

PATIENT GLOSSARY

ADRENAL GLANDS

Produce several hormones including cortisol and DHEA. These glands take over at menopause to become the main source of all sex hormone production in the body.

ADRENAL IMBALANCE

Also known as low adrenal reserve or adrenal insufficiency, leading to adrenal fatigue. This condition occurs when the adrenals no longer produce enough cortisol to meet bodily demand and is a result of prolonged stress (emotional, viral, physical). Adrenal support includes adequate rest, exercise, nutrition, and supplementation with physician guidance.

ADRENOCORTICOTROPIN (ACTH)

Hormone made by the pituitary gland that stimulates production of adrenal hormones.

ANDROGENS

Testosterone and DHEA (anabolic hormones) that build and maintain skin, bone, and muscle. DHEA, the principal androgen in both men and women, is linked to energy, immune function, mood, and mental function. Testosterone is necessary to maintain muscle mass, bone density, skin elasticity, sex drive, and cardiovascular health in both sexes.

ANDROGEN DOMINANCE

Excessive androgens, relative to inadequate estrogen or progesterone levels, that are produced endogenously (within the body) or with supplementation can lead to symptoms of acne, increased facial/body hair, and loss of scalp hair.

ANDROPAUSE

Also called male menopause. Occurs as male hormones, testosterone and DHEA, decrease with age.

ANDROSTENEDIONE

An androgen that is necessary for the synthesis of both estrogen and testosterone.

ANOVULATION/ANOVULATORY

Suspension or cessation of ovulation.

AROMATASE

An enzyme found predominantly in fat tissue that converts androgens to estrogens.

BIOAVAILABLE

The unbound (free) fraction of a hormone that has left the bloodstream to enter target tissues in the body. This unbound fraction is present and measurable in saliva.

BIOIDENTICAL

Hormones derived from natural plant compounds (e.g., soy) and synthesized to duplicate the exact structure and function of hormones produced naturally within the body.

BLOOD SPOT TESTING

A minimally invasive technique for testing hormones and other substances using drops of blood that are dried on special filter paper. Blood spot testing avoids the discomfort and inconvenience of having blood drawn at the doctor's office, and simple finger or heel stick reduces pain and stress that can alter accuracy of results.

PATIENT GLOSSARY

COMPOUNDING PHARMACIST

A pharmacist skilled in formulating natural, bioidentical hormone supplements based on tested hormone levels and tailored to individual patient needs.

CORPUS LUTEUM

Formed from the ruptured ovarian follicle that released the egg; it produces progesterone.

CORTISOL

Produced by the adrenal glands, this hormone regulates the stress response, glucose metabolism, and immune function. Cortisol has a catabolic (breaking down) action on tissue when levels are too high or out of balance, leading to weakened immunity, allergies, and stress-related illness.

DHEA (DEHYDROEPIANDROSTERONE)

Hormone produced primarily by the adrenal glands that converts to androgens and estrogens. It is needed for energy, stamina, mental outlook, and immune function.

DIHYDROTESTOSTERONE (DHT)

A biologically active metabolite of the hormone testosterone, formed primarily in the prostate gland, testes, hair follicles, and adrenal glands by the enzyme 5 α -reductase. DHT is three times more potent than testosterone. It is associated with male pattern baldness and prostate problems, is crucial to virilization (male gender differentiation), and reduces estrogen's negative effects in men.

ENDOCRINE SYSTEM

The group of glands that produce the majority of the body's hormones.

DOWN-REGULATION OF RECEPTOR SITES

A negative feedback cycle, due to excess hormone levels, that results in tissue desensitization and loss of cellular receptor sites wherever hormones bind to cells.

ENDOGENOUS

Naturally occurring or originating within the body.

ENDOMETRIOSIS

The abnormal growth of uterine tissue (endometrium) in places outside the uterus such as on the ovaries and other pelvic structures. Associated with estrogen dominance.

ESTRADIOL

The primary and most-potent form of estrogen produced by the body during reproductive years.

ESTRIOL

The weakest, most benign of the three types of estrogen produced by the body.

ESTROGENS

A family of hormones (estradiol, estrone, estriol) that are necessary for cellular growth, differentiation of secondary sexual characteristics, and maintaining the health of the reproductive tissues, breasts, bones, skin, and the brain.

PATIENT GLOSSARY

ESTROGEN DOMINANCE

An excess of estrogen in the absence of adequate levels of progesterone in women (or testosterone in men). It can result from estrogen replacement therapy, menopause, hysterectomy, birth control pills, and/or a decline in ovarian progesterone production. In men, it can result from reduced testosterone production by the testes. In either gender, it can result from exposure to pollutants and toxins (xenoestrogens). The constellation of symptoms ranges from breast tenderness and bloating, to mood swings and depression. Excess estrogens are a risk factor for the development of breast and prostate cancers.

ESTRONE

One of the three types of estrogen produced by the body, and the main circulating estrogen in women after menopause.

FIBROCYSTIC BREASTS

Tender, painful, swollen breasts; a sign of estrogen dominance.

