

### Common Hormone Conditions

The Month-Long Hormone Assessment (MLHA) measures estradiol and progesterone approximately every third day through the menstrual cycle (11 samples). The Month-Long Hormone Assessment also reports average testosterone, cortisol and DHEAS levels. By providing a record of your symptoms on sample collection days, your healthcare professional is better able to determine if those symptoms arise from a hormone imbalance. A ratio of progesterone to estradiol is calculated, which offers insight into how the relationship between these two hormones may impact symptoms.

The following are examples of conditions that may be associated with hormone imbalance:

#### Mood Disturbances

Mood swings and increased irritability may be linked to an imbalance between estradiol and progesterone. Chronically elevated or low cortisol levels have also been linked to mood disturbances.

#### Cycle Specific Symptoms

Symptoms regularly occurring at specific times in the menstrual cycle may be related to hormone imbalance. For instance, hot flashes can be associated with too little estrogen while progesterone deficiency may manifest as fatigue and/or insomnia.

#### Infertility

Too little progesterone, or progesterone that surges too early or too late in the menstrual cycle can have a negative effect on ability to conceive. The month-long hormone assessment maps out progesterone over the menstrual cycle and also helps identify when ovulation occurs.

#### Abnormal Bleeding

Heavy bleeding is often associated with high estradiol levels but may also arise from low estradiol. The Month-Long Hormone Assessment may help identify hormone imbalances that contribute to heavy or abnormal bleeding. Note that unexplained heavy bleeding should always be discussed with your family physician or gynecologist.

#### No Menstrual Period

Absence of menstrual periods in a woman with a previously regular cycle can be due to high androgenic hormones like testosterone, or anovulation (absence of ovulation).

#### Estradiol

- *Estradiol is the strongest hormone in the estrogen family, followed by estrone. Estriol is the weakest. The MLHA reports estradiol levels.*
- *Estrogen receptors are found throughout the body including: heart, brain, breast, bone, bladder, blood vessels.*
- *Responsible for female sex characteristics, estrogens also help build the lining of the uterus (endometrium).*

#### Progesterone

- *Progesterone helps balance the effects of estrogens.*
- *Progesterone is highest in the latter half of cycle because it is released by the corpus luteum, which only forms after ovulation.*

#### Cortisol

- *This major stress hormone is released by the adrenal glands.*
- *High or low cortisol levels may indicate poor adrenal function.*

#### DHEAS

- *DHEA is an adrenal hormone that circulates in blood as DHEA sulfate (DHEAS).*
- *After menopause, estrogen and testosterone are made primarily from DHEA released by the adrenal glands.*

#### Testosterone

- *Testosterone helps maintain muscle mass and bone, improves sense of well-being and sex drive.*

### You've Hit Menopause: Now What?

The book **"You've Hit Menopause: Now What?"** has more detailed information on hormone balance. Visit [www.rmalab.com](http://www.rmalab.com) to find out more about this book and how you can get a free copy.

## Restoring Hormone Balance

### Estradiol

*Low estradiol* may be corrected by supplementing with estradiol, although nutritional supplements are generally preferable in pre-menopausal women. For example, phytoestrogens may provide relief from symptoms of low estrogen.

*High estradiol* occurs when too much is produced or when estradiol is not efficiently eliminated. An enzyme in fat cells promotes the formation of estrogens from adrenal hormones, so weight loss often reduces estrogen levels. It is important to make sure there is enough progesterone to balance the effects of high estradiol.

### Progesterone

*Low progesterone* can be 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 is associated with low thyroid hormone levels, therefore lab tests for thyroid function may be recommended.

*High progesterone* when progesterone is not being supplemented is rarely a concern.

### Testosterone

*Low testosterone* symptoms can sometimes be resolved by adding progesterone or correcting adrenal issues. However, supplementation with testosterone may be necessary in some cases.

*High testosterone* is associated with polycystic ovarian syndrome and insulin resistance. Further testing or treatment may be necessary.

### Cortisol

*Low cortisol* strongly suggests adrenal issues, which may require further testing or interventions by your healthcare professional.

*High cortisol* levels are associated with conditions including: bone loss, high blood pressure, insulin resistance, weight gain, memory impairment, immune system suppression, and interfering with the action of other hormones. Lifestyle changes as well as supplements may be recommended.

### DHEAS

*Low DHEAS* does not have well-defined signs and symptoms, although low DHEAS is often associated with chronic illness.

*High DHEAS* is associated with polycystic ovarian syndrome and insulin resistance. Further testing or treatment may be necessary.

## Why Test Hormones in Saliva?

- Saliva hormone testing offers fast, reliable and accurate way of assessing hormone levels, The simplicity of saliva collection in the home makes it ideal for mapping out hormone levels over a complete menstrual cycle.
- Saliva testing measures the free, biologically active hormone levels - hormones that *actually* make it into tissue, because hormones pass through saliva gland tissue before getting into saliva.
- It is impractical to collect blood every three days to map out estradiol and progesterone over a complete menstrual cycle, nor could an average for testosterone, cortisol and DHEAS be provided.
- The stress of a needle puncture for blood collection tends to raise cortisol levels.

## 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 contribute to illness.*

*Rocky Mountain Analytical is committed to offering laboratory tests that identify hormone imbalances and other conditions - so they can be corrected before disease develops!*

## About Us

*Rocky Mountain Analytical was founded in 2002 with a mission to offer tests that focus on early identification and prevention of disease.*

*Rocky Mountain Analytical is an accredited medical laboratory located in Calgary, Alberta. Accreditation means tests performed by Rocky Mountain Analytical are regularly reviewed for quality, accuracy and reproducibility by the College of Physicians & Surgeons of Alberta.*

*Ask your healthcare professional whether a test is right for you.*

Information is for educational purposes only. It is not meant as medical advice and any treatment decisions should be made with the knowledge or consent of your healthcare professional.



**Rocky Mountain Analytical**  
*Changing lives, one test at a time*

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