

Your genes, your estrogen, *and why you feel like this.*

Estrogen has to get into your cells, and it has to get back out. Your genes affect both. Here is what those genes actually are, why too much and too little feel the same, and how to find out which one is yours.

Written by Sarah, a Functional Nutrition Practitioner, for someone who has never heard any of this before. Educational, not medical advice. Bring it to your doctor, do not use it instead of one.

Estrogen has to get *in*, and it has to get *out*.

Think of estrogen as a message.

For the message to do anything, something has to pick it up. Your cells have **receptors**, which work like a lock the message fits into.

Once the message is delivered, your body has to get rid of it. Your **liver** breaks it down and wraps it up. Your **gut** carries it out.

1. MADE

Ovaries mostly. Also fat tissue.

2. RECEIVED

Fits into receptors. This is where it works.

3. REMOVED

Liver packages it. Gut carries it out.

So there are two places things go wrong. How well you *pick up* the signal. And how well you *clear out* what is left behind.

Your genes affect both. That is not a theory. It is the reason you and your sister can go through the same transition and have completely different years.

WHY THIS MATTERS MORE THAN A LAB RESULT

A blood test tells you how much estrogen was floating around on the morning you got stuck.

It does not tell you how well your body receives it, or how fast you clear it. Those are the parts that are written into you, and they do not change month to month.

Too much and too little *feel the same.*

Every month you ovulate, what is left behind makes progesterone. Progesterone balances estrogen out.

In your 40s you start skipping ovulation. On those months you make almost no progesterone, while estrogen keeps swinging.

So estrogen ends up running without its counterweight. It does not have to be high to cause trouble. It just has to be unbalanced.

Other months, estrogen drops out from under you. Same woman, same year, opposite problem.

WHEN ESTROGEN IS HIGH OR UNBALANCED	EITHER WAY	WHEN ESTROGEN IS LOW
Heavy or long periods	Bad sleep	Hot flashes, night sweats
Sore, swollen breasts	Anxiety, irritability	Vaginal dryness
Bloating	Brain fog	Pain with sex
Worse PMS	Fatigue	Skipped periods
Headaches before your period	Low sex drive	Aching joints
	Mood swings	

Look at the middle column. That is most of what women actually complain about, and it happens at *both ends*.

This is why guessing from symptoms does not work. It is also why one blood test does not settle it.

WHAT DOES HELP SORT IT OUT

Two things. Your symptom pattern across a whole cycle, which is free. And knowing how your body is built to handle estrogen in the first place, which is what the genetic test is for.

These are the ones *I look at.*

You do not need to memorize these. I just want you to see that they are real, specific things with real, specific jobs.

GENE	ITS JOB	IF YOURS RUNS SLOW OR DIFFERENT
ESR1 ESR2	The receptors. The locks estrogen fits into.	The signal may land differently than it does for someone else at the same level.
CYP19A1	Aromatase. Turns other hormones into estrogen, including in fat tissue.	Affects how much estrogen you make. This is the strongest known genetic influence on estrogen levels.
CYP1A1 CYP1B1	The first cut. Your liver can break estrogen down more than one way, and the pieces are not identical.	Shifts which pieces you make more of. CYP1B1 favors the harsher one.
COMT	Puts a small tag on those pieces so they can leave. Also clears your stress hormones.	The slower version makes 2 to 3 times less of the tagged product in the lab. It is also busy with adrenaline, so stress competes for it.
MTHFR	Supplies the raw material COMT uses to make those tags.	Less raw material available. One study found about 12 percent lower levels of the key ingredient.
GSTM1 GSTT1	The cleanup crew for the harsher breakdown pieces.	Some people are missing these genes entirely. Cleanup may run leaner.

Notice how they chain together. CYP1B1 makes a piece, COMT tags it, MTHFR supplies what COMT needs, GST cleans up what is left.

One slow step is manageable. Two or three slow steps stacked on top of each other is a different situation, and that is the part a symptom quiz will never tell you.

WHERE I WILL BE STRAIGHT WITH YOU

These genes are real and their jobs are established. What no gene test can do yet is predict exactly which symptom you will get, or guarantee how you will respond to hormone therapy. Anyone promising that is ahead of the science.

What your results *do* tell us is where to look first, and in what order to fix things. That is the difference between a plan and a guess.

Supporting the pathway is not the same as *replacing the hormone*.

This is the most important page in here, so I am going to say it plainly.

Nutrients help the machinery run. B vitamins, fiber, crucifers, all of that supports the steps on the last page.

But none of it makes estrogen.

If your estrogen has genuinely dropped, no supplement is going to fill that gap. That is what hormone therapy is for, and that is a conversation with a prescriber.

In my opinion this is where a lot of women get stuck. They are handed a supplement plan when they needed hormones, or handed hormones with none of the clearance side supported. Both halves matter.

WHY YOUR GENES MATTER EVEN ON HRT

If you start estrogen, your body still has to clear it. The same COMT, CYP and GST steps are still doing that job, at whatever speed you were born with.

That is why knowing your genetics before or during hormone therapy is useful. Not to decide whether you take it. That is your doctor's call. But to know what needs support while you do.

ONE THING GENUINELY WORTH ASKING YOUR PRESCRIBER

Estrogen swallowed as a pill goes through your liver first, which raises clotting proteins. Through the skin, as a patch or gel, it mostly skips that trip. In one study the pill form carried about 4 times the clot risk of taking nothing, while the skin form showed no measurable increase. ACOG's own guidance tells doctors to weigh that.

WORTH DOING ON YOUR OWN

- Cut back on alcohol. Best evidence here by far: 2 drinks a day raised estrogen about 27 percent in a controlled study.
- Fiber, 25 to 30 g a day
- Crucifers as food, several times a week
- Daily, comfortable bowel movements
- Track one full cycle before you buy anything

ASK ME FIRST

- DIM and I3C. Do not take these on tamoxifen. They lowered blood levels of its active form in a 12-month trial.
- Calcium-D-glucarate. Sold hard for this. No human study exists.
- Licorice root hiding in "hormone balance" blends
- Black cohosh, if you have any liver history
- High-dose B6, which can cause nerve damage

Let's find out which one of these *is yours*.

You have spent enough time guessing. The genetic test maps the genes on page 3, and the intake goes through your results next to what you actually eat, take, and feel.

You come out with the 2 or 3 things that are yours to work on, in the order that makes sense for your body. Most people leave with a shorter list than they came in with.

BOOK YOUR CALL →

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Not ready for the full panel? Start with the free Dirty Gene Test at int-wellness.com/dirty-gene-test. It takes about 10 minutes and it is where I start with nearly everyone.

SEE A DOCTOR FIRST, NOT ME

Bleeding between periods or after sex, periods so heavy you soak through hourly, or any bleeding after a full year without one. Swelling or pain in one leg, chest pain, trouble breathing. A new severe headache with visual aura. Those need a physician now.

This guide is one practitioner's opinion and a summary of public research. Educational, not medical advice, not a diagnosis. Sarah is not a physician and does not diagnose, treat, or prescribe. Diagnosis and medication decisions belong with your licensed provider. Do not start, stop or change any medication because of anything here, and clear every supplement with your prescriber if you take tamoxifen, an aromatase inhibitor, or any prescription. Sources: Canonico, Circulation 2007. ACOG Committee Opinion 556, reaffirmed 2020. Thomson, Breast Cancer Res Treat 2017. Reichman, JNCI 1993. Dawling, Cancer Res 2001. Obi, Int J Womens Health 2011.