

HORMONE OVERVIEW: Know Your Options

Murray Avenue Apothecary
Presented by:
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What is Murray Avenue Apothecary?



What is Compounding?

- Compounding is the traditional and artful method of preparing customized medication to help meet unique physician and patient needs.
- "An art and a science"-it cannot be commoditized
- Pharmacist trained in formulating prescriptions and prepares them from pure ingredients.

What Sets Us Apart?

- Specially-trained staff has **experience** and **expertise** to **solve your problems**.
 - Pharmacist/Owner has over 30 years of experience
 - Knowledgeable staff provides the personal service and care you deserve
- **Compounding Specialists**
- **Quality Assurance**
 - Finest quality ingredients and follow strict guidelines
 - Third-party testing

What Sets Us Apart?

- **Personal, private consultations and follow-up**
- **Green**
 - Pittsburgh's *ONLY* green Pharmacy
 - Veggie capsules and fillers.
 - Recycling program



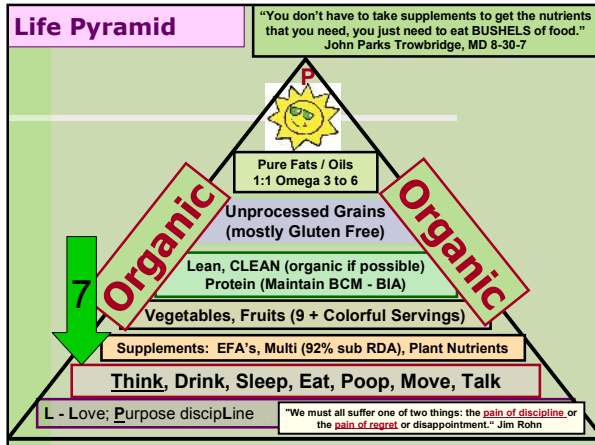
Build Your Health Foundation



Or Else. . .



It will fall apart as you age,
and so will YOU!



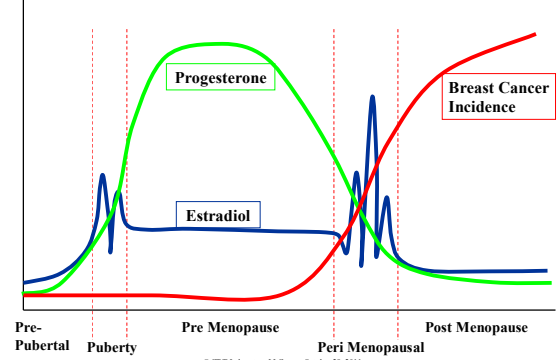
Balancing Your Hormones and Your Life

- Menopause is NOT an estrogen-deficient disease
- Staying healthy is goal
- Eat well, exercise, stress reduction, find meaning in your life
- Vitamins, minerals, supplements are in addition to basics
- Work with nutritionist/naturopath/holistic doctor to meet goals

Symptoms and Life Stages

- The stages of menopause:
 - PRE - regular cycles (or not) - PMS linked to low PG/E2 ratio (Estrogen dominance)
 - PERI - fluctuating cycles and symptom appearance with changing PG/E2 ratio (signs of Estrogen dominance present)
 - POST - 12 consecutive months without menses - 40% E2, Zero PG, Estrone in fat cells-6000 women per day!
- Know the warning signs of imbalance - Hormone receptors are present in almost all tissues, so when hormone levels drop, the effects are felt all over the body (brain, blood vessels, bone, bladder and reproductive organs).

OVARIAN ESTRADIOL AND PROGESTERONE PRODUCTION OVER A LIFETIME



Partners in a Balancing Act



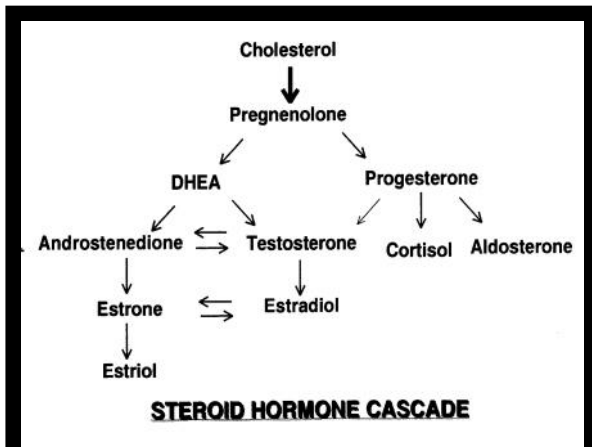
For the best effect hormones need to be in-sync

What is a Hormone?

