



Hormones Definition and Information

Cortisol:	<p>Cortisol is a steroid hormone produced by the adrenal glands. Whenever you experience something your body perceives as a threat, like a large dog barking at you, a chemical known as adrenocorticotrophic hormone (ACTH) is released in your brain. This triggers your adrenal glands to release cortisol and adrenaline. Increased levels of cortisol result in a burst of new energy and strength.</p> <p>The cortisol level test is used to check if your cortisol production levels are either too high or too low. There are certain diseases, such as Addison's disease and Cushing's disease, which affect the amount of cortisol your adrenal gland produces.</p> <p>Cortisol plays a role in several systems in the body. These systems include: stress responses, immune system, nervous, circulatory and skeletal systems.</p> <p>Your waking day hormone (highest in the morning and lowest at night). It is necessary for energy production, blood sugar metabolism, anti-inflammatory effects and stress response.</p> <p>Symptoms of too much cortisol (cushing syndrome): The condition where your cortisol level in your body is too high over a long period of time is called Cushing's syndrome.</p> <ul style="list-style-type: none">- Heart disease and High Blood Pressure- Sleep problems- Weight gain- You catch a cold easily- You feel anxious- you crave junk food <p>The symptoms of low cortisol, (hypoadrenalism): Mental and psychological ailments such as depression.</p> <ul style="list-style-type: none">- Faintness and dizziness.- Weakness and fatigue.- Heart palpitations.- Emotional hypersensitivity.- Inability to cope with stress.- Social anxiety.- Muscle weakness.
<u>DHEA:</u>	<p>DHEA is a natural steroid and precursor hormone produced by the adrenals. This hormone is essential for energy production and blood sugar balance. DHEA is a precursor to other hormones, mainly testosterone. Natural DHEA production is at its highest in your twenties: by the time we reach seventy we only make about 20% of the DHEA we had when we were young.</p> <p>Symptoms of low DHEA include:</p> <p>When your body does not produce enough DHEA as you get older, you might suffer from some unpleasant symptoms.</p> <ul style="list-style-type: none">- Loss of energy

	<ul style="list-style-type: none"> - Mood Changes - Sexual Symptoms
<p>Dihydrotestosterone DHT:</p>	<p>Dihydrotestosterone (DHT) is a male hormone that is best known for its role in causing male pattern baldness and prostate problems. It is an androgen, as is testosterone that is responsible to maintain bone density, fat distribution, muscle strength and mass, red blood cell production, sex drive and sperm production.</p> <p>Symptoms of too much DHT:</p> <ul style="list-style-type: none"> - Hair Loss (men and women) - stopping of menstrual periods in women (amenorrhoea) - increase acne - Prostate dysfunction (men) <p>Symptoms of too low DHT:</p> <ul style="list-style-type: none"> - Low levels may cause low libido- interest in sex (men) - Women should have low levels
<p><u>Estrogens</u></p>	<p>There are three forms made by the body: estrone, estradiol and estriol. The form used in past hormone replacement therapies is estradiol, often in the form of concentrated pregnant mare's urine (premarin). It is a proliferative (causes growth) hormone that grows the lining of the uterus.</p> <p>It is also a known cancer-causing hormone: breast and endometrial (uterine) in women and prostate gland in men. It will treat menopausal symptoms like hot flashes, insomnia and memory-loss.</p> <p><u>Estrogen tests</u> are used to detect a deficiency or excess in a woman and to help diagnose a variety of conditions associated with this imbalance. They may also be used to help determine the timing of a woman's ovulation and may be ordered to monitor the health status of the developing baby and placenta during pregnancy.</p> <p>In a man, <u>estrogen testing</u> may be performed to detect a hormone excess and its cause.</p> <p>Symptoms of too much Estrogen (in women):</p> <ul style="list-style-type: none"> - Bloating - Swelling and tenderness in the breasts - Decreased sex drive - Irregular menstrual periods.

	<ul style="list-style-type: none"> -Headaches -Mood swings -weight gain <p>Symptoms of too much Estrogen (in men):</p> <ul style="list-style-type: none"> - Infertility - Gynecomastia - Erectile dysfunction <p>Symptoms of low Estrogen (in women):</p> <ul style="list-style-type: none"> - Hot flashes - Night sweats - Anxiety - Vaginal dryness - Loss of libido - Mood swings <p>Symptoms of low Estrogen (in men):</p> <ul style="list-style-type: none"> - Fatigue along the lines of sleepiness - hypersomnia (sleeping too much and too often) - strong erections but limited sensitivity - osteoporosis and osteopenia - joint pain, clicking or popping joints - loss of libido (interest in sex) - difficulty retaining water (constant urination) - anxiety, depression, irritability
<p>Follicle-Stimulating Hormone (FSH)</p>	<p>Follicle-stimulating hormone (FSH) is an important part of the reproductive system. It's responsible for the growth of ovarian follicles. Follicles produce estrogen and progesterone in the ovaries and help maintain the menstrual cycles in women. In women, the most common reasons for an <u>FSH test include</u>: assessing infertility problems, assessing irregular menstrual cycles, diagnosing disorders of the pituitary gland or diseases involving the ovaries</p> <p>In men, FSH is a part of the development of the gonads as well as sperm production. The most common reason for FSH test for men include: evaluate a low sperm count, assess hypogonadism or gonadal failure, assess testicular dysfunction</p>
<p><u>Luteinizing Hormone (LH)</u></p>	<p>Luteinizing hormone (LH) is an important hormone both men and women produce. This hormone is known as a gonadotropin, and it affects the sex organs in both men and</p>

	<p>women. For women, it affects ovaries, and in men, it affects the testes. LH plays a role in puberty, menstruation, and fertility.</p> <p>Symptoms of too much LH and FSH (in women):</p> <ul style="list-style-type: none"> - Can indicate a problem with your ovaries - a pituitary disorder or polycystic ovary syndrome <p>Symptoms of low level LH (in women)</p> <ul style="list-style-type: none"> - pituitary disorder - Stress <p>Symptoms of too much LH (in Men) - primary testicular failure.</p>
<p><u>Melatonin:</u></p>	<p>Classified as a hormone but also acting as a neurotransmitter, melatonin is primarily secreted during the dark (at night) with levels dropping dramatically after exposure to bright light. Melatonin is a hormone your body produces in the pineal gland to help you sleep. Your body functions upon a 24-hour cycle of light and dark, called your circadian rhythm, that regulates melatonin secretion in your body. During the day, your pineal gland is inactive and melatonin secretion is at a minimum. At night, however, as you're ready to fall asleep, your pineal gland is just starting to wake up, increasing your melatonin levels and helping your body relax and fall asleep. In fact, your melatonin levels peak at around 2 a.m., when you are likely in your deepest sleep of the night.</p> <p>Several factors impair the production of melatonin, including excess intake of vitamin B12 (over 3,000mcg per day) and excess exposure to light during evening hours.</p> <p>Symptoms of low level of Melatonin:</p> <ul style="list-style-type: none"> - insomnia - Light sleeper/easy waking during the night - Fatigue - Depression - Stress - Anxiety
<p><u>Progesterone</u></p>	<p>Progesterone is a female sex hormone produced mainly in the ovaries following ovulation each month. It's a crucial part of the menstrual cycle and maintenance of pregnancy. Progesterone helps to regulate your cycle, but its main job is to get your uterus ready for pregnancy. Progesterone is necessary for breast development and breast-feeding as well. It complements some of the effects of estrogen, another female</p>

	<p>hormone. It also plays an important role with testosterone, as it is the precursor for adrenal hormones.</p> <p>Symptoms of low level of Progesterone:</p> <ul style="list-style-type: none"> - Headaches or migraines - Mood changes, including anxiety or depression - Low sex drive - Hot flashes - Irregularity in your menstrual cycle <p>A <u>progesterone test</u> (PGSN) can help you determine if your progesterone levels are too low.</p> <p>Symptoms of high level of Progesterone:</p> <ul style="list-style-type: none"> - Ovulation, Pregnancy - Menopause - Drowsiness, Mood swings, Hot flashes, Vaginal infections (if you are not ovulating or not pregnant)
<p><u>Prostate-Specific Antigen (PSA)</u></p>	<p>Most men have PSA levels under four (ng/mL) and this has been used as the cutoff for concern about risk of prostate cancer. Men with prostate cancer usually have PSA levels higher than four, although cancer is a possibility at any PSA level. Reports state that men who have a prostate gland that feels normal on examination and a PSA less than four have a 15% chance of having prostate cancer, and those with a PSA between four and 10 have a 25% chance of having prostate cancer and if the PSA is higher than 10, the risk increases to 67%</p>
<p><u>Testosterone</u></p>	<p>An anabolic hormone (builds tissue) that is essential for men and women. The proper level of testosterone is necessary for bone health, muscle strength, stamina, sex drive and performance, heart function and mental focus.</p>
<p><u>Thyroid-Stimulating Hormone (TSH)</u></p>	<p>Thyroid gland is an organ that produces hormones that regulate important bodily functions, including metabolism. The thyroid is stimulated to produce its hormones by another hormone called thyroid stimulating hormone, or TSH.</p> <p>Hypothyroidism is a condition in which the body lacks sufficient thyroid hormone. When thyroid hormone levels are abnormally high, TSH is typically low. Symptoms of low levels of TSH:</p> <ul style="list-style-type: none"> - Fatigue - Nervousness - Restlessness - Weakness

	<ul style="list-style-type: none">- Sensitivity to heat, sweating- darkening of skin- Increase appetite- Coarse, dry hair- memory loss
<u>Thyroxine (T4)</u>	A thyroid hormone that regulates the metabolism of all cells and tissues in the body.
<u>Triiodothyronine</u>	Released from the thyroid gland along with thyroxine and is also converted from T4 after release into circulation. T3 regulates growth and development, metabolism, and body temperature.

Sources

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