

FEMALE PANEL

Common Hormone Conditions

Interactions between the five hormones of the female panel (see Page 3) are fundamental to health and hormone imbalances may negatively impact health. Below are examples of how hormone imbalance can affect health:

WEIGHT GAIN

High levels of the stress hormone, cortisol, can cause unstable blood sugars and may increase sugar cravings. High estrogen levels may interfere with thyroid gland function and result in weight gain. High levels of testosterone and/or DHEAs may be associated with polycystic ovarian syndrome, a condition that makes weight loss very difficult.

DEPRESSION/DIFFICULTY COPING/ IRRITABILITY

Our laboratory data shows that 2/3 of women who self-report depression or difficulty coping and 7/10 who report irritability have at least one hormone that is out of range. While there is no guarantee that restoring hormone balance will lessen these mood symptoms, many women experience some relief from mood disorders when their hormones are balanced.

SLEEP DISTURBANCES

High or low levels of cortisol may affect sleep, as may low levels of estradiol. For some postmenopausal women, difficulty sleeping is directly related to hot flashes and night sweats, which are often signs of hormone imbalance. Once hormone imbalances are addressed, sleep issues may resolve.

HOT FLASHES

Having too little estrogen can be associated with hot flashes, but so can supplementing with too much estrogen! Maintaining the right amount of estrogen is at least one factor in controlling hot flashes.

BONE LOSS

Testosterone and estradiol help build bone, while high cortisol tends to break down bone. High cortisol is of particular concern because it breaks down bone and interferes with the bone-building action of testosterone!

BREAST CANCER

A common pattern of hormone imbalance shows up in women with breast cancer: above range estradiol, below range progesterone, above range evening cortisol and out of range DHEAs. The Estrogen Metabolism Ratio urine test and the Melatonin Cortisol Index can also give some insights into breast cancer risk.

Why Test Hormones In Saliva?

- Saliva hormone testing is excellent at uncovering hormone imbalance.
- Saliva measures hormone that *actually* made it into tissue, because hormones pass through saliva gland tissue before getting into saliva.
- Blood measures hormones that *might eventually* get to tissue.
- Saliva collection is painless and easy to do at home. Blood collection requires a trip to the laboratory, and some hormones cannot be tested in blood (e.g., estriol).
- The stress of a needle puncture for blood collection tends to raise cortisol levels. Saliva collection is not known to raise cortisol levels.
- Patients who are taking thyroid hormones (e.g. Synthroid or Eltroxin) may experience low thyroid symptoms even though serum TSH is normal. This is because the serum TSH frequently fails to reflect how well supplemented thyroid hormone is being delivered to tissue.

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RESTORING FEMALE HORMONE BALANCE

ESTROGENS

Low estrogen can be corrected by supplementing with estrogen, however some nutritional supplements may also help improve symptoms. For example, boron may help boost estrogen production, and plant estrogens and progesterone may provide relief from symptoms of low estrogen.

High estrogen occurs either from making/retaining too much estrogen or supplementing with too much. Women who carry weight around their midsection often have high estrogen levels because fat cells have an enzyme that makes estrogen from adrenal hormones. Thus, weight loss often reduces estrogen levels.

When estrogen levels are high, it is important to make sure there is enough progesterone to balance its effects. Supplementing with too much estrogen can make estrogen receptors less responsive to estrogen, leading to estrogen deficiency symptoms.

PROGESTERONE

Low Progesterone is often corrected by supplementing with natural progesterone, which is generally very safe and effective. The herb chasteberry may also help normalize progesterone levels. Sometimes low progesterone indicates low thyroid hormone levels, therefore lab tests for thyroid function may be recommended.

High Progesterone is almost always a consequence of over-supplementation. Therefore, it is likely that your health care practitioner will recommend a dose reduction.

Prolonged supplementation of high doses of progesterone may cause progesterone receptors to become less sensitive, which could result in symptoms of low progesterone.

Too much progesterone also sometimes leads to increased testosterone levels and symptoms of testosterone excess. A dose reduction or different progesterone type (cream instead of capsule) may be required.

CORTISOL

Low Cortisol in the morning strongly suggests adrenal issues, which may require further testing or interventions by your health care provider.

High Cortisol levels are associated with numerous symptoms and conditions including: bone loss, high blood pressure, insulin resistance and diabetes, weight gain, memory impairment and immune system suppression.

High cortisol levels also interfere with the action of other hormones. Therefore, when cortisol levels are high, the first step in restoring hormone balance is often to lower cortisol levels. Your health care provider may recommend lifestyle changes as well as supplements to help address high cortisol levels.

DHEAs

Low DHEAs does not have well-defined signs and symptoms, although low DHEAs is often associated with chronic illness. Some women may benefit from supplementing with DHEA to bring saliva hormone levels within range.

High DHEAs is associated with polycystic ovarian syndrome and insulin resistance. Thus, it may be necessary to undergo further testing, or to receive treatment for these conditions.

High levels also occur when too much DHEA is given, in which case your health care practitioner will likely recommend reducing the dose.

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TESTOSTERONE

Low Testosterone symptoms can sometimes be resolved by adding progesterone or correcting adrenal issues. However, it is also sometimes **necessary to supplement with testosterone.**

High Testosterone is associated with polycystic ovarian syndrome and insulin resistance. Thus, it may be necessary to undergo further testing, or to receive treatment for these conditions.

WHY TEST?

Good health has a lot to do with maintaining balance: the right balance of work and play, the right balance of nutrients in the diet, and the right balance of hormones.

Hormone imbalance may be a result of illness, or may produce symptoms and biochemical changes that eventually lead to illness.

THE FIVE HORMONES

ESTROGENS

Estradiol, estrone, estriol

- Receptors found throughout body including: heart, brain, breast, bone, bladder, blood vessels
- Estradiol is the strongest estrogen, followed by estrone. Estriol is the weakest.
- Are responsible for female sex characteristics and play an important role in the menstrual cycle.
- Are needed to build up the lining of the uterus (endometrium)

PROGESTERONE

- Is needed to balance the effects of estrogens and keep the endometrium from getting too thick .
- Is highest shortly after ovulation because it is released by the corpus luteum, which only forms after ovulation.

CORTISOL

- Is the major stress hormone released by the adrenal glands.
- High or low cortisol levels may be an indication of poor adrenal function

DHEAs

- Is a storage form of the adrenal hormone DHEA; used to make estrogens and testosterone
- After menopause, estrogen and testosterone are made primarily from DHEA released by the adrenal glands.

TESTOSTERONE

- Helps maintain muscle mass and bone, improves sense of well-being and sex drive.