- Body language
- Chemical messengers
 - Interact with specific receptors on the surface of cells.
 - LOCK and KEY idea: Hormones are the keys that fit into receptor locks to cause a specific effect.
- Regulate cell function
 - Growth
 - Development
 - Mental and physical functions throughout life

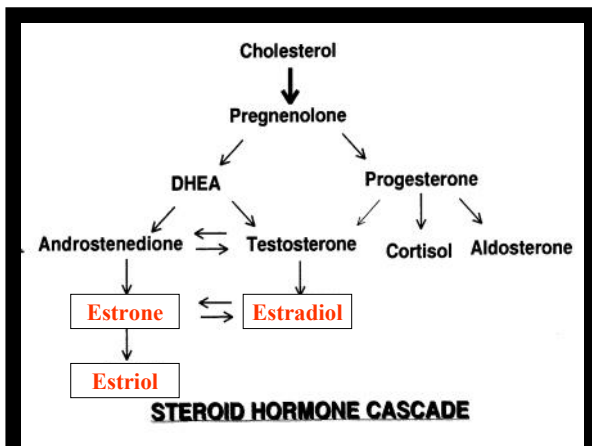


THE MASTER KEY



6 Steps to Balancing Your Hormones and Your Life

1. **Be aware of your symptoms**
2. Be informed
3. Make lifestyle changes
4. Test your hormones
5. Find a doctor who listens
6. Gentle hormone restoration therapy (Use ONLY Human Hormones)



Natural (Human) Estrogens

- Estriol (E3)- 34%
 - High levels during pregnancy, therefore safe for fetus
 - Least stimulating to the breast and uterine tissue
 - Best estrogen for vaginal dryness, urinary leakage
- Estradiol (E2)- most potent- 6%
 - Greater binding receptor and strongest estrogenic effect
 - Primary regulator of menstrual cycle
 - Builds up uterine lining
 - Majority of today's conventional RXs contain only **estradiol** the strongest form **without progesterone**.
- Estrone (E1)- 54%
 - Most common postmenopausal estrogen
 - Converts to estrone sulfate, a storage form, and to estriol
 - Primary estrogen in Premarin

Estrogen Symptoms....

- **Too low**
 - Hot flashes, night sweats
 - Vaginal dryness
 - Incontinence
 - Foggy thinking
 - Memory lapses
 - Depression
 - Tearfulness
 - Disturbed sleep
 - Heart palpitations
 - Bone loss
- **Too high (Dominance)**
 - Water retention, bloating
 - Breast tenderness
 - Fibrocystic breasts
 - Irritability, anxiety
 - Weight gain in hips
 - Bleeding changes
 - Headaches
 - Uterine fibroids
 - Cold body temp
 - Fatigue

Estrogen Metabolism & Elimination MUST Occur DAILY!!!!

- Indole-3 Carbinol and DIM
- Liver Detox (Glutathione)
- Fiber
- Probiotics
- Progesterone
- Calcium D Glucarate
- B Vitamins
- Iodine
- Vitamin D
- Resveratrol
- SamE
- Curcumin
- Coenzyme Q10
- Green tea
- Conjugated Linoleic Acid (CLA)
- Selenium

Are You Estrogen Dominant?



Warning Signs & Symptoms

- Mood swings (PMS)/cravings
- Fibrocystic/tender breasts
- Irregular bleeding
- Irritability/Anxiety
- Fat gain, hips
- Water retention
- Depression/tearful/headaches
- Low Libido
- Hot Flashes/Night Sweats

Related Conditions

- Breast Cancer
- Prostate Cancer
- Fibroids
- Endometriosis
- Thyroid dysfunction

Estrogen Dominance- WHY?

