

The Endocrine System and Glands of the Human Body

By [Barbara Brody](#)

Medically Reviewed by [Jabeen Begum](#) on May 20, 2021

IN THIS ARTICLE

- [What Is the Endocrine System?](#)
- [What Is a Gland?](#)
- [Endocrine System Functions](#)
- [Parts of the Endocrine System](#)
- [Health Issues](#)
- [Endocrine System Disorders](#)

What Is the Endocrine System?

The [endocrine system](#) is a network of glands in your body that make the hormones that help cells talk to each other. They're responsible for almost every cell, organ, and function in your body.

If your endocrine system isn't healthy, you might have problems developing during [puberty](#), [getting pregnant](#), or [managing stress](#). You also might [gain weight](#) easily, have weak bones, or lack energy because too much [sugar](#) stays in your [blood](#) instead of moving into your cells where it's needed for energy.

What Is a Gland?

A gland is an organ that makes and puts out hormones that do a specific job in your body. Endocrine and exocrine glands release the substances they make into your bloodstream.

Endocrine System Functions

Your endocrine system:

- Makes hormones that control your [moods](#), growth and development, [metabolism](#), organs, and reproduction
- Controls how your hormones are released
- Sends those hormones into your bloodstream so they can travel to other body parts

Parts of the Endocrine System

Many glands make up the endocrine system. The hypothalamus, pituitary gland, and pineal gland are in [your brain](#). The thyroid and parathyroid glands are in your neck. The thymus is between your [lungs](#), the adrenals are on top of your [kidneys](#), and the pancreas is behind your [stomach](#). Your ovaries (if you're a woman) or testes (if you're a man) are in your pelvic region.

- **[Hypothalamus](#)**. This organ connects your endocrine system with your [nervous system](#). Its main job is to tell your pituitary gland to start or stop making hormones.
- **Pituitary gland**. This is your endocrine system's master gland. It uses information it gets from your brain to tell other glands in your body what to do. It makes many important hormones, including growth [hormone](#); prolactin, which helps [breastfeeding](#) moms make milk; antidiuretic hormone (ADH) (vasopressin), which controls blood pressure and helps control body water balance through its effect on the kidney, corticotropin /ACTH: Adrenocorticotrophic hormone. which stimulates the adrenal gland to make certain hormones, thyroid-stimulating hormone (TSH), which stimulates the production and secretion of thyroid hormones, oxytocin which helps in milk ejection during breast

feeding; and luteinizing hormone, which manages [estrogen](#) in women and testosterone in men.

- **Pineal gland.** It makes a chemical called [melatonin](#) that helps your body get ready to go to [sleep](#).
- **Thyroid gland.** This gland makes thyroid hormone, which controls your growth and [metabolism](#). If this gland doesn't make enough (a condition called hypothyroidism), everything happens more slowly. Your [heart rate](#) might slow down. You could get [constipated](#). And you might gain weight. If it makes too much (hyperthyroidism), everything speeds up. Your [heart](#) might race. You could have [diarrhea](#). And you might [lose weight](#) without trying. The thyroid gland also produces the hormone calcitonin, which may contribute to bone strength by helping calcium to be incorporated into bone.
- **Parathyroid.** This is a set of four small glands behind your thyroid. They play a role in [bone](#) health. The glands control your levels of [calcium](#) and phosphorus.
- **Thymus.** This gland makes white blood cells called T-lymphocytes that fight infection and are crucial as a child's [immune system](#) develops. The thymus starts to shrink after puberty.
- **Adrenals.** Best known for making the "fight or flight" hormone adrenaline (also called [epinephrine](#)), these two glands also make hormones called corticosteroids. They affect your [metabolism](#) heart rate, oxygen intake, blood flow, and sexual function, among other things.
- **Pancreas.** This organ is part of both your digestive and endocrine systems. It makes digestive enzymes that break down food. It also makes the hormones [insulin](#) and [glucagon](#). These ensure you have the right amount of [sugar](#) in your bloodstream and your cells.
- If you don't make insulin, which is the case for people with [type 1 diabetes](#), your [blood sugar levels](#) can get dangerously high. In [type](#)

[2 diabetes](#), the [pancreas](#) usually makes some insulin but not enough.

- **[Ovaries](#)**. In women, these organs make estrogen and progesterone. These hormones help develop [breasts](#) at puberty, regulate the [menstrual cycle](#), and support a [pregnancy](#).
- **Testes**. In men, the testes make testosterone. It helps them grow facial and body [hair](#) at puberty. It also tells the [penis](#) to grow larger and plays a role in making [sperm](#).