



HORMONES

Presented By:

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HORMONES

- ❖ *"There are four big epidemics of hormonal problems in Americans today that are sending millions of people out of balance: too much insulin (from sugar), too much cortisol and adrenaline (from stress), imbalances of sex hormones such as estrogen and testosterone, and not enough thyroid hormones."*

Mark Hyman, MD¹

¹In January 2012, Dr. Hyman was featured on Dr. Oz show. He is the author of *The Ultra Mind Solution* and several other books dealing with chronic illnesses. He is a family physician, a four-time New York Time bestselling author, and an internationally recognized leader in the groundbreaking medicine approach known as Functional Medicine.

What Are Hormones?

❖ Definition:

Hormones are chemicals released by cells in the glands sending messages through the blood from one target gland to another. There has to be enough fat in the blood to carry the hormones to their target cells. Hormones control all metabolic activities in the body. (Total Cholesterol of above 150 is required for proper hormone transportation).

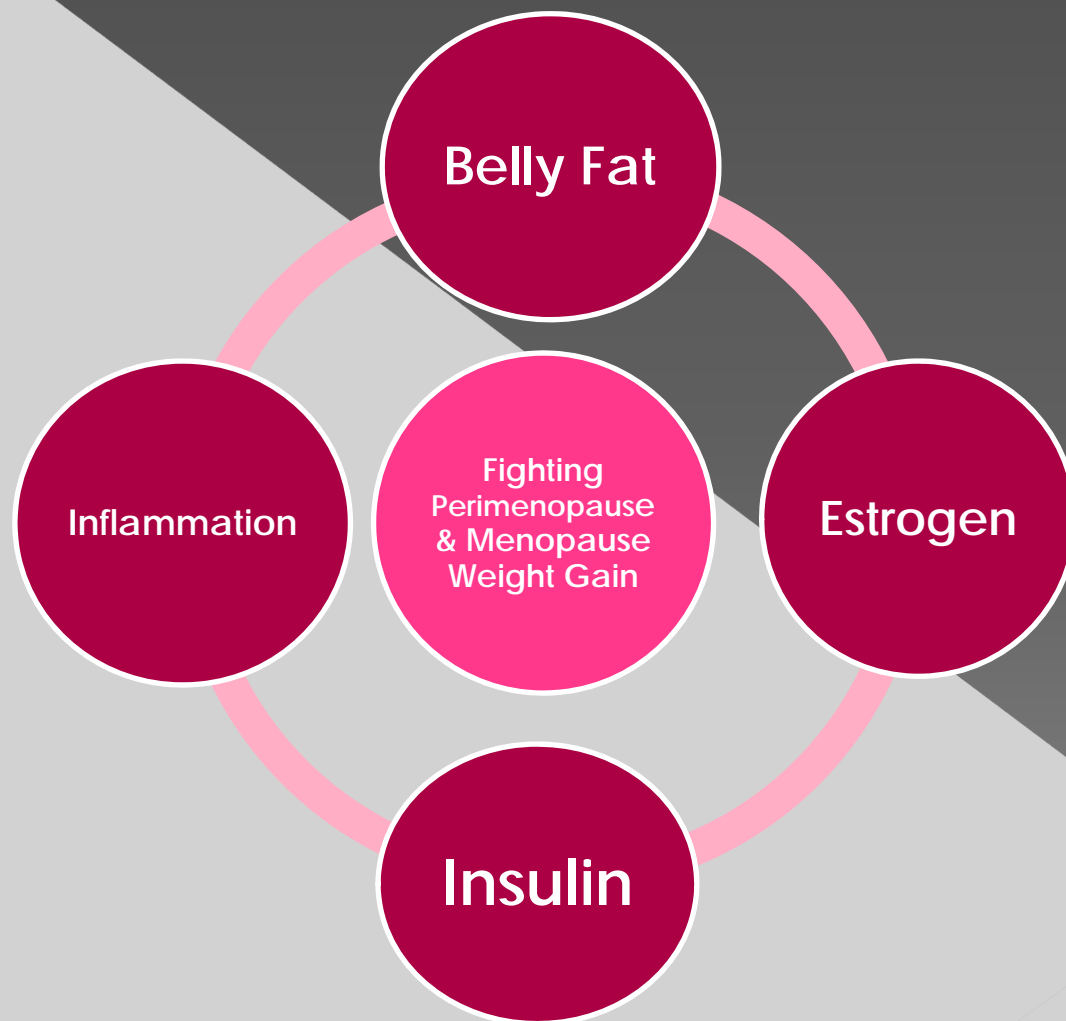
Glands and Hormones

- ❖ Where they are produced:
 - Adrenal gland hormones, DHEA, cortisol, and adrenalin
 - Sex hormones (from ovaries and testes): estrogen, progesterone, and testosterone
- Thyroid hormones: T4 and T3
- Pituitary and hypothalamus hormones: all hormones relating to glands (e.g., TSH)

Glands and Hormones

- Pancreatic hormone: **insulin** (fat storage hormone; pancreas makes it when you eat sugar or carbohydrates; **the more insulin you have the more belly fat you have;** estrogen makes more insulin)
- The fat hormone: **leptin** (produced by the white fat cells in the body)

Cycle of Inflammation and Weight





Most Important Glands for Weight Loss

- ❖ **Adrenal Glands:**
located on top of the kidneys
- Adrenal hormones: *adrenalin* and *cortisol*; part of the 'fight or flight' response; regulate blood sugar, sleep, mood/stress, anxiety, pain, detoxification, fat metabolism, density
- Adrenals produce a "mother" hormone called *pregnenolone*, which is a building block of many hormones that the adrenal glands produce, including the sex hormones.

Most Important Glands for Weight Loss

- When your adrenals are imbalanced, you are in a catabolic state (you are eating yourself from inside out)
- Adrenal glands need **B vitamins** and herbs like licorice root, ginseng, and ashwaganda root for optimal health and recovery from adrenal stress
- Adrenal stress symptoms: chronic fatigue, non-refreshing sleep/insomnia, memory issues (brain fog), chronic inflammation, food cravings (sweets/salty), slow recovery from exercise/muscle wasting, blood pressure (low or high), cold sensitivity due to interference with thyroid functioning, impaired liver detoxification

Most Important Glands for Weight Loss

- ❖ **Thyroid Gland:** located at the base of the throat, just above the collar bone
 - It produces T4 which allows for T3 conversion, which burns fat and energy for the body
 - It is involved in fertility (regulates the menstrual cycle): it supports the levels and cycle of progesterone
 - It regulates the body temperature (low body temperature indicates low fat burning) and it needs minerals, particularly zinc, selenium, and potassium iodide to have optimal functionality

Most Important Glands for Weight Loss

- Thyroid gland also regulates the blood pressure, hair and nail growth, and skin quality
- Low thyroid can cause headaches and water retention (edema), sensitivity to cold, dry brittle hair, dry itching skin
- Hyper thyroid burns up all your resources (elevates blood pressure, can cause weight loss or weight gain)
- * It is important to have specific vitamins and minerals for adrenal and thyroid health *

Most Important Glands for Weight Loss

- ❖ **Hypothalamus and Pituitary Glands:** they turn on and off all sex hormones creating a woman's cycle; affect weight through appetite management (feeling of satiety); create human growth hormone (HGH) which tells the body to burn fat and keep the muscle
 - Lack of HGH can cause physical and psychological problems
 - ***Physical symptoms*** can include: premature aging, excess body fat, fatigue, muscle weakness, decreased sexual desire
 - ***Psychological symptoms*** can include: shyness, feeling of hopelessness, sadness or depression, anxiety

Sex Hormones

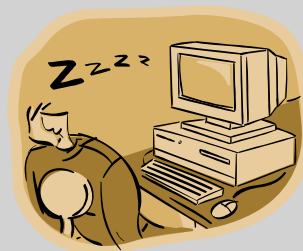
- ❖ **Estrogen:** produced in the ovaries; after menopause, the adrenal glands take over the production of estrogen
 - Women will also put on fat to produce estrogen

- ❖ Signs of low estrogen
 - Aging and thinning skin, wrinkles around the mouth and eyes
 - Memory lapses, depression, fatigue
 - Hot flashes and night sweats
 - Dry eyes and vagina
 - Painful intercourse

Sex Hormones

❖ Signs of low estrogen

- Droopy breasts in women and large breasts in men
- Irregular or no periods
- Bone density problems
- Leaky/weak bladder
- Sleep disturbance
- Lower self-esteem



❖ Signs of Excess Estrogen

- Tender or full breasts
- Overactive mind
- Uptight or irritated (feeling cranky)
- Edema of the hands and feet

Sex Hormones

❖ Progesterone:

produced in the ovaries; responsible for helping you stay pregnant and calm. During perimenopause it is usually the first hormone that we run out of

❖ Signs of low progesterone:

- Anxiety and sleeping lightly
- Heavy painful monthly bleeding or break-through bleeding mid cycle
- Swelling and inflammations
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Sex Hormones

❖ Signs of low progesterone include cont.:

- More aches and pains in the body including arthritis and Fibromyalgia



- Asthma and allergies are getting worse
- Cramping and twitching of muscles
- Tender/full feeling breasts
- PMS
- Bone loss

Sex Hormones

❖ Signs of excess progesterone:

- Can sedate the brain (brain fog)
- Induces sleep
- Interferes with the action of insulin and is involved in insulin resistance
- Stimulates appetite (weight gain)
- High levels can promote breast cancer
- Increases temperature of the skin
- Can decrease sex drive with already low testosterone levels
- Increases urinary incontinence
- Counteracts the benefits of estrogen

Sex Hormones

❖ **Testosterone:**

for women, testosterone needs to be in balance. It is produced in the ovaries and the adrenal glands. If you have overactive adrenal glands, you are producing too much testosterone and/or estrogen.