- Relative excess of estrogen
- High fluctuations during peri-menopause
- Overdosing of estrogen therapies
- Impaired elimination of estrogen metabolites
- Environmental xenoestrogens
- Lack of progesterone to balance

Breast Cancer Prevention

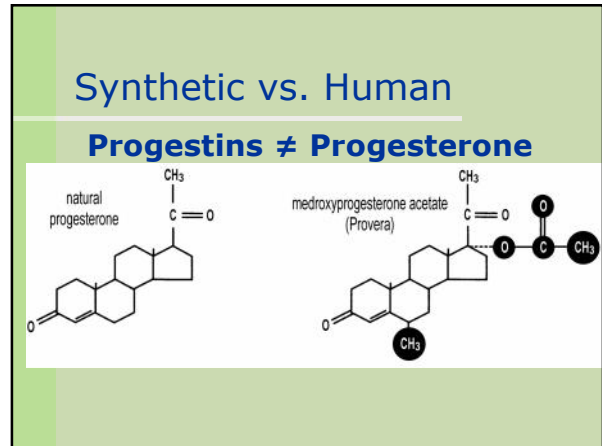
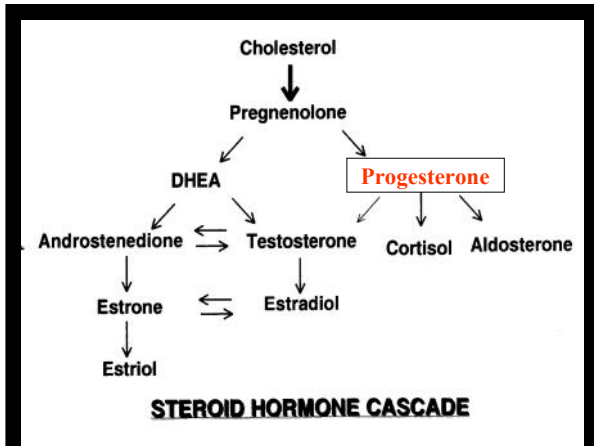


Andropause: "Estrogen Dominance in Men"

- Erectile dysfunction
- Low sex drive
- Lack of stamina
- Low testosterone/estrogen ratio
- Prostate problems

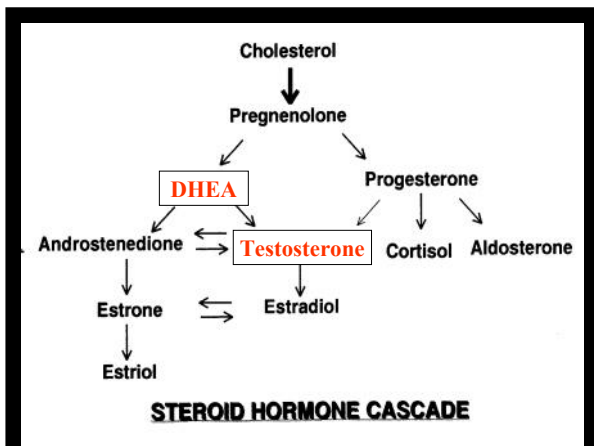


"Action man has become in-action man."



- ## Progesterone
- Progesterone is the **key player** in keeping hormones balanced
 - Regulates our cycles
 - Survival of the fertilized egg
 - Precursor of other steroid hormones
 - Protects against breast fibrocysts
 - Acts on the brain as a natural antidepressant
 - Normalizes blood clotting
 - Helps restore libido
 - Facilitates thyroid function
 - Protects the body against the undesirable side effects of estrogen buildup

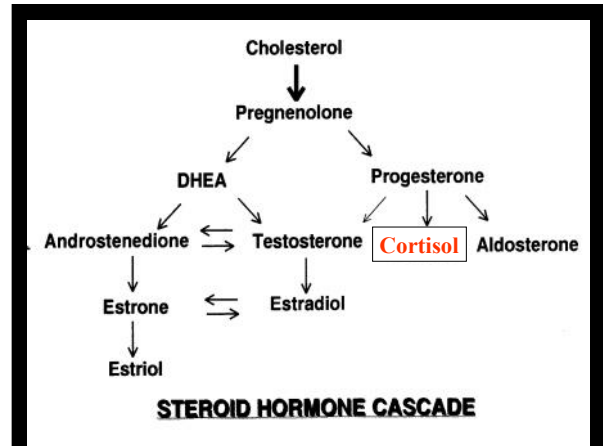
- ## Progesterone Symptoms
- **Too low**—Estrogen Dominance
 - Water retention, bloating
 - Breast tenderness
 - Fibrocystic breasts
 - Irritability, nervousness
 - Weight gain in hips
 - Erratic/heavy periods
 - Dry skin/hair, brittle nails
 - Cold body temp
 - PMS, postpartum depression
 - **Too high**
 - Drowsiness
 - Breast swelling (topical use)
 - Nausea
 - Depression
 - Foggy thinking
 - Oily skin, increased acne
 - Excess facial hair



