The Great Plains Laboratory, LLC

Hormone Health & Your Body

The Importance of Understanding Hormone & Bodily Changes

Why Analyze Female Sex Hormones?

Hormone Markers

Estrogen
Estradiol
Estriol
Estrone
Progesterone
Testosterone
DHEA
Cortisol

As girls mature to women, hormonal changes orchestrate the process leading to the beginning of menstruation. There are two phases during a woman's menstrual cycle, the first phase is considered the estrogen-dominant phase (prior to ovulation), and the second phase is progesterone-dominant (post-ovulation). The monthly shifts between estrogen to progesterone are crucial to a woman's health.

Women normally produce small amounts of testosterone. This "male" hormone helps women stay strong, fit and sexually active, and may protect against breast cancer and cardiovascular disease.

DHEA is the precursor to both female and male sex hormones and is released with cortisol under stress conditions.

Measuring hormone levels is an important proactive step in health maintenance. Many "vague" symptoms result from hormone imbalance and can be treated if properly identified.

Symptoms of the reproductive and menopausal years

- Breast pain and/or tenderness
- Cysts and lumps (breast, uterine)
- Fibrocystic breasts
- Depression / insomnia
- Irregular menstrual cycles
- Hot flashes
- Weight gain
- Brain fog

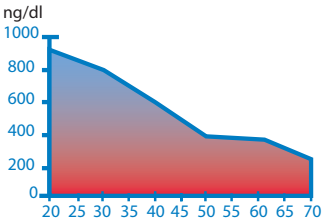
Why is Male Sex Hormone Balance Important?

Hormone Markers

Estradiol
Progesterone
Testosterone
DHEA
Cortisol

Testosterone is the primary male sex hormone and is released in pulses throughout the day. Testosterone production rises during puberty. After 35, free testosterone becomes less available due to increased testosterone-binding proteins and decrease in testosterone-releasing cells. Low testosterone levels or high stress in men's early 20's or 30's may cause symptoms similar to going through the natural decline of testosterone.

DHEA is the precursor to both female and male sex hormones, as well as to the stress hormone cortisol. The balance of testosterone with other estrogens, progesterone, DHEA, and cortisol influences men's health. Higher estrogen levels with low testosterone levels have been correlated with an increased risk of prostate problems. High cortisol and DHEA can increase anxiety, lower immunity and destablize blood sugar, as well as the risk of cardiovascular disease.



Decline in testosterone by age

Symptoms of declining testosterone

- Erectile dysfunction
- Decrease mental ability
- Insulin resistance
- Decreased sex drive
- Lethargy
- Weight gain
- Difficult urination
- Prostate enlargement
- Decline in muscle strength and mass
- Bone loss

How Do Stress Hormones Affect Your Body?

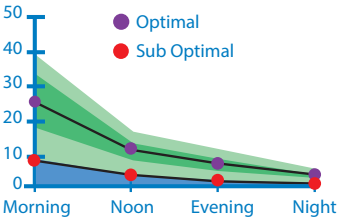
Standard Hormoneal Markers for Assessing Adrenal Function

Estradiol
Progesterone
Testosterone
DHEA
Cortisol

Stress comes in many forms: mental, physiological, and environmental, but all forms of stress can generate a physiological response. The capacity to handle daily stress is influenced by factors that strain body systems, such as: allergies, environmental pollutants, infections, sleep deprivation, and mental illnesses.

Physical and emotional stress cause cortisol and DHEA release from adrenal glands. Cortisol helps the body respond to stress by increasing glucose metabolism for quick energy, decreasing immune response and stimulating a cascade of other hormones. DHEA heightens your awareness and memory retrieval while decreasing emotional response. The stress response is overall beneficial in handling immediate challenges. However, it is not healthy to be in a constant "fight or flight" which contributes to accelerated aging.

Contemporary life provides little time for people to allow their bodies to recover from stress. Chronic stress impacts cardiovascular health, reproduction, mental health and increases cancer risk.



Diurnal cortisol curves

Benefits of Analyzing These Markers Through Saliva

Testing through saliva is an easy, non-invasive and accurate way to provide a good "snap shot" of your hormone production throughout the day. The hormone present in the saliva is the active hormone that is available for bodily use. This will be beneficial for your physician and you to create an optimal hormone balancing plan.

Comprehensive Plus Panel

- Assessment of major estrogens
- Estradiol and estriols levels have been shown to be higher in women with greater risk of breast cancer and polycystic ovarian disease.

Recommended for women only.

Markers Tested

Estradiol (estrogen)*
Estrone (estrogen)*
Estriol (estrogen)*
Progesterone
Testosterone
DHEA
Cortisol (4x a day)

Comprehensive Panel

- Provides an excellent snapshot of both the sex hormones and stress hormones
- Aids in assessing female sexual dysfunction
- Aids in assessing male sexual dysfunction
- Illuminates how stress may be interfering with the patients sex hormone balance

Markers Tested

Estradiol (estrogen)
Progesterone
Testosterone
DHEA
Cortisol (4x a day)

*Estrogen Quotient Ratio = EQ = E3/ E1 + E2 *E3 (estriol ; body's protective form of estrogen E1 and E2 (body's proliferative forms of estrogen)*
Kajantie & Phillips, "The effects of sex and hormonal status on the physiological response to acute psychosocial stress" Psychoneuroendocrinology 31 151-178, 2006
An ideal would be a ratio closer to 1. EQ < 1: means the proliferative estrogens are higher than the protective estrogen and can be associated with an increase chance of cancer. EQ < 1.5 means there is more protective estrogen present than proliferative estrogen and can be associated with a low risk of cancer. Lemon, Henry M.D. "Estriol Prevention of Mammary Carcinoma Induced by 7,12-Dimethylbenzanthracene and Procarbazine." Cancer Research 35, 1341-1353, May 1975.
In addition to sex differences, individual variances in physiological response to stress appear to be an important risk factor for development of chronic disease.

Contact Us
GP-Labs.com
913.341.8949
sales@gp-labs.com

Address
11813 West 77th Street
Lenexa, KS 66214
United States