

Top 7 Tips to Balance Your Hormones

Analysis by [Dr. Joseph Mercola](#)

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STORY AT-A-GLANCE

- › Maintaining a healthy hormone balance as you age does not automatically mean you must use hormone replacement. There are several helpful lifestyle strategies and nutritional supplements you can try first
- › Avoiding processed food is a foundational strategy for preserving your natural hormone function, so the first tip to balance your hormones is to eat real food. Refined carbohydrates and damaged fats can elevate your estrogen levels and alter other critical hormone levels
- › Studies have shown ashwagandha helps normalize thyroid hormone levels and may be an effective treatment for subclinical hypothyroidism
- › Strategies that will augment testosterone naturally include strength training, eliminating sugar, vitamin D, zinc, magnesium, healthy fats, branch chain amino acids, certain herbal supplements and avoiding endocrine disrupting chemicals

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Hormones have far-reaching effects in your body, and hormone deficiencies can wreak total havoc on your health. When you think about unbalanced hormones, "hot flashes" are but one of many possible effects. For example, a series of studies^{1,2,3,4} led by John Morrison,⁵ an authority on the neurobiology of aging, suggests estrogen helps restore synaptic health and improves working memory.

In other words, what is typically thought of as "age-related cognitive decline" may actually be caused by estrogen deficiency. However, maintaining a healthy hormone balance as you age does not automatically mean you must use hormone replacement. There are several helpful lifestyle strategies and nutritional supplements you can try first.

Addressing your diet should be your first step. If tweaking your diet is not enough, there are a number of nutritional supplements and herbs that might do the trick. If all else fails, you could also consider bioidentical hormone therapy.

While natural bioidentical hormones can be helpful in many instances, I typically don't recommend them as a first line option due to potential side effects. You'll also want to make sure you're working with a physician who has a thorough knowledge of hormone replacement.

The Fantastical World of Hormones

The word "hormone" derives from the Greek word "hormon," which means "to excite" or "set in motion." They have shaped your life ever since you were an embryo. The featured video, "The Fantastical World of Hormones," explores the history and discovery of hormones. More recent discoveries about how the endocrine system works, for example, have transformed our understanding of the critical roles hormones play in health and disease.

Hormones are essential to just about every life process, from your growth and development to your metabolism and passions. Every multicelled organism, plant or animal, uses hormones. However, the workings of hormones are not as obvious as the beating of your heart and other such biological processes that are more easily observed and quantified.

Understanding hormones requires that scientists also be medical detectives, and these "hormone detectives" have been responsible for the abundant twists and turns we've seen in the field of endocrinology.

"The Fantastical World of Hormones," is an informative primer for understanding of what hormones are, where they come from, and what they do in your body. In this article, I'll also review some of the strategies you can use to help optimize your hormones.

Hormone Basics

More than 80 human hormones have been identified, all with distinctly different roles. Each hormone acts as a chemical messenger and is aimed at a specific target cell and has no effect on any other cells as it washes past them. When a hormone acts on its specific target cell, it can change the way it behaves to make it perform a specific task.

For example, the hormone adrenalin causes your heart to beat faster, and the hormone gastrin makes your stomach secrete gastric acid when eating certain foods. Hormones exert their influence in very small concentrations; every molecule packs a punch. This is also why endocrine-disrupting chemicals like BPA and phthalates are so dangerous even in tiny amounts.

Different hormones also act on a variety of time scales. For example, adrenalin acts on your heart for a few minutes, but estrogen secreted daily can have effects that last for years.

Some hormones are also designed to stimulate the release of other hormones. Some exert effects throughout your body, whereas others act only on small, localized areas of tissue. Hormones can be broadly classified into four categories,⁶ based on how they work:

1. Steroids, such as sex hormones and adrenal hormones
2. Peptides, examples of which include human growth hormone (HGH), insulin and melatonin
3. Amino acid derivatives (amines) such as adrenalin
4. Eicosanoids, such as prostaglandins (involved in inflammation)

Hormones are kept in balance (homeostasis) through a complex feedback system, and their release is triggered by three principal mechanisms:⁷

1. Specific molecules in your blood (e.g., certain minerals or nutrients that serve as feedback mechanisms)
2. Stimulation by other hormones (this typically leads to a rhythmic release of hormones, rising and falling in a predictable pattern)
3. Stimulation by signals from your nervous system (this typically leads to a short burst of a hormone, such as adrenalin)

Hormones can be endocrine and exocrine, depending on how they're released:

- **Endocrine** – Hormones released directly into your bloodstream from a ductless gland (pituitary, adrenal, thyroid, ovary, testicle, pancreas, etc.)⁸
- **Exocrine** – Hormones released into a duct or lumen, such as from your salivary glands or the gastric glands in your stomach⁹

Some organs have both endocrine and exocrine functions, such as your kidneys, pancreas and gonads. When you see the phrase "endocrine system," this generally refers to your system of eight hormone-secreting glands, but not to the other hormone-secreting tissues and organs, such as the placenta, which secretes estrogens and progesterone during pregnancy.¹⁰

Tip No. 1: Eat Real Food

Avoiding processed food is a foundational strategy for preserving your natural hormone function, so the first tip to balance your hormones is to eat real food. Refined carbohydrates and damaged fats can elevate your estrogen levels, in some cases, as much as twice of what is normal. This may actually be a major cause of menopausal symptoms for many women.

Processed foods may also alter other critical hormone levels and are loaded with health-degrading ingredients such as sugar (especially fructose), genetically engineered

ingredients, unhealthy vegetable oils, processed salt, bromines and other chemical additives.

On the other hand, consuming a diet rich in whole organic or biodynamic foods, along with high-quality proteins and healthy fats can go a long way toward keeping your hormones balanced as you age, especially when combined with an effective fitness program.

As a general rule, fat-soluble vitamins have a beneficial effect on sex hormones. Consuming foods rich in vitamin A will benefit progesterone production. Here's a quick summary of do's and don'ts for maintaining healthy hormone levels. You can also learn more by listening to my interview with Dr. Thierry Hertoghe, whose specialty is treating hormone imbalances with food. His interview is included above for your convenience.

Do:

- Eat a whole food diet rich in fresh organic vegetables and fermented foods
- Eat lots of dark green leafy vegetables, rich in magnesium, which facilitates sex hormone production. Magnesium supplementation can also help improve your sex hormone levels, including your testosterone and HGH
- Eat high-quality protein such as fish, grass fed red meat and pastured chicken, but cook them at a lower temperature. High-quality protein from meat and fish, as well as healthy fats such as egg yolk, lard and butter, helps improve progesterone and DHEA secretion

Avoid:

- Regular alcohol consumption, as this decreases your growth hormone production. Having just one alcoholic drink per day can decrease your HGH by 75%
- Unsprouted grains. If consuming grains (which are best avoided altogether), make sure they're sprouted. Unsprouted grains, sugar or fructose decrease seven of the 12 most important hormones

Tip No. 2: Assess Your Adrenal Health and HPA Axis Function

Your body has two adrenal glands, located just above each of your kidneys. As part of your endocrine system, your adrenal glands secrete more than 50 hormones, making the health and function of your adrenals very important.

Both primary and secondary adrenal insufficiency can be diagnosed with a lab test. More subtle abnormalities in the hypothalamus-pituitary-axis (HPA), on the other hand, are more difficult to diagnose, as there's no accepted medical test for it. Many doctors will use an ACTH (adrenocorticotrophic hormone) test to check for problems with your adrenal glands.

However, the ACTH test only recognizes extreme underproduction or overproduction of hormone levels, as shown by the top and bottom 2% of a bell curve. This means your adrenal cortisol production could be functioning 20% below the mean, and your body experiencing symptoms of HPA dysfunction, yet the test will not recognize it.

To identify HPA dysfunction, a comprehensive hormone panel is recommended. One of the best is the DUTCH test, which stands for Dried Urine test for Comprehensive Hormones. The DUTCH test can identify dysfunctional diurnal patterns, for example, and measures hormonal metabolites, which can reveal underlying pathology. To learn more, see my interview with Mark Newman (above), founder of Precision Analytical Laboratory, who developed the test.

Tip No. 3: Balance Your Thyroid Function With Ashwagandha

Studies have shown ashwagandha helps normalize thyroid hormone levels and may be an effective treatment for subclinical hypothyroidism. In one,¹¹ ashwagandha was found to significantly improve serum thyroid stimulating hormone (TSH) levels, T3 and T4 levels, compared to placebo. As explained by Thyroid Advisor:¹²

"The function of the thyroid gland is regulated by two formations of the brain: the hypothalamus and the pituitary gland. The hypothalamus collects input from

body systems and evaluates if the thyroid gland should decrease or increase secretion of T4 and/or T3.

If additional T4 and/or T3 is required, or if one's rate of metabolism is slow, the thyroid is directed to produce thyrotropin releasing hormone. The thyrotropin releasing hormone is transported throughout the body and once it reaches the pituitary gland, it stimulates it to secrete thyroid stimulating hormone.

It's at this point that Ashwagandha comes in as a remedy for thyroid malfunction. It directs TSH hormone to travel to the pituitary. TSH triggers the thyroid gland to produce sufficient amounts of T4 and T3."

Tip No. 4: Balance Estrogen With Progesterone

Many women also tend to be estrogen dominant (either from overproduction of estrogen due to ovarian cysts, an inability to break down estrogen, exposure to pesticides, or a decreased production of progesterone), so using progesterone can help decrease a woman's risk for breast cancer as well.

An effective strategy that can help counteract estrogen excess is to take transmucosal progesterone (not oral or transdermal), which is a natural estrogen antagonist.

Progesterone is one of only four hormones I believe many adults can benefit from. (The other three are thyroid hormone T3, DHEA and pregnenolone.)

I do not recommend transdermal progesterone, as your skin expresses high levels of 5-alpha reductase enzyme, which causes a significant portion of the progesterone you're taking to be irreversibly converted primarily into allopregnanolone and cannot be converted back into progesterone.

Dr. Ray Peat has done the seminal work in progesterone and probably was the world's greatest expert on progesterone. He determined that most solvents do not dissolve progesterone well and discovered that vitamin E is the best solvent to optimally provide progesterone in your tissue. For a more detailed explanation on the ideal way to

administer progesterone, I recommend reviewing my article, "[Unlocking the Secrets of Hormone Health and Vitality.](#)"

Tip No. 5: Other Plant Remedies for Women

PMS and other menstruation issues can also be addressed with a number of different plant remedies, including:

- **Cramp bark** – Cramp bark (*Viburnum opulus*) may help to relieve muscle spasms and is often used to relieve menstrual cramps. It's known as a uterine relaxant and contains the antispasmodic scopoletin.
- **Black cohosh** – Black cohosh is traditionally used to regulate body temperature and treat menopausal symptoms such as hot flashes, but it's also known for having a relaxant effect on the uterus.
- **Dong quai** – Traditionally recommended for dysmenorrhea, or painful menstruation. It acts like estrogen in your body, and may help to improve uterine tone.
- **Valerian** – Known for its sedative effects, valerian may be useful for PMS-related mood swings, insomnia and irritability.
- **Chaste tree berry** – Traditionally used to ease menstrual problems, including premenstrual syndrome. A systematic review¹³ found a significant reduction in PMS symptoms in women using chaste tree berry compared with those in the placebo group.

Further, in women suffering from premenstrual dysphoric disorder, which is a more severe form of PMS, chaste tree berry worked as well as the drug fluoxetine in relieving symptoms.

Tip No. 6: Boost Testosterone Naturally

Testosterone plays many important roles in men's health. Besides affecting your sex drive, it also helps maintain muscle mass, bone density, red blood cells and a general sense of vigor and well-being.

Beginning around age 30, a man's testosterone levels begin to decline and continue to do so as time goes on – unless you proactively address your lifestyle. Common symptoms of declining testosterone levels include:

- Decreased sex drive
- Erectile dysfunction and/or problems urinating
- Depression
- Difficulties with concentration and memory
- Weight gain and/or breast enlargement

Unfortunately, direct-to-consumer drug advertising, which is permissible in the U.S., drives many men to use testosterone even though they're not good candidates for it. Research¹⁴ has found significant individual variations in the amount of testosterone required for any particular man to maintain lean body mass, strength and sexual function.

Other hormones, even the female sex hormone estrogen (albeit in very low concentrations), also play a critical role in men's health, so the singular focus on testosterone replacement may be inappropriate – and unnecessarily risky. A set of seven interconnected, federally funded clinical trials^{15,16,17,18,19,20,21} involving 790 men over the age of 65 revealed both benefits and risks of testosterone treatment.

In older men with low testosterone levels, short-term (one year) treatment was found to boost bone density and strength (especially in the spine) and reduce anemia. As far as cognition is concerned, no significant improvements were noted in the men's memory or problem-solving skills.

On the downside, one year of testosterone treatment also increased the risk of cardiovascular events in men aged 65 or older who had a serum testosterone level

below 275 nanograms per deciliter (ng/dL) and symptoms of hypogonadism.^{22,23,24}

Compared to the placebo group, those receiving testosterone had a greater increase in coronary artery plaque – a 20% increase, compared to a 1% increase in the placebo group, which is a rather significant difference.

In another study,²⁵ men aged 65 and older who took testosterone doubled their risk of heart attack within the first three months of use, even if they did not have heart disease prior to starting the therapy. The result was similar in younger men diagnosed with heart disease. The good news is there are many ways men can optimize their testosterone naturally. The video above describes several helpful strategies, including:

Weight loss – Visceral fat (internal belly fat) is known to suppress testosterone production²⁶

High-intensity exercise and strength training

Optimize your vitamin D level – To produce testosterone, your body requires several different nutrients. Among the nutrients more often depleted are vitamin D3 and zinc

Reduce stress – Stress, when chronic and unaddressed, can result in hypercortisolemia, which inhibits testosterone production²⁷

Increase zinc and magnesium intake – Zinc is one of the nutrients required for testosterone production; magnesium has also been shown to improve sex hormone levels, including testosterone and HGH

Eat healthy fats and do not shun cholesterol-rich foods – Your body cannot produce testosterone without cholesterol, and research shows a diet with less than 40% of energy from fat (mainly from animal sources, i.e., saturated) decreases testosterone²⁸

Boost intake of branch chain amino acids – This is best accomplished by whole foods like whey protein concentrate (not Isolate)

Avoid endocrine disrupting chemicals known to affect testosterone production –

This includes phthalates, bisphenol-A, PFOAs, the insecticide methoxychlor, the fungicide vinclozin, NPEs, bovine growth hormones (found in some commercial dairy products), unfermented soy products, MSG, fluoride and metalloestrogens such as aluminum, antimony, copper, lead, mercury, cadmium and tin

Herbal supplements – There are also nutritional supplements that can help boost your testosterone level. These include saw palmetto (which increases testosterone by inhibiting up-conversion to dihydrotestosterone²⁹), astaxanthin in combination with saw palmetto,³⁰ and ashwagandha³¹

Tip No. 7: Saw Palmetto for Male Prostate Health

Aside from raising testosterone levels in men, saw palmetto can also help prevent enlarged prostate and prostate cancer. And, if your body doesn't need it, it will do no harm.

Supercritical CO₂ extraction is the cleanest extraction method known today, aside from eating the food whole. And, the higher the pressure used, the more micronutrients are left in the oil, such as lutein, lycopene, zeaxanthin and chlorophyll.

The highest quality products are the organic supercritical-extracted saw palmetto oils, which are very dark green in color. Only one or two out of every 20 brands will be of this high quality. Next in line are ultrahigh or high pressure-extracted oils (rose colored), super critical oils and low pressure-extracted oils (yellow colored).

Hormone Balancing Is a Complex Affair, but Worth Your Effort

Maintaining a healthy hormone balance can be tricky, but worth the effort due to the powerful roles they play in your health. I strongly recommend taking the time to watch the featured documentary, as it will broaden your understanding.

As mentioned earlier, if you suspect you may have a hormone imbalance, seek professional medical help. It's inadvisable to start tweaking your hormones without proper testing first, and once you begin you'll want to regularly measure your hormone levels to make sure you're still on the right track.

Obviously, a detailed discussion of every hormone and all the ways to improve them is beyond the scope of this article, but the following table outlines many of the most recognizable hormones, with links to where you can go for more information.

Hormone	Where It's Produced	Primary Functions
I. STEROID HORMONES – Derived from cholesterol, includes sex hormones and adrenal hormones (mineralocorticoids and glucocorticoids)		
Estrogens	Ovaries, placenta, breasts, liver, adrenal glands, fat cells, hypothalamus ³² and others	Female sexual development, breast development, menstruation, pregnancy, memory and antiaging
Progesterone	Ovaries, placenta and central nervous system	Female sexual development, breast development, menstruation and pregnancy
Testosterone	Testes and ovaries	Male sexual development, sex drive, sperm production, and muscle and bone mass
DHEA (Dehydroepiandrosterone)	Adrenals and brain ³³	Lean body mass, bone strength, immunity, heart

Hormone	Where It's Produced	Primary Functions
		health and resistance to stress
Pregnenolone	Adrenals	Memory and resistance to stress
Cortisol	Adrenals	Resistance to stress, energy production, anti-inflammatory and mood stability
Vitamin D (1,25 dihydroxyvitamin D or calcitrol)	Skin, liver and kidneys	Varied, including bone and muscle health, heart health, immunity, metabolism, brain development, cell communication and much more

II. PEPTIDE HORMONES – Often in "prehormone" form, requiring further processing to be active

HCG (human chorionic gonadotropin)	Placenta	Helps support the endometrial lining for a developing fetus (and stimulates progesterone)
HGH (Human growth hormone, or somatotropin/somatropin)	Pituitary	Promotes growth in children and adolescents, and helps regulate body composition, tissue

Hormone	Where It's Produced	Primary Functions
		growth and metabolism in adults
Melatonin	Pineal gland	Sleep; supports brain health, heart health, immune system and cancer prevention
Insulin	Pancreas	Signals glucose to be transferred from your blood into your cells for energy usage; fat body regulation
Glucagon	Pancreas	Signals liver to release glucose into your blood
Prolactin	Pituitary, breasts, uterus, prostate, skin, fat and immune cells	Promotes lactation, bonding and more than 300 reproductive, metabolic, immune and other functions³⁴
Adrenocorticotrophic hormone (ACTH)	Pituitary	Stimulates cortisol release
Leptin	Fat cells	Fat regulation
Ghrelin	Stomach and pancreas	Stimulates hunger
Parathyroid hormone (PTH)	Parathyroid gland	Controls amount of calcium in your bones and

Hormone	Where It's Produced	Primary Functions
		blood
Thyrotrophin-releasing hormone (TRH)	Hypothalamus	Stimulates the thyroid gland to release TH
Humoral factors (e.g., thymosin)	Thymus	Development of a healthy immune system

III. AMINO ACID DERIVATIVE HORMONES (AMINES) – Derived from tyrosine and tryptophan, includes thyroid hormones and catecholamines

Adrenalin	Adrenals	"Fight or flight" response: increases heart rate, dilates blood vessels and releases glucose
Thyroid hormone (TH)	Thyroid gland	Organ development and metabolism

IV. Eicosanoid hormones – Produced from fatty acids (arachidonic acid); very short-lived in your body and exert effects primarily on local tissues

Prostaglandins	Nearly every cell in the human body	Varied, including uterine contractions, bronchodilation, inflammation and more
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