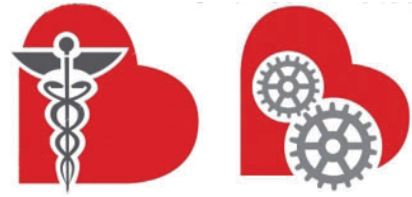


Hormones of the Female Reproductive Systems

by: Carole Wegner- May 20th, 2010



The female reproductive system is primarily regulated by five hormones including estrogen, progesterone, gonadotropin releasing hormone, follicle stimulating hormone, and luteinizing hormone. These hormones play a role in one or more stages of development and function of the female reproductive system.



Female hormones regulate all phases of female life. Photo Credit Yellow Florial
Female image by Vojsek from Fotolia.com

Estrogen

Ovaries produce three varieties of estrogen called estradiol, estrone, and estriol. Estrogens play a role in development of secondary sex characteristics that appear at puberty. Estradiol plays a role in breast development and promotes fat distribution to breasts, hips and legs.

Estrogens are produced by follicles within the ovary and help regulate the menstrual cycle. Estrogen promotes the rapid growth of cells lining the uterus called the endometrium in preparation for possible implantation and pregnancy. At the end of pregnancy, high levels of estrogen induce the ovaries to produce oxytocin which stimulates uterine contractions.

Estrogen also has non-reproductive functions. Estrogen prevents abnormal blood clotting which maintains heart health. In addition, estrogen helps bones retain calcium which keeps them strong. The natural decline of estrogen with aging often requires medical supplementation with exogenous estrogen to prevent declining heart health and osteoporosis.

Progesterone

Progesterone is also produced by the ovaries and levels fluctuate during the menstrual cycle. After ovulation, the follicle collapses and reorganizes itself into a new steroid secreting gland called the corpus luteum. The corpus luteum produces progesterone. Progesterone maintains the health of the uterine lining during pregnancy. If pregnancy

occurs, the implanting embryo produces human chorionic gonadotropin, or hCG, which keeps the corpus luteum functional so that it can continue secreting progesterone to support the pregnancy until the placenta is developed enough to take over progesterone production. If there is no pregnancy, the corpus luteum dies, progesterone levels fall and the uterine lining is shed during menses.

Gonadotropin Releasing Hormone

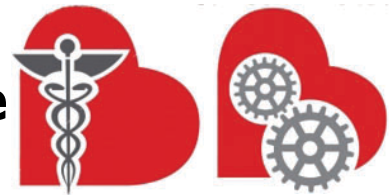
The monthly hormonal changes and development of a mature egg that occur with the monthly cycle are initiated in the brain by secretion of gonadotropin releasing hormone, or GnRH. GnRH in turn stimulates the production of follicle stimulating hormone, or FSH and luteinizing hormone, or LH which locally regulate follicular function in the ovary.

FSH and LH

FSH stimulates the follicles within the ovaries to produce increasing amounts of estrogen and small amounts of progesterone during the first two weeks of the menstrual cycle. Under the influence of FSH, multiple follicles grow until one or two follicles become dominant, secreting the most estrogen. As estrogen levels rise in the ovary, they are also released back into the blood system and return to the brain where estrogen signals the brain to stop producing FSH. The rising estrogen levels also signal another gland in the brain, the pituitary gland, to release luteinizing hormone which signals the dominant follicle to release its egg for possible fertilization.

Source: <http://www.livestrong.com/article/127967-hormones-female-reproductive-system/>

Hormones in Male Reproductive Systems



by: Kristin Hendrickson- May 11th, 2010

The male reproductive system depends upon the action of many different hormones or chemicals, produced by various body glands and enter systemic circulation. Some of these hormones, called "tropic" hormones, cause other hormones to release. Other hormones have direct effects upon organs or body systems, emotions and production of semen. Unlike women, men don't experience cyclic hormone fluctuation throughout the month--instead, their hormone levels stay relatively constant throughout their reproductive years.

Gonadotropin-Releasing Hormone

Something of a "master" hormone, according to the textbook "Human Physiology," Gonadotropin-Releasing Hormone (GnRH) is a tropic hormone produced by a part of the brain called the hypothalamus. While GnRH isn't directly responsible for male sexual behavior or characteristics, it nevertheless proves incredibly important, because it causes the release of two other hormones of the male reproductive system.

Follicle-Stimulating Hormone

Produced in a part of the brain called the anterior pituitary, follicle-stimulating hormone (FSH) proves active in both male and female reproductive systems. The name comes from the hormone's action in females---males don't produce follicles---but the same hormone responsible for development of a mature egg in women stimulates the production of sperm in the testes of men. FSH is released in response to the stimulation of the anterior pituitary by GnRH

Luteinizing Hormone

Like FSH, luteinizing hormone (LH) is released by the anterior pituitary in response to the action of GnRH. Also like FSH, LH is produced by women as well and named for its action in the female reproductive cycle---men don't experience luteinization, which is the release of a mature egg from the ovary during ovulation. In men, LH causes the interstitial cells of the testes to produce the hormone testosterone

Testosterone

Made in the testes, testosterone enters systemic circulation in relatively constant concentrations in a healthy, reproductive-age male. This hormone produces and maintains the secondary sexual characteristics of the male---enhanced musculature, facial and body hair, thickened larynx and deepened voice and enlargement of the genitals. It's also responsible for the sex drive and works with FSH to stimulate the production of sperm.

Inhibin

The hormone inhibin is produced by cells in the testes that are responsible for monitoring the health and maturation of sperm. If sperm levels are high, making nutrients for the developing sperm scarce, the testes release inhibin. The inhibin travels through the bloodstream to the brain, where it prevents the secretion of GnRH. In the absence of GnRH, FSH and LH levels fall and sperm production slows. This is one of the major mechanisms whereby male hormones are maintained at relatively constant concentration.

Source: <http://www.livestrong.com/article/121075-hormones-male-reproductive-systems/>

Natural Foods & Vitamins for the Male Reproductive Organs

by: August McLaughlin - December 18th, 2013



As a male, your reproductive organs include your testicles and your penis. Your testicles produce sperm, and your penis allows for urination and intercourse. Health problems that may affect your reproductive organs include epididymitis, or inflamed testicles, testicular cancer and infertility, which affects one in six couples, according to the American Dietetic Association. A nutritious, balanced diet may help prevent or manage these conditions and your overall health.



Eat plenty of whole grains. Photo Credit Anna Gugnina/iStock/Getty Images

Whole Grains

All grains provide glucose, which is your body's main dietary source of energy. Unlike refined grains, whole grains have not been stripped of valuable vitamin, mineral, fiber or protein content during food processing. As low-glycemic foods, they have a mild impact on your blood sugar. Abnormally high blood sugar damages the nerves that control blood flow into your

penis, according to Wahida Karmally, director of nutrition at the Irving Center for Clinical Research at Columbia University Medical Center. Blood sugar imbalances increase your risk for type 2 diabetes. To avoid these risks, replace refined foods, such as white bread and enriched pasta, with whole-grain foods, such as oatmeal, brown rice, quinoa and air-popped popcorn.

Lean Protein Sources

Protein supports lean tissue growth and repair and strong immune function. A diet rich in fatty foods, such as red and processed meats, can reduce your testosterone levels, according to "The Male Body: An Owner's Manual" by Winston Caine and Perry Garfinkel. Eating too much saturated fat also increases your risk for prostate cancer. Lean, protein-rich alternatives include fish, skinless white-meat poultry, low-fat dairy products, tofu, beans and lentils. Low-fat milk and yogurt are valuable sources of vitamin D -- a nutrient that helps your reproductive system and body function well.

Fruits and Vegetables

Fruits and vegetables provide rich amounts of antioxidants, including vitamin C, which support your body's ability to resist and heal from infections and disease. A lack of vitamin C may cause your sperm to clump together, according to the ADA, potentially reducing your fertility. It also might reduce your risk of developing prostate cancer, according to Cedar-Sinai University. Fruits and vegetables particularly rich in vitamin C include berries, kiwi, citrus fruits, cantaloupe and tomatoes.



Berries are high in antioxidants. Photo Credit
Jupiterimages/Creatas/Getty Images

Foods with Selenium

Men should also add foods with selenium to their diet for reproductive health. Selenium activates an enzyme, called selenoprotein V, that's found exclusively in the testes and contributes to the development of healthy sperm cells. Brazil nuts, walnuts, brown rice and shrimp all contain selenium, and adding chicken, pork, salmon or halibut to your diet also boosts your selenium intake.

Source: <http://www.livestrong.com/article/483567-natural-foods-vitamins-for-the-male-reproductive-organs/>