- ## Androgens: Testosterone and DHEA
- Testosterone and DHEA are anabolic hormones
 - Build and maintain bone, muscle, and brain
 - Sex drive
 - Connective tissue
 - When out of balance might experience increased facial/body hair, hair loss, loss of curves, acne, depression, vaginal dryness, low sex drive.
 - 50% of T from DHEA
 - Adrenal imbalance, illness, menopause, hysterectomy can cause low Testosterone

Androgen Symptoms: Testosterone and DHEA

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ Too Low ■ Fatigue, prolonged ■ Memory loss ■ Decreased libido ■ Muscle weakness ■ Mental fuzziness ■ Depression ■ Blunted motivation ■ Diminished feeling of well-being | <ul style="list-style-type: none"> ■ Too High ■ Deepening of voice ■ Enlargement of clitoris ■ Facial hair ■ Male pattern baldness ■ Aggressive behavior ■ Irritability, moodiness ■ Acne ■ Insomnia |
|--|--|

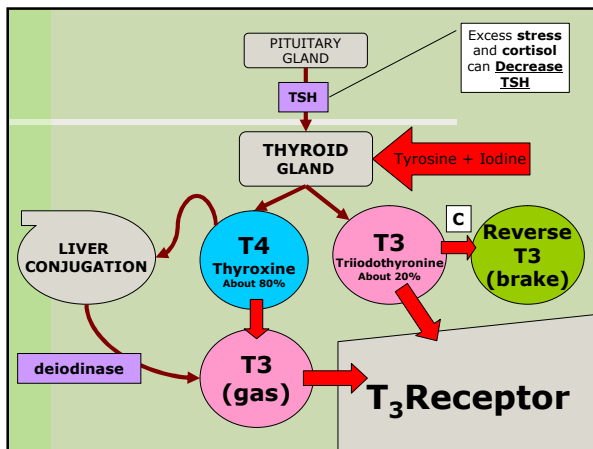


Cortisol

- Secreted by adrenal glands in response to stressors.
- Too high or too low signal imbalance with symptoms ranging from sugar craving, allergies and arthritis to fatigue, difficulty sleeping, burnout and thyroid problems.

Cortisol Symptoms: Adrenal Imbalance

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ Aches and pains ■ Elevated triglycerides ■ Morning fatigue ■ Bone loss ■ Sleep disturbances ■ Depression ■ Anxiety ■ Blood sugar imbalance | <ul style="list-style-type: none"> ■ Infertility ■ Nervousness ■ Allergic conditions ■ Autoimmune illness ■ Chronic illness ■ Evening fatigue ■ Susceptibility to infections |
|---|---|



Thyroid Symptoms: Hypothyroidism or Hypometabolism

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ FATIGUE ■ Dry skin/hair ■ Hair loss ■ Weight gain ■ Irregular, heavy or painful menses ■ Infertility ■ Hoarseness ■ Depression | <ul style="list-style-type: none"> ■ Constipation ■ Aches and Pains - "Carpal Tunnel" symptoms ■ High blood lipids ■ Slow thought processes ■ Cold intolerance ■ Edema ■ Loss of outer third of eyebrows |
|---|---|

6 Steps to Balancing Your Hormones and Your Life

1. Be aware of your symptoms
2. ***Be informed***
3. Make lifestyle changes
4. Test your hormones
5. Find a doctor who listens
6. Gentle hormone restoration therapy (Human Hormones)

Be Informed: Research on HRT

- With few exceptions, the major studies provided to physicians and scientists in the USA have failed to distinguish among types and dosages of "HRT"-Provera is confused for human progesterone.
- For the most part, only one dose of one synthetic preparation is studied-Prempro
- We need to look closely at each study, reported side effects, adverse reaction or risk, and ask "**exactly what are we studying?**"