❖ Signs of low testosterone:

- Low sex drive
- Hot flashes
- Weak bones
- Anxiety and fear, a feeling of not being safe
- Loss of coordination

Sex Hormones

❖ Signs of low testosterone cont.:

- Flabby or weak muscles, loss of stamina (more fat less lean muscle)



- Loss of skin tone, facial wrinkles and reduced pubic hair
- Feeling tired or exhausted all the time
- Poor body image

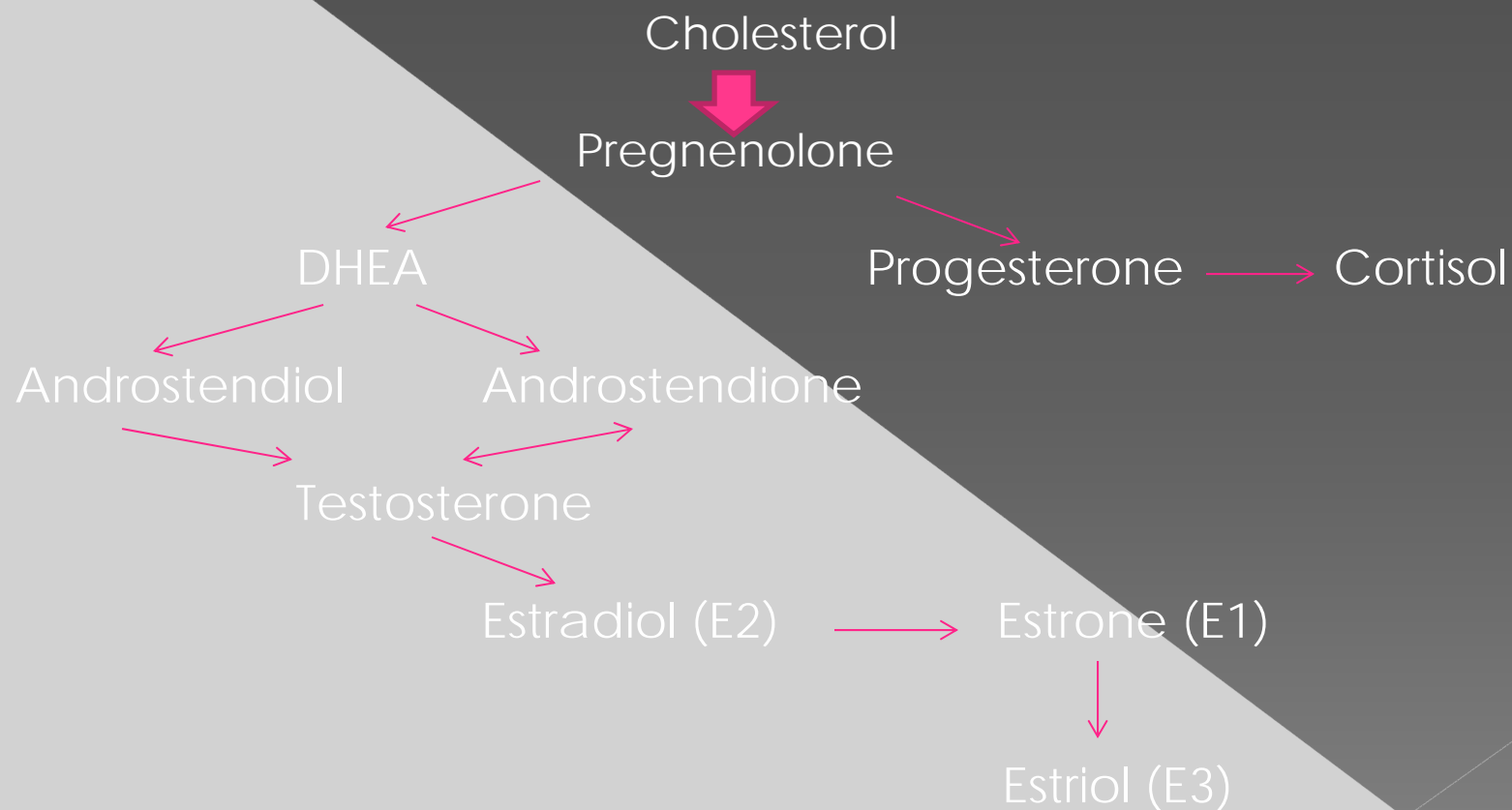
Sex Hormones

❖ Signs of excess testosterone:

- Oily skin and acne
- Development of facial hair in women
- Changes in the voice for women, a deepening
- Carbohydrate sensitivity (Syndrome X)
- Angry, hostile, agitated or aggressive
- Extra weight around the middle, spare tire



Selective Hormone Pathways





Hormonal Message Interference

- ❖ Since the super highway for the hormones in the body is your blood, for more efficient delivery, clean up your blood, aka detoxify from:
 - Bacteria, fat, food particles, uric acid crystals, Candida and parasites
- ❖ Glands may have to send more hormonal messages to get a response from the receiving gland. It would be as though the glands are shouting hormonal messages at each other (*hot flashes* are an example).



How Does the Body Get Out of Balance?

- ❖ Toxins in the body and environmental pollutants
- ❖ Vitamin and mineral deficiencies
- ❖ Low “good fat” diets
- ❖ Gluten and other food proteins (casein, soy & corn protein) can affect your hormonal health by placing more stress on the adrenal glands which comes from the inflammatory response in the gut
- ❖ Diets high in refined carbohydrates, sugars, and processed foods
- ❖ Liver and bowel congestion
- ❖ Lymphatic congestion (e.g., cellulite)
- ❖ Dehydration
- ❖ Stress/emotional trauma (death in the family, job loss, divorce)

Age-Related Decline of Hormones

- ❖ Anti-aging hormones: estrogen, progesterone, testosterone, pregnenolone, DHEA (dehydroepiandrosterone), HGH (human growth hormone), melatonin, thyroid hormones

Age-Related Decline of Hormones

<i>Estrogen</i>	30% drop by age 50, then a sharp drop with fluctuations in menopause
<i>Progesterone</i>	75% loss from age 35 to 50, then continuing decline
<i>Human Growth Hormone (HGH)</i>	50% loss from age 25 to 50, followed by an additional 50% loss by age 75
<i>DHEA</i>	
<i>Pregnenolone</i>	
<i>Testosterone</i>	
<i>Melatonin</i>	Small decline from age 25 to 40, followed by a sharp drop after age 40

Current State of Health

- ❖ The liver is the most important organ in weight loss. Why?
- The liver conjugates all the hormones and it filters everything we eat, drink, and all that is in our blood; then it transports the toxins to the kidneys in the form of urea

Current State of Health

- Liver turns plastics and chemicals into xenoestrogens (e.g., air freshener, plastic bottles, pesticides, etc.)



- The body will store anything it cannot process: aspartame/splenda, alcohol, and other non-foods
- When the liver can no longer keep up with the toxins, your body will start having chronic symptoms that will not show up on traditional blood tests

Additional Information

❖ Choose high quality nutritional supplements:

1) *Foundational* supplements to lower inflammation include Vitamin D, fish oil, Probiotic, Vitamin C, mineral supplements (per Dr. Hyman)





Additional Information

2) *Personalized*
supplemental
support for adrenals,
thyroid gland and
blood sugar

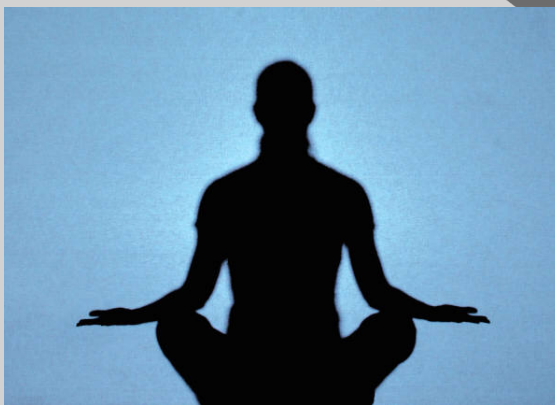
Check our
supplement store:

www.nutritional-solutions.com



Additional Information

- ❖ Get plenty of rest and good water (no chlorine or fluoride – they slow down the thyroid)
- ❖ If you have adrenal fatigue/or chronic fatigue, begin a mild, steady burn kind of exercise program (walking, treadmill, Pilates, yoga)



Additional Information

- ❖ Replace pre-hormones for the adrenal glands, such as pregnenolone, DHEA
- Use natural supplements to enhance sleep and balance hormones (Melatonin)
- ❖ Use natural hormone-enhancing products or bio-identical hormones when necessary

Additional Information

- ❖ Treat yourself to a spa treatment, facial massage, etc. to balance stress hormones



- ❖ Spend time with people that support you for success not failure!
- ❖ Love yourself everyday!





Thank You For Your Time

❖ Q & A

