

# THE ESSENTIAL GUIDE TO YOUR HORMONES

## What You Need to Know

Hormones play a critical role in our bodies, but what exactly are hormones and why are they important for our health? We'll decode the body's most important hormones and explain how changes in hormone levels can affect your body and your well-being.



# TOP 23 HORMONES

There are many different hormones in the human body. Here is a look at the leading hormones, their role and why they're important to know about.

## 1 Estrogen (es-tro-gen)

The female sex hormone, and one that teenage girls know all too well, is responsible for setting off puberty. Produced primarily in your ovaries, estrogen regulates your menstrual cycle, maintains pregnancy and keeps bones strong for women and men too! Watch out, world.



## 2 Progesterone (pro-ges-ter-one)

The reason for that week circled in red on your calendar, progesterone is a crucial player in your menstrual cycle. After ovulation these levels rise to prepare your uterus for the implantation of the embryo. If pregnancy doesn't occur, the levels drop again, causing you to get your period.



## 3 Prolactin (pro-lac-tin)

Moms-to-be are faced with major changes, including this hormone that rises during pregnancy. Fun fact: the pituitary gland releases prolactin after childbirth to trigger lactation, which enables moms to breastfeed.



## 4 Human Chorionic Gonadotropin (HCG) (hu-man cho-ri-on-ic go-nad-o-tro-pin)

Congratulations you're pregnant! HCG is the hormone that a pregnancy test can detect about two weeks after conception.



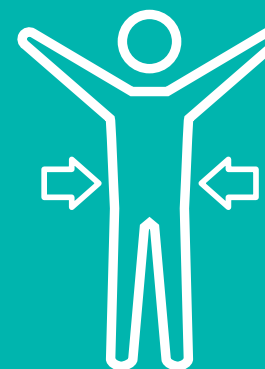
## 5 Testosterone (tes-tos-ter-one)

Surprisingly, this male sex hormone plays a big role for women, too. It contributes to your sex drive, bone density and muscle strength. But when levels are too high, it can cause male pattern balding (buzzkill!).



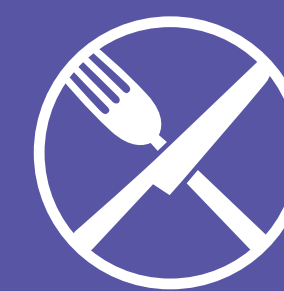
## 6 Peptide YY (PYY) (pep-tide)

The original weight loss program, PYY is produced in the small intestine and released into your bloodstream after you eat to decrease appetite and make you feel full.



## 7 Glucagon-Like Peptide 1 (GLP-1) (glu-ca-gon like pep-tide)

Feeling extra satisfied after lunch? It could be GLP-1, the appetite-regulating hormone produced in the gut after eating.



## 8 Thyroid Hormones (thy-roid hor-mones)

Two of the primary players that are released by your thyroid are: triiodothyronine (T3) and thyroxine (T4). These hormones dictate your weight, determine your energy levels, internal temperature, skin, hair, nail growth, and more.



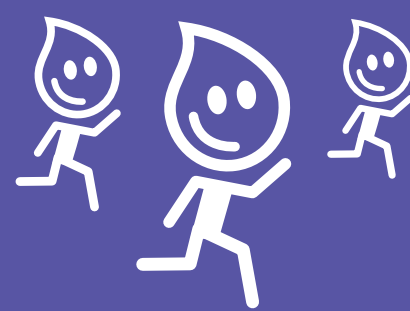
## 9 Insulin (in-su-lin)

As any diabetic knows, insulin couldn't be more important. After you eat, cells in your pancreas release insulin that shuttles glucose from your bloodstream into your body's tissues to use for energy later. People with type 1 diabetes can't make insulin; people with type 2 diabetes can't make enough or make too much and the body does not respond correctly.



## 10 Glucagon (glu-ca-gon)

Produced by cells in your pancreas and works to keep your blood sugar levels stable, this hormone breaks down stored glucose so your body can use it for energy.



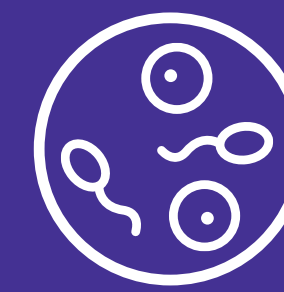
## 11 Serotonin (ser-o-to-nin)

If you have major mood swings, you can thank this hormone that boosts and stabilizes mood. Dark chocolate converts a compound called L-tryptophan to serotonin, explaining why eating chocolate makes us feel happier.



## 12 Follicle Stimulating Hormone (FSH) (fol-li-cle-stim-u-lat-ing hor-mone)

Couples struggling with infertility know the importance of FSH. In women, it helps control the estradiol hormone synthesis, menstrual cycling and the production of eggs by the ovaries. In men, it helps control the production of sperm.



## 13 Leptin (lep-tin)

This hormone is your very own personal trainer. It controls appetite by signaling your brain to stop eating. It also helps your brain regulate how much energy your body burns throughout the day.



## 14 Luteinizing Hormone (LH) (lu-te-in-iz-ing hor-mone)

Puberty relies on LH and knows no bounds. It controls the production of estrogen or testosterone from the ovaries or testes and is often measured during an infertility workup to evaluate ovulation in women or testicular function in men.



## 15 Melatonin (mel-a-to-nin)

Insomniacs may feel too familiar with this sleep hormone, which regulates our sleep and wake cycles.



## 16 Oxytocin (ox-y-to-cin)

Cupid's arrow is dipped in this stuff. Dubbed the love hormone, oxytocin levels rise when we make physical contact with another human. It's also the maternal hormone because large amounts of it are released during childbirth and helps with milk letdown during lactation.



## 17 Growth Hormone (growth hor-mone)

As its name implies, it promotes human growth and plays a crucial role in increasing muscle mass and bone development. It's our own personal Game of Thrones shield, protecting our tissues from breaking down to avoid injury.



## 18 Cortisol (cor-ti-sol)

Stressed out? This hormone is released during times of stress, increasing heart rate, blood pressure, blood glucose, respiration and muscle tension in response. It also temporarily shuts down the body's systems that aren't needed in the face of crisis, such as digestion and reproduction.



## 19 Adrenaline (a-dren-al-ine)

The flight or fight hormone allows you to battle a danger head-on or escape to safety. Persistently high levels of adrenaline from chronic stress, however, increases your risk for anxiety, depression, heart disease and weight gain, which is why laughter really may be the best medicine.



## 20 Dehydroepiandrosterone (DHEA) (de-hy-dro-ep-i-an-dro-ste-rone)

Responsible for gossipy teenage sleep-overs, this hormone from the adrenal gland and ovaries initiates production of male and female sex hormones, welcoming fun things like pubic hair, acne and body odor.



## 21 Parathyroid Hormone (PTH) (par-a-thy-roid)

Strong bones are key to a long, happy life, and so is PTH. From the parathyroid glands, it's vital to our bone health and essential for normal calcium and phosphorus balance in the body.



## 22 Ghrelin (ghrel-in)

Got a rumbling in your tummy? You can thank this hunger hormone made by the stomach. It stimulates appetite and prepares the body for food. Researchers believe blocking ghrelin levels may be the key to weight loss.



## 23 Aldosterone (al-dos-te-rone)

Craving pickles? Made by the adrenal glands, it regulates blood pressure by increasing salt and water reabsorption in the kidney.





## HORMONES AND THE ENDOCRINE SYSTEM

Hormones are the body's chemical messengers and are part of the endocrine system. Endocrine glands make hormones, which travel through the bloodstream to tissues and organs, and control most of our body's major systems. The endocrine system regulates our heart rate, metabolism – how the body gets energy from the foods we eat – appetite, mood, sexual function, reproduction, growth and development, sleep cycles, and more.

## HORMONE KEY FACTS

- Hormones play a critical role in our body's chemistry, carrying messages between cells and organs.
- Hormones affect our body's functions, from growth and sexual development and mood to how well we sleep, how we manage stress and how our body breaks down food.
- When they are in proper balance, hormones help the body thrive. But sometimes hormone levels are too high or too low. Hormone imbalances can occur any time regardless of one's age and cause serious health problems requiring ongoing medical management.

## ENDOCRINE GLANDS AND HORMONES

Endocrine glands are special groups of cells that make hormones. The major endocrine glands are:

- Adrenal Glands – produce androgens and cortisol; gives your body odor and pubic hair, helps in how we respond to stress; regulates blood pressure and more.
- Hypothalamus – produces hormones that regulate body temperature, appetite and weight, mood, sex drive, sleep, and thirst.
- Ovaries – female reproductive glands that produce eggs and sex hormones – including estrogen, testosterone and progesterone – which are vital to reproductive organ development, breast development, bone health, pregnancy, and fertility.
- Pancreas – produces insulin, glucagon and other hormones but primarily responsible for controlling blood sugar levels.
- Parathyroid – controls the amount of calcium in our bones and blood.
- Pineal Gland – produces melatonin, which is important for sleep cycles.
- Pituitary Gland – the “master control gland” makes hormones that control growth, reproduction, lactation, and the activity of other glands.
- Testes – male reproductive glands produce sperm and secretes testosterone.
- Thymus – active until puberty, produces cells crucial to the immune system that protect the body from threats such as viruses and infections.
- Thyroid – produces hormones that control the rate at which the body burns calories and how fast the heart beats.

Vital to our overall health, hormone levels change as we grow and age. Knowing more about the role they play in our bodies can help you protect and manage your health. Download Journey through the Endocrine System Mobile App.

Visit [hormone.org](http://hormone.org) for more information.