WHI Study- Key Points

- Risks of Prempro on balance exceeded benefits
- Compared to placebo, Prempro had:
 - A 41% increase in stroke
 - A 29% increase in heart attacks
 - A doubling of rates of blood clots
 - A 22% increase in total heart disease
 - A 26% increase in breast cancer
 - Risks showed up after 1-4 years
 - WHI was first large randomized clinical trial ever

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Make Lifestyle Changes

- Diet & Supplementation
- Exercise
- Stress Relief
- Sleep

Diet

- **Hormone balancing diet**
 - Organic, hormone-free foods
 - Mediterranean style- fish, vegetables, whole grains, olive oil, fruits
 - High fiber decreases reuptake of metabolites
 - Low inflammation
 - Decrease alcohol-watch glass size
 - Low stress: "Its not what you eat, but what eats you"!
 - Sugar and white flour free, not processed
 - Avoid carcinogens- i.e.well-done meat

Essential Supplements

- Zinc – low levels may mimic estrogen deficiency
- Boron – elevates estradiol and testosterone levels. Check fruit & vegetable intake.
- Vitamin B6 – involved in the clearance of estradiol from receptors
- Selenium – necessary for production of thyroid hormone.
- Vitamin C, Chromium, Vitamin B5, MSM – important for adrenal function.
- Adequate protein intake.
- Amino Acids

Exercise

- Aerobic: “burns” carbs, improves insulin resistance, good for your heart
- Anaerobic: “burns” fats, good for your bones
- Stretching (yoga)
 - Stay in the moment, reduce stress
 - “You don’t get old and then get stiff, you get stiff then you ARE old”
- Strength training

Stress Relief

- **Does stress worsen hot flashes?**
 - **Yes!**
- Subjected to stressful conditions
- Subjected to non-stress conditions
- 43% increase in flushes during stress vs. non-stress
- So, try to find a way to minimize stress
 - Meditation
 - Yoga
 - Centered Breathing- Center your mind

Fictional Example of a Woman’s Day...Stressed?

- Wake up after sleeping poorly because of night sweats
- Shower
- Dry hair/ apply make up
- Hot flash
- Re-dry/Re-apply make up
- Make and eat breakfast
- Go to work
- Work all day
- Run errands on way home
- Cook dinner
- Eat Dinner
- Do dishes
- Help kids with homework, arguments, etc
- Straighten house
- Collapse with a cup of tea

Sleep

- Crucial for hormone balance
- Maintain good sleep hygiene
 - Dark room
 - No caffeine after breakfast
 - Write down worries before bed
 - Get in bed→ go to bed!
- Relaxation techniques

6 Steps to Balancing Your Hormones and Your Life

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Test Your Hormones-Saliva

- Measures the free active fraction of hormone available to the cells and tissues
- Convenient, less invasive
- Lab gathers and reports clinical information to provide a link between results and symptoms
- Results more closely correlate with symptoms
- Great measure of tissue levels because hormones must pass through tissue to get to saliva.

Test Your Hormones-Saliva

- Confirm symptoms of hormone imbalance through testing
- Matching hormone levels with symptoms
- Identifying potential hormone overdose
- Review saliva hormone test results with your physician or practitioner to design an individualized program

Test Your Hormones-Blood

- Usually measures the total level of hormone (protein bound plus free)
- Serum test involves blood draw in lab or office
- Serum testing most widely used by default and lack of exposure to other methods
- Lab provides result only
- Blood spot testing

Test Your Hormones-Urine

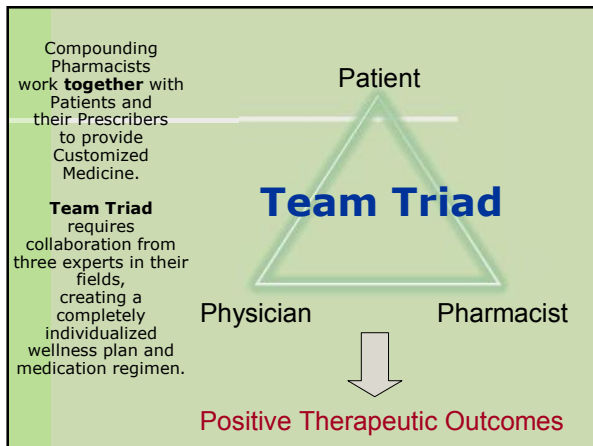
- Expensive
- Inconvenient- Collection over 24 hrs
- Measurement of what is being thrown away, not what is bioavailable or being utilized by tissues
- Not getting representation of active hormone delivered to the tissue when on hormone therapy

