

6 Things You Probably Don't Know About Estrogen



Estrogen can sometimes seem like a four-letter word. As we age, our bodies produce less. In its place come mood swings, weight gain, hot flashes, vaginal atrophy, and loss of sexual desire.

In an effort to regain our equilibrium, we supplement, diet, and exercise. We discuss — often ad nauseum — with friends and strangers online (IG currently boasts nearly 90,000 #estrogen/estrogendominance posts). And we read books and blogs about menopause like it's our job. Yet the more we learn, the more elusive the knowledge feels. So what *do* we know about estrogen? Here are a few things that might surprise you.

There Are Three Types

Estrogen is responsible for the sexual development of girls when they reach puberty. It causes breasts to grow, hips to widen, and the menstrual cycle to start. It's involved in bone health and cholesterol metabolism, and it helps regulate weight, glucose metabolism, and insulin sensitivity.

There are three types of estrogen, each with unique characteristics.

- Estrone, made primarily in the ovaries and fat cells, makes up more than 50 percent of our estrogen.
- Estradiol, produced in the ovaries, is a powerhouse that is 12 times more active than estrone.
- Estriol, the weakest form of estrogen that is essentially a waste product made when the body uses estradiol. (A significant amount is produced by the placenta during pregnancy.)

Estrogen Dominance Is a Problem

Too much estradiol and estrone relative to the hormone progesterone causes estrogen dominance — and it's estrogen dominance that's making headlines. [Linked to an increased risk](#) of autoimmune disease, breast cancer, ovarian cysts, uterine fibroids, infertility, and miscarriages, it wreaks havoc on women's health.

Women who undergo hormone testing and are told that they have low estrogen but also estrogen dominance can feel confused. How can estrogen be dominant when there's not much of it? Put simply: It's a ratio of estrogen to progesterone, and if you're low in both you can still be estrogen dominant.

Signs of estrogen dominance, according to [Medical News Today](#):

- Irregular periods
- Spotting
- Heavy menstrual bleeding
- Terrible PMS
- Bloating
- Cold hands and feet
- Difficulty sleeping
- Fatigue
- Hair loss
- Headaches
- Low sex drive
- Mood changes, depression, anxiety
- Memory problems
- Swollen or tender breasts
- Noncancerous lumps in breasts
- Uterine fibroids

If you suspect you are estrogen dominant, see your doctor for hormone testing to identify your levels of estrogen and progesterone. With that information you can work with your healthcare professional to determine the right course of action for you. You can also increase your intake of [cruciferous vegetables](#), which studies show block estrogen, and cultivate self-care through exercise, meditation, and yoga, which lower chronic stress, an enemy of progesterone. You can [incorporate a vaginal moisturizer](#) into your daily routine to reduce dryness and other symptoms of atrophy.

Estrogen Impacts Your Thyroid

According to thyroid expert and *New York Times* bestselling author [Dr. Sara Gottfried](#), the link between estrogen and hypothyroidism is hard to miss. “It is the change in reproductive hormones that triggers hypothyroidism and the symptoms of fatigue, weight gain, and depression. Since many of the symptoms overlap with imbalanced reproductive hormones, practitioners have nicknamed the condition ‘thyropause.’”

Many women in midlife are diagnosed with [hypothyroidism](#), or underactive thyroid. And thyroid cancer occurs three times more often in women than in men, suggesting that [estrogen plays a role in thyroid disease](#). Even if you don't have cancer, thyroid problems can exacerbate menopause symptoms and contribute to osteoporosis, so see your doctor if you suspect a problem.

The Environment Impacts Estrogen

While beauty brands have spent decades educating women about the impact of the environment on skin, only recently have the effects of environmental estrogens, aka xenoestrogens, emerged. [Studies have linked environmental estrogens](#) at pollutant levels with breast cancer in women and prostate cancer in men. But even at lower levels, [environmental estrogens may mimic, block, or cancel estrogen](#).

To help reduce the environmental estrogens in your life, get a water filter, toss your plastic containers, eat less processed food, and switch to beauty and cleaning products made with natural ingredients.

Estrogen Can Be Produced by the Brain

Discovering that the brain can produce — and release — estrogen was a medical breakthrough in the last decade. At the University of Wisconsin School of Medicine and Public Health, [researchers found that the hypothalamus](#) could directly control reproductive function in rhesus monkeys and likely performs the same action in women. The learning led to further research linking estrogen imbalances to age-related diseases such as Alzheimer's. The study, published in the *Journal of Neuroscience*, “opens up entirely new avenues of research into human reproduction and development, as well as the role of estrogen action as our bodies age,” wrote one author of the 2013 paper.

The bottom line here is that we're still learning a lot about estrogen. Stay tuned.

Estrogen Has Antibodies

A 2016 study published in the *American Journal of Physiology — Lung Cellular and Molecular Physiology* showed that women have [a powerful estrogen receptor with antiviral powers](#). While estrogen “dampened” the flu in one test, “... other studies have shown that estrogens have antiviral properties against HIV, ebola, and hepatitis viruses,” wrote Sabra Klein, the leading investigator.

Delving further into hormone interactions with the immune system is enabling doctors to understand our hormones and how we may better control them. And that's definitely something to look forward to.