as it is a little stronger but less safe as it is Biestrogen plus Estrone.
Fixing the ED in Menopause

When estrogen (hormone replacement) therapy is needed for menopausal symptoms such as,

• Hot flashes (estrogen level dips)
• Dry, thin, brittle/painful vaginal mucosa
• Urinary stress incontinence due to poor pelvic muscle tone from low estrogen levels

we can support with bio-identical estrogen replacement (don’t confuse the bio-identical with the synthetic hormone analogs)
Estrogen Dominance - PMS repair in cycling women
Inter-relationship of Adrenals-Ovaries-Thyroid

A low ‘one’ looks/acts like a high ‘other’

Adrenal function  Thyroid function

Progestrone  Estrogen

A low ‘one’ looks/acts like a high ‘other’
Effect of Adrenals on Progesterone

Adrenal stress depletes progesterone thus shifting the balance toward estrogen (estrogenic symptoms and effects or estrogen dominance).

When dealing with stress or if the adrenals are fatigued, the adrenals need more cortisol. Progesterone is converted to cortisol to help the adrenals but this can produce a progesterone deficit, hence Estrogen Dominance.
Steroid Hormone Pathways

Cholesterol
- Pregnenolone
  - Progesterone
    - 17a-OH-progesterone
      - DHEA
        - Androstenediol
  - 17-OH-pregnenolone

  - Cortisol

  - Testosterone
    - Estriol

  - Estradiol

- Aldosterone
  - Estriol
Stress causes a greater need for cortisol hence a drop in progesterone as it converts to cortisol.
Knowing Your Estrogens

E-1 = Estrone

E-2 = Estradiol

E-3 = Estriol

2-OH 😊 Protective

4-OH 😞 Carcinogenic

16-OH 😞 Carcinogenic

😊 - 😞
Normal Cycle

Ovary

Luteal surge triggers Ovulation

Corpus luteum Makes progesterone

Scar

Period

Estrogen

Progesterone

Testosterone

Period
Poor Corpus luteum $\rightarrow$ poor progesterone production

Becomes a ‘cyst’. Makes Testosterone $\rightarrow$ acne, problems with hair growth

Cycle

Estrogen

Progesterone

Testosterone

Cycle
Fixing ED in Cycling Women

• If you have the e-FHP test (by Diagnos-Techs) graphing the entire cycle, then you can pinpoint the correction to add progesterone or even estrogen at the times needed. Having taken progesterone cream will cause a distortion of the test results falsely suggesting an excessively elevated level of progesterone.

• If no test is available, you can replace some (eg 5-20mg) progesterone at times of need (e.g., PMS)
Progesterone Replacement of Cycling Women

Obtain a Progesterone cream whose concentration is known and that you are able to measure out.

- During the period, 3-5mg daily (depending on personal size and need)
- Then 7-10mg daily x 8 days
- Then 15-20mg daily until the period when you return to 5 mg daily etc.
- Take more if estrogenic symptoms (eg, PMS) and less if progesterone symptoms (lethargy, sleepiness, yeast infections, constipation, weight gain)
- Apply to fatty areas for slow release (eg, abdomen) and non fatty areas for fast release (wrist).
- Progesterone helps sleep if you take at night. You can split between day dose and the night dose.
Correction of ED in cycling women

• Always support the adrenals if needed (and it usually is needed).
• If periods are irregular, you can try using **Chaste Tree** (Vitex) → First thing in AM daily. Can take months to kick in. For healthier ovulation. *Don’t use if pregnant.*
Estrogen dominance repair

- Avoid substances with estrogenic effects
- DIM to reduce the carcinogenic 16-Hydroxy Estrone Sulforaphane to reduce the carcinogenic 4-Hydroxy Estrone
- Calcium D-Glucarate to reduce estrogens via enhanced breakdown.
- Liver drainage support
- Phytoestrogen support (especially in post menopause)
- Iodine support (*if not hyperthyroid*) ➔ may need 12.5mg tab daily (as Iodoral or Lugols solution) ➔ start with a tiny amount daily as test dose.
- Black Cohosh, Chaste tree
Copies of the handouts can be viewed or downloaded from DrRind.com

Go to the menu section on the left side of the screen and click on Forms