6 Steps to Balancing Your Hormones and Your Life

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Find a Doctor Who Listens

- Question authority! If your doctor does not test your hormone levels, does not balance estrogens with progesterone and does not want to hear about it...maybe its time to explore a new health relationship?
- Bring your hormone test evaluation with you for review
- Work with your physician and compounding pharmacist to determine a course of treatment that includes:
 - Necessary lifestyle changes
 - Human hormone therapy (as needed)
 - Routine monitoring and adjustment



- ## 6 Steps to Balancing Your Hormones and Your Life
1. Be aware of your symptoms
 2. Be informed
 3. Make lifestyle changes
 4. Test your hormones
 5. Find a doctor who listens
 6. ***Gentle hormone restoration therapy*** (Human Hormones)

- ## Gentle Hormone Restoration Therapy
- Goal is to restore hormone levels to the normal physiological level of a younger individual to treat the symptoms caused by hormone deficiencies and imbalances and provide the protective benefits of the hormones to the entire system
 - It's your body, you know what it needs!
 - "Be aware of symptoms, get educated and take a proactive role in your health!"

- ## Why Restore Our Hormones?
- Healthier aging process
 - Less degenerative diseases
 - Decrease symptoms of hormonal imbalance
 - Better quality of life. . .
 - Sleep
 - Energy
 - Sex drive
 - Weight maintenance
 - At the turn of the century women did not live to 47-now we can live to 100!


- ## How Do We Treat Other Hormone Deficiencies?
- Hypothyroidism? (low thyroid levels) --> ■ *Thyroid* (esp T4 and T3)
 - Type I Diabetes (low insulin levels) --> ■ *Insulin*
 - Addison's disease (low cortisol levels) --> ■ *Cortisol* (i.e. hydrocortisone)
 - Small stature (low growth hormone) --> ■ *Human growth hormone* (HGH)

- ## Synthetic vs. Human
- | Synthetic (Conventional) | Human (Bioidentical) |
|--|--|
| <ul style="list-style-type: none"> ■ Conjugated Equine Estrogen (CEE) IS NOT Estrogen Replacement Therapy (ERT) <li style="text-align: center;"><i>CEE ≠ ERT</i> ■ CEE is a synthetic drug product that mimics some of the actions of estrogen in the body; it does not restore normal physiological estrogen levels | <ul style="list-style-type: none"> ■ The term "bioidentical" refers to the hormone which has the same molecular structure as the hormone produced in the human body |

Human Identical

"In a sense bio-identical hormones Have undergone safety trials as Long as human have walked the Earth."

- George Gilson, M.D.
You've Hit Menopause Now What?



They say menopause makes women do strange things ...
LIKE SWALLOW HORSE URINE!

PREMARIN CONTAINS HORSE URINE

Keys to Hormone Restoration Therapy

- Use the same exact hormone the body produces
- Imitate the mechanisms the body uses naturally as closely as possible
- Know your options
- Determine your needs and goals
- Individualized therapy from knowledgeable providers
- Cannot apply general rules, only guidelines
- **It depends on the individual patient!!!**

What Are My Options?

Compounding allows specific *individualization* of dose and dosage form on prescription




- Gives your healthcare provider complete flexibility in personalizing your therapy and "tweaking" to restore your hormone balance
- Many dosage forms available- oral capsules, transdermal creams and gels, suppositories
- Preservative-free or dye-free preparations

What Are My Options?



Summary...

- We need to learn about hormone balance and the complex relationships between hormones: E2, Pg, T, DHEA, Cortisol, and Thyroid
- We need testing which looks at all these hormones and also integrates this information with the symptoms
- If we know the facts, we can make an informed decision

Summary continued...

Continue educating yourselves about your options.....your health and quality of life depends on it!

Do not fear hormones...they are crucial to the proper functioning of your body.

Thank you for your time!

Visit us at:

www.MAapgh.com

www.YourGoddessRoom.com

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