FINGER STICK

A method of collecting drops of blood. Usually collected with a lancet that pricks the finger. See venipuncture.

FOLLICULAR PHASE

The first half of the menstrual cycle when estrogens build up to trigger ovulation.

FOLLICLE STIMULATING HORMONE (FSH)

Pituitary hormone involved in triggering ovulation; elevated levels may mark the onset of menopause or andropause.

FREE TESTOSTERONE INDEX

Ratio between the amount of testosterone and SHBG (the protein that binds up available testosterone). Indicates the amount of bioavailable, free testosterone.

FREE TRIIODOTHYRONINE (fT3)

The active form of thyroid hormone. Normal levels keep the body functioning properly and are crucial for maintenance of physical and mental health.

FREE THYROXINE (fT4)

The main (inactive) thyroid hormone. A well-regulated process causes thyroxine to generate the active thyroid hormone T3 (Triiodothyronine).

FSH

See follicle stimulating hormone.

GLUCOCORTICOCIDS

Hormones, primarily cortisol, produced by the adrenal glands.

GOITER

Enlargement of the thyroid gland; often visible as a swelling in the neck.

HORMONE

A chemical messenger that travels through the bloodstream to regulate various body functions. Produced in glands and organs of the body and activated in cell receptor sites.

PATIENT GLOSSARY

HORMONE IMBALANCE

A problem stemming from the deficiency or overproduction of one or more hormones, particularly in relationship to the other hormones with which they interact.

HYPERTHYROIDISM

Overactive thyroid function. Less common than hypothyroidism.

HYPOADRENIA

Low adrenal function.

HYPOTHYROIDISM

Low thyroid function, often associated with hormonal imbalance (particularly estrogen dominance) and linked with cold body temperature (feeling cold all the time), weight gain, inability to lose weight, thinning hair, low libido, and depression. Women are at greatest risk, developing thyroid problems seven times more often than men, particularly during years prior to menopause.

HYSTERECTOMY

Surgical removal of the uterus, which often includes the ovaries (oophorectomy). The resulting total depletion of reproductive hormones causes women to go into “surgical menopause” overnight.

INFERTILITY

The inability to become pregnant. Hormonal imbalances are a cause of infertility.

IGF-1

See insulin-like growth factor.

INSULIN

Hormone secreted by the pancreas. It “unlocks” the cells to allow glucose (sugar) from food to enter and be converted into energy.

INSULIN-LIKE GROWTH FACTOR (IGF-1 or Somatomedin C)

The most reliable indicator of human growth hormone levels. Low levels indicate human growth hormone deficiency associated with premature aging, decreased muscle and bone mass, slowing cognitive ability, low libido, and overall reduced quality of life.

INSULIN RESISTANCE

A term used to describe the failure of the tissues to respond (resistance) to insulin and absorb glucose for energy production. Associated with hormonal imbalance (particularly high triglycerides, polycystic ovaries, and excess androgens). Insulin resistance leads to increased risk of cardiovascular disease, diabetes and cancer.

LH

See luteinizing hormone.

LUTEINIZING HORMONE (LH)

Pituitary hormone that signals the ovaries to release an egg and to make progesterone. In men, it signals the testes to produce testosterone.

LUTEAL PHASE

The latter half of the menstrual cycle when progesterone production is at its peak.

PATIENT GLOSSARY

LUTEAL INSUFFICIENCY

Failure of the corpus luteum to produce adequate amounts of progesterone upon ovulation; often caused by anovulation.

MALE MENOPAUSE

See andropause.

MENSTRUATION

Monthly shedding and discharge of the uterine lining and blood from the uterus as part of the reproductive cycle.

MENOPAUSE/POSTMENOPAUSE

The end of menstrual cycles; cessation of menses for 12 consecutive months.

Marked by physiological decline of reproductive hormones.

OSTEOPOROSIS

Bone loss influenced by low estrogen, progesterone, androgens, and/or high cortisol.

OSTEOBLASTS

Bone building cells.

OSTEOCLASTS

Bone destroying/reabsorbing cells.

OVARIES

Egg-producing female reproductive organs that are primary sources of the female reproductive hormones, estrogen and progesterone.

OVARIAN STROMA

The inner ovarian layer that can manufacture excess testosterone with hormonal imbalance.

PANCREAS

Large gland in the abdomen that secretes insulin.

PCOS

See polycystic ovarian syndrome.

PERIMENOPAUSE

The 5 to 10 years approaching menopause when reproductive hormones fluctuate as ovarian functions decline.

PHYTOESTROGENS

Plant compounds (e.g. soy, black cohosh) with mild estrogen-like activity; are used as natural alternatives to relieve menopausal symptoms.

PITUITARY GLAND

Pea-sized gland in the brain that produces several types of hormones that trigger and regulate the steroid hormones. See FSH, LH.

PMS

See premenstrual syndrome.

PATIENT GLOSSARY

POLYCYSTIC OVARIAN SYNDROME (PCOS)

A condition whereby undeveloped follicles (cysts) form within the ovaries. It is seen in women with high estrogen and low progesterone levels, and/or high androgen (testosterone) and insulin levels.

PREMENSTRUAL SYNDROME (PMS)

A set of physical and emotional symptoms that stem from hormonal imbalances and fluctuations during a woman's menstrual cycle.

PROGESTERONE/ESTRADIOL (Pg/E2) RATIO

Indicates fundamental balance or imbalance between these two hormones.

PROGESTINS

Synthetic hormones structurally similar to progesterone (e.g. Provera) but not naturally occurring in the body; they suppress normal ovarian production of progesterone and have been shown in studies to have negative side effects.

PROGESTERONE

A hormone produced by the ovaries after ovulation and in lesser amounts by the adrenal glands. A precursor to most of the steroid hormones, it has many vital functions, from maintaining pregnancy to regulating menstrual cycles. It has calming and diuretic properties, and enhances the beneficial effects of estrogens while balancing estrogen and preventing problems linked to estrogen excess. Progesterone also facilitates balance of other steroid hormones.

PROINFLAMMATORY STATE

A condition characterized by elevations in C-reactive protein (CRP), most often associated with an increased risk of developing cardiovascular disease and diabetes. Elevated CRP is commonly caused by obesity whereby excess adipose tissue produces high levels of inflammatory proteins released during the immune response that may elicit higher CRP levels.

PROSTATE SPECIFIC ANTIGEN (PSA)

A protein produced by the prostate gland; high PSA is an important indicator of prostate enlargement. A normal PSA reading is a prerequisite for initiating testosterone therapy in men.

PROTHROMBOTIC STATE

A condition characterized by increased plasma plasminogen activator inhibitor (PAI)-1 and fibrinogen, commonly present in persons with CardioMetabolic Syndrome. Prothrombotic and proinflammatory states are metabolically interconnected.

PSA

See prostate specific antigen.

RECEPTOR SITES

Molecules on the surface of the body's cells that allow specific hormones to pass into the cell (via a lock-and-key effect) to perform their regulatory function.

SEX HORMONE BINDING GLOBULIN (SHBG)

A protein that binds to specific hormones in the bloodstream (e.g., testosterone and estrogen), limiting their availability to bodily tissues. It increases with age and excess estrogens.

SHBG

See sex hormone binding globulin.

PATIENT GLOSSARY

SOMATOMEDIN C

See insulin-like growth factor

SUBLINGUAL

Means “under the tongue”. Usually refers to medications placed under the tongue (sublingually) and absorbed through the oral mucosa.

TESTES

Sperm-producing male reproductive organs that are the primary source of testosterone.

TESTOSTERONE

An anabolic hormone that builds and maintains bone and muscle mass, skin elasticity, sex drive, and cardiovascular health in both sexes. The dominant male hormone.

THYROID

Gland that produces hormones that regulate metabolism. Imbalances lead to weight gain, cold body temperature, depression, hair loss, etc.

THYROID PEROXIDASE ANTIBODIES (TPOab)

Antibodies that attack the thyroid gland, produced in autoimmune thyroid conditions. Elevated with Hashimoto’s (autoimmune) thyroiditis and associated with polycystic ovaries in women. See TPO.

THYROID STIMULATING HORMONE (TSH)

The pituitary hormone that signals the thyroid to produce T4 (Thyroxine), which converts to active T3 (Triiodothyronine).

TPO

Thyroid peroxidase, an enzyme used by the thyroid gland to make thyroid hormones. Antibodies to TPO attack the thyroid gland in autoimmune thyroid conditions. See Thyroid Peroxidase Antibodies (TPOab).

TROCHE

A medicated lozenge similar to a hard candy that can be compounded by a pharmacist to deliver hormones.

TSH

See thyroid stimulating hormone.

TYPE 2 DIABETES

A condition where the pancreas no longer makes enough insulin to process food intake and regulate blood sugar levels. It is the most common form of preventable diabetes.

TISSUE DESENSITIZATION

The inability of cells to utilize (take up) hormones.

UTERINE FIBROID

Benign tumor of the uterus, often associated with hormonal imbalance.

PATIENT GLOSSARY

VASOMOTOR SYMPTOMS

Hot flashes/night sweats commonly beginning in perimenopause; stem from hormone fluctuations which impact centers in the brain that regulate capillary dilation and perspiration.

VENIPUNCTURE

The act of using a needle to draw blood from a vein. See finger stick.

VITAMIN D

A group of fat-soluble prohormones (hormone precursors), the two major forms of which include Vitamin D2 and Vitamin D3. Vitamin D has been found to be important in protecting the body from a wide range of diseases including cardiovascular disease, stroke, osteoporosis, osteomalacia, cancer, autoimmune diseases (such as multiple sclerosis), rheumatoid arthritis, diabetes (Types 1 and 2), and schizophrenia.



866.600.1636 | info@zrtlab.com

zrtlab.com

Copyright © 2017 ZRT Laboratory, LLC. All rights reserved.
Revised Feb. 15, 2017