



THE PREVELITY LIBRARY

VOL. 04 · HORMONES

Hormones, in Balance.

Menopause, testosterone, and thyroid — what actually changes with age, what the evidence now says about hormone therapy, and how to tell good care from a sales pitch.

FREE PREVIEW EDITION

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PRE-VELITY

INNOVATIVE PREVENTION, PERSONALIZED FOR LONGEVITY.

FOREWORD

The myths and the medicine got tangled up.

As we get older, things change. We get slower, weaker, more tired — and it's fair to ask why, and whether anything can be done about it.

It can feel as if everyone is on hormones now. Everyone has also heard the horror stories: they gave my father a heart attack, they gave my mother cancer. Some of those stories have real roots. Many come from a single study, misread for two decades. And some come from clinics that sell hormones without testing, monitoring, or restraint.

The evidence has moved a great deal, and in late 2025 the FDA moved with it, revising the warnings on menopausal hormone therapy. This guide lays out what the evidence now supports: what hormones do, what changes with age, when therapy helps, when it doesn't, and how to tell careful medicine from a sales pitch.

WHAT THIS IS — AND ISN'T**Education, not a prescription.**

This guide can't account for your history, and it isn't a treatment plan. PreVelity is strictly preventive: we screen, monitor, and refer. Hormone therapy decisions are made with your own physician or a specialist we refer you to.

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SECTION 01

01.

Hormone Basics.

Hormones are chemical messengers on a constant seesaw, turning nearly every system in the body up and down. Before we talk about replacing them, we need a vocabulary for what they do.

INSIDE THIS SECTION

The feedback loop · Sex hormones · DHEA · Thyroid

MESSENGERS

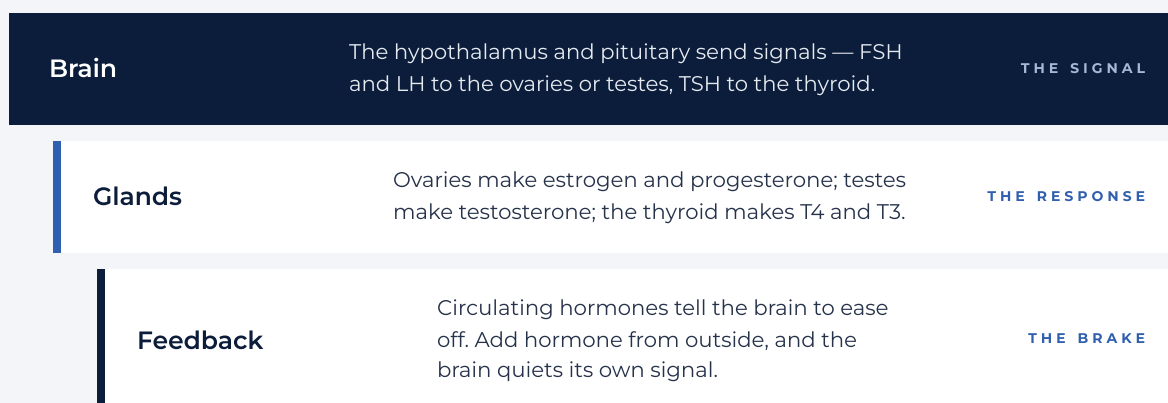
Small molecules, enormous reach.

Hormones regulate energy, sleep, metabolism, mood, sexual health, bone, and muscle. As we age — or when illness interferes — levels can drift out of their healthy ranges. Because hormones touch so much, they're often blamed for every symptom under the sun, correctly or not.

The goal of hormone therapy isn't to make anyone superhuman. It's to relieve symptoms and restore a healthy balance where a true deficiency exists. Used well, it can meaningfully improve quality of life and protect bone. Used carelessly, the same molecules cause real harm.

FIGURE 01 · THE FEEDBACK LOOP

HOW THE BRAIN TALKS TO THE GLANDS.



That brake explains two of the most important cautions in this guide: outside testosterone can suppress sperm production and fertility, and unnecessary thyroid hormone can suppress your own thyroid.

SEX HORMONES

Estrogen, progesterone, testosterone — in everyone.

They're called sex hormones, but they matter for nearly everything: bone, muscle, blood vessels, brain, and mood. Both sexes make all three. What differs is the ratio.

ESTROGEN**Protective, regulatory**

Supports bone, blood vessels, brain, skin, and muscle quality in women and men. Falls sharply at menopause.

PROGESTERONE**The counterweight**

Balances estrogen across the menstrual cycle, protects the uterine lining, and supports sleep. Often the first to falter in perimenopause.

TESTOSTERONE**Builder and driver**

Libido, strength, bone, and mood in both sexes. Men make roughly ten to twenty times as much as women.

DHEA**The reserve tank**

Made mainly in the adrenal glands and converted into testosterone and estrogen as needed. Peaks in your twenties and declines with age. Too much from supplements can cause acne, oily skin, and unwanted hair growth.

FSH & LH**The brain's switches**

Rise when sex hormones are low and fall when they're plentiful — which makes them useful for telling whether a problem starts in the gland or in the signal.

THYROID

The body's metabolic thermostat.

The thyroid sets the pace of metabolism in nearly every cell — which is why low thyroid leaves people tired and cold, and excess leaves them anxious, hot, and with a racing heart. **TSH**, from the pituitary, is the thermostat signal. **T4** is the main, storage form the thyroid releases; **T3** is the active form, made mostly by converting T4 in the tissues. Section 04 covers what can go wrong along that path.

SECTION 02

02.

Menopause & the 2002 Story.

For two decades, one study shaped how women were treated through menopause. The evidence since then — and the FDA's 2025 decision — tell a more careful story.

INSIDE THIS SECTION

Perimenopause and menopause · The Women's Health Initiative · What changed in 2025

THE TRANSITION

Perimenopause is the storm. Menopause is the new normal.

Menopause is defined as twelve months without a period. The years leading up to it — perimenopause, often starting in the mid-40s — are when hormone levels swing unpredictably before settling lower. That volatility is why symptoms can feel abrupt and disruptive.

VASOMOTOR

Hot flashes, night sweats

The classic symptom — and not always the most disruptive one.

SLEEP

Fragmented nights

Early waking and broken sleep, often before flashes begin.

MOOD

Irritability, anxiety

Frequently mistaken for primary depression.

BODY

Shifting composition

More abdominal fat, and bone loss that accelerates in the years around menopause.

INTIMACY

Vaginal and urinary changes

Dryness, discomfort, recurrent urinary infections — often the symptom no one mentions.

BRAIN

"Brain fog"

Word-finding and memory lapses that usually improve after the transition.

Two other hormones deserve attention in midlife. **Testosterone** matters for energy, libido, and bone in women and is easy to overlook — or to overdo. And **thyroid** problems become more common in women at this age, with symptoms that overlap perimenopause. Assessing the whole picture matters.

A study from 2002 shouldn't quietly decide your next thirty years. Neither should a sales pitch. The evidence should.

ON THE HORMONE HIATUS

THE 2002 STORY

What the Women's Health Initiative actually showed.

Much of the fear around hormone therapy traces to the Women's Health Initiative (WHI), whose first major results were published in 2002. The headlines were alarming, and millions of women stopped therapy almost overnight. What the headlines left out:

01 The absolute increase was small.

IN REAL NUMBERS

In the combined estrogen-plus-progestin arm, the extra breast cancer risk amounted to fewer than one additional case per 1,000 women per year.

02 Estrogen alone behaved differently.

A SEPARATE ARM

In women without a uterus taking estrogen alone, breast cancer was not increased — and in long-term follow-up, it was lower.

03 The women were older, the drugs were different.

TIMING AND MOLECULE MATTER

Participants averaged over 60 and were many years past menopause, and they took oral conjugated estrogens with a synthetic progestin — not the transdermal estradiol and micronized progesterone often used today.

WHAT CHANGED IN 2025

The FDA revised the warnings.

In November 2025, the FDA began removing cardiovascular disease, breast cancer, and probable dementia from the boxed warning on menopausal hormone therapy, and asked that labels note that therapy for moderate-to-severe hot flashes may be considered within ten years of menopause or before age 60. Relabeled products began appearing in 2026. Information about heart and breast cancer risk stays in the full label, and estrogen-alone products keep a boxed warning about uterine cancer for women with a uterus.

WHERE THE LINE ACTUALLY IS

For most healthy women with bothersome symptoms who start near menopause, the balance of benefits and risks is favorable. Hormone therapy isn't appropriate for everyone — including women with a history of breast cancer, unexplained vaginal bleeding, prior blood clots or stroke, or active liver disease — and it still requires regular screening and follow-up. The decision is individual, and it belongs to you and your physician.

END OF THE FREE PREVIEW

The rest of this guide.

You know the players and the history. The complete edition covers testosterone in men — what to rule out first, fertility, and the testosterone trap — thyroid without the myths, what to test and when, the foundations hormones depend on, and an honest guide to the therapy options your doctor may discuss, with the red flags that should send you elsewhere.

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