The Ultimate Guide to Hormones

For the active female in her 40s

Discover the 8 hormones to track for maximal performance.

What are they?
How to test them.
And why you should care.

Dr Andréa PROULX ND

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Hi, I'm Dr Andréa,

As an athlete in her 40s and a naturopathic doctor, I help female athletes have more energy, take advantage of their hormonal superpowers, and perform better in sport and life!

In this guide you'll get:

- An understanding of what hormones to track
- How to have them assessed accurately
- How perimenopause affects our hormones
- Why these hormones are essential to performing at your peak in your 40s.

Let's do this!

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Hormone Checklist

Always take note of where you are in your cycle when testing hormones

- ✓ Estrogen
- ✓ Progesterone
- ✓ Testosterone
- ✓ Cortisol (best by saliva)
- ✓ Thyroid TSH "thyroid screening"
- ✓ Free T4 and Free T3
- ✓ DHEA "anti-aging" hormone
- ✓ Vitamin D – in many ways this "vitamin" acts like a hormone

All of these hormones can fluctuate in our 40s.

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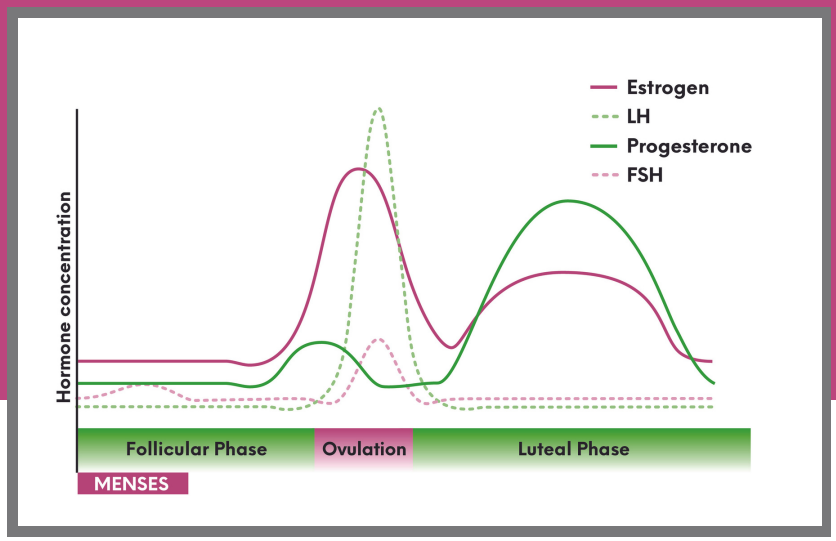
Your Menstrual Cycle 101

If you are not on the contraceptive pill, your estrogen and progesterone have ups and downs in a cycle between periods.

Each hormone affects all parts of your body, not just your ovaries and uterus. They affect your sports and life performance in many ways. None are "good" or "bad,"—the effects are simply part of our nature, and we need to tune in to turn up our successes.

In our 40s, the overall production of these hormones declines at different paces and no two women are the same.

In general, here's what some of our hormones do every month. That is, until we hit our 40s.



Estrogen

The dominant hormone the first 2 weeks and peaks at ovulation.

There are 3 main types of estrogen.

Estradiol, the dominant one, is the one to track.

Estrogen, along with testosterone, stimulates muscle growth.

When to check it?

Day 3 of your cycle (the third day of your bleed) AND Day 21 (for the ratio of estrogen to progesterone)

In athletes, total estrogen can be lower than in non-athletes, leading to minimal periods, fertility concerns, weak bones, and difficulties gaining muscle mass.

In our 40s, both estrogen and progesterone gradually start to decline over 5-10 years. It's important to note that in perimenopause, overall estrