

The Endocrine System - Part 1

Kristine Brown - Traditional Community Herbalist

What Does the Endocrine System Consist of?

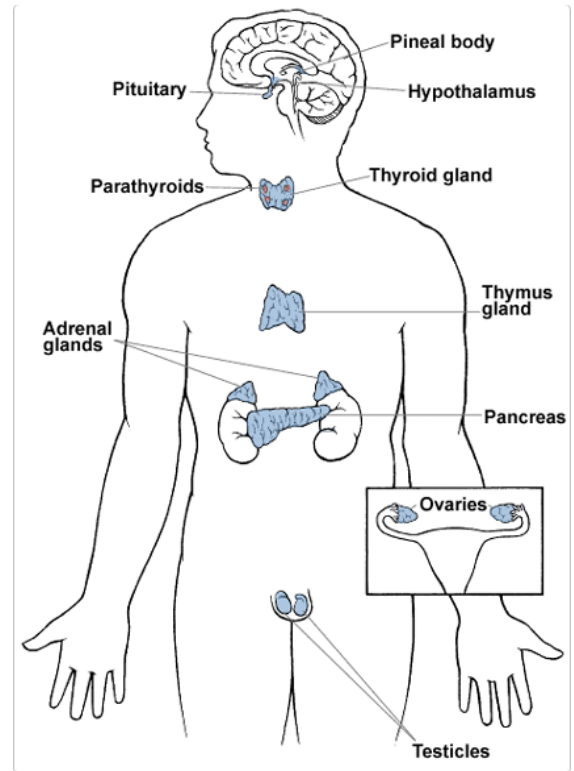
Pituitary glands	Adrenal glands
Pineal glands	Pancreas
Hypothalamus	Reproductive glands:
Thyroid gland	Ovaries (female)
Parathyroid glands	Testes (male)
Thymus gland	

What is the Function of the Endocrine System?

The endocrine system is in charge of body systems that happen slowly, such as cell growth. The foundations of the endocrine system are glands and hormones.

Hormones transfer information and instructions from one set of cells to another.

Glands produce and secrete chemicals. They select and remove materials from the blood, process them and secrete the finished chemical product for use somewhere in the body.



Pituitary gland - the major endocrine gland. A pea-sized body attached to the base of the brain, the pituitary is important in controlling growth and development and the functioning of the other endocrine glands.

Pineal gland - a pea-sized conical mass of tissue behind the third ventricle of the brain, secreting a hormonelike substance in some mammals.

Hypothalamus - a section of the brain responsible for the production of many of the body's essential hormones, chemical substances that help control different cells and organs. The hormones from the hypothalamus govern physiologic functions such as temperature regulation, thirst, hunger, sleep, mood, sex drive, and the release of other hormones within the body. This area of the brain houses the pituitary gland and other glands in the body.

Thyroid gland - a vitally important hormonal gland that plays a major role in the metabolism, growth and maturation of the human body. It helps to regulate many body functions by constantly releasing a steady amount of hormones into the bloodstream.

Parathyroid glands - four tiny glands, located in the neck, that control the body's calcium levels. Each gland is about the size of a grain of rice. The parathyroids produce a hormone called parathyroid hormone (PTH).

Thymus gland - a lymphoid organ situated in the neck of vertebrates that produces T cells for the immune system. The human thymus becomes much smaller at the approach of puberty.

Adrenal glands - made up of two glands that sit on top of your kidneys that are made up of two distinct parts.

- The adrenal cortex—the outer part of the gland—produces hormones that are vital to life, such as cortisol (which helps regulate metabolism and helps your body respond to stress) and aldosterone (which helps control blood pressure).
- The adrenal medulla—the inner part of the gland—produces nonessential (that is, you don't need them to live) hormones, such as adrenaline (which helps your body react to stress).

Pancreas - secretes enzymes, or digestive juices, into the small intestine to further break down food after it has left the stomach. This gland also produces the hormone insulin and secretes it into the bloodstream in order to regulate the body's glucose or sugar level.

Common Acute and Chronic Problems for Endocrine System:

Adrenal Disorders:

Addison's disease	Mineralocorticoid deficiency
Adrenal insufficiency	Conn's syndrome
Cushing's syndrome	Glucocorticoid remediable aldosteronism (GRA)
Pheochromocytoma	Congenital adrenal hyperplasia
Adrenocortical carcinoma	

Glucose homeostasis disorders:

Diabetes - Type 1, Type 2, Gestational, Mature Onset	
Hypoglycemia	Glucagonoma

Thyroid disorders:

Hyperthyroidism	Hypothyroidism
Hashimoto's disease	Grave's disease
Goiter	Thyroiditis
Graves-Basedow disease	Toxic multinodular goiter
Thyroid cancer	Thyroid hormone resistance

Endocrine tumors:

Multiple endocrine neoplasia I and II	Carcinoid syndrome
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Pituitary gland disorders:

Hypopituitarism	Acromegaly (Gigantism)
Cushing's disease	Prolactinoma

Reproductive hormone disorders:

Polycystic ovary syndrome (PCOS)	Hermaphroditism
Precocious puberty	Gonadal dysgenesis
Androgen insensitivity syndrome	Hypogonadism (Gonadotropin deficiency)
Kallmann syndrome	Klinefelter syndrome
Turner syndrome	Ovarian failure
Testicular failure	Delayed puberty

Parathyroid gland disorders:

Primary hyperparathyroidism	Secondary hyperparathyroidism
Tertiary hyperparathyroidism	Hypoparathyroidism

Misc:

Pancreatitis	Autoimmune polyendocrine syndromes
Incidentaloma	

Herbal Applications for the Endocrine System:

Extracts	Tea
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Ways to Maintain Endocrine System Health:

- ~ Eat organic as much as possible, especially meat, dairy and the 'dirty dozen' fruits and veggies (pesticides are endocrine disruptors)
- ~ Avoid low fat diets, instead consume good healthy fats rich in omegas and a rainbow of vegetables: dark green leafy vegetables and orange pigment rich vegetables are especially good
- ~ Avoid artificial sweeteners
- ~ Purify your water, both drinking and bathing
- ~ Avoid plastics, especially for food and water. Use glass or metal water bottles. Never heat food in plastic, which releases toxins into the food
- ~ Avoid environmental toxins such as bromides (found in soft drinks, bakery items and hot tubs), phthalates (found in hair spray, nail polish and used to soften plastics) and triclosan (found in antibacterial soaps, beauty products and many cleaning products)
- ~ Switch to more natural products for everyday life: cleaning, bathing, shampooing, laundering, etc.
- ~ Eliminate excess stress
- ~ Get plenty of restful sleep on a regular basis
- ~ Support your well being through doing less, practicing rest and relaxation EVERY DAY
- ~ Supplements to support the endocrine system: B-complex, especially: pantothenic acid (B5), niacin (B3) and cobalamin (B12), vitamin C, D3, magnesium citrate

Herbs for the Endocrine System:*Adaptogens*

Ashwagandha (*Withania somnifera*)
 Astragalus (*Astragalus membranaceus*)
 Eleuthero (*Eleutherococcus senticosus*)
 Ginseng (*Panax ginseng*)
 Licorice (*Glycyrrhiza glabra*)*
 Reishi (*Ganoderma lucidum*)
 Rhodiola (*Rhodiola rosea*)
 Schizandra (*Schizandra chinensis*)
 Shatavari (*Asparagus racemosus*)
 Tulsi (*Ocimum sanctum*)

Relaxing Nervines

California Poppy (*Eschscholzia californica*)
 Chamomile (*Matricaria recutita*)
 Crampbark (*Viburnum opulus*)
 Lavender (*Lavendula officinalis*)
 Lemon Balm (*Melissa officinalis*)
 Milky Oats (*Avena sativa*)
 Passionflower (*Passiflora incarnata*)
 St. John's Wort (*Hypericum perforatum*)
 Skullcap (*Scutellaria laterifolia*)
 Valerian (*Valerian officinalis*)
 Vervain (*Verbena officinalis*)

*Use only under the care of a qualified herbalist

Please note: while the following herbs can assist in healing these specific indications, work with diet and lifestyle also play a large role in the healing process.

Adrenal Specific Herbs

Ashwagandha (*Withania somnifera*)
 Ginkgo (*Ginkgo biloba*)
 Ginseng (*Panax ginseng*)
 Gotu kola (*Centella asiatica*)
 Nettles (*Urtica dioica*)
 Rhodiola (*Rhodiola rosea*)

Thyroid Specific Herbs

Hypothyroid
 Ashwagandha (*Withania somnifera*)
 Black Walnut (*Juglans nigra*)
 Bladderwrack (*Fucus vesiculosus*)
 Hawthorn (*Crataegus spp.*)
 Ginkgo (*Ginkgo biloba*)

Hyperthyroid

See also Relaxing Nervines
 Bugleweed (*Lycopus virginicus*, *L. europaeus*)

Diabetes Type II Specific Herbs

Digestive bitters
 Blueberry (*Vaccinium spp.*)
 Burdock (*Arctium lappa*)
 Cinnamon (*Cinnamomum verum*)
 Devil's Club (*Oplopanax horridum*)
 Fenugreek (*Trigonella foenum-graecum*)
 Gymnema (*Gymnema sylvestre*)
 Maitake (*Grifola spp.*)
 Reishi (*Ganoderma lucidum*)

Recommended Herbal Books (*indicates available through library loan system):

General Body System Information

- ~ The Herbal Handbook: A User's Guide to Medical Herbalism by David Hoffmann
- ~ Herbal Medicine From the Heart of the Earth by Sharon Tilgner, N.D.
- ~ The Authentic Herbal Healer by Holly Bellebuono
- ~ Holistic Anatomy by Pip Waller
- ~The Encyclopedia of Medicinal Plants by Andrew Chevallier*
- ~The Complete Medicinal Herbal by Penelope Ody*
- ~The Holistic Herbal by David Hoffmann*
- ~ Medical Herbalism: The Science and Practice of Herbal Medicine by David Hoffmann

Endocrine System Specific

- ~ Rogers' School of Herbal Medicine Volume 7 - The Endocrine System by Robert Dale Rogers

Online Resources

Thyroid problems:

Ryan Drum on thyroid issues: <http://www.ryandrum.com/thyroid1.html>,
<http://www.ryandrum.com/thyroidpart1.htm>, <http://www.ryandrum.com/thyroidpart2.htm>

Juliet Blankespoor on endocrine disruptors:

<http://blog.chestnutherbs.com/endocrine-disruptors>

Rosalee de la Foret on endocrine system health:

<http://www.herbalremediesadvice.org/endocrine-system.html>
<http://www.herbalremediesadvice.org/endocrine-system-facts.html>

Rosalee on metabolic syndrome:

<http://www.herbalremediesadvice.org/metabolic-syndrome.html>

Rosalee on adrenal fatigue:

<http://www.herbalremediesadvice.org/adrenal-fatigue-syndrome.html>

Naturopathic Wellness Center on balancing the endocrine system naturally:

<http://www.nawellness.com/balancing-the-endocrine-system-naturally/>

Natalie Vickery on insulin resistance and metabolic syndrome:

<https://thefamilyherbalist.wordpress.com/2010/02/04/insulin-resistance-the-metabolic-rollercoaster-ride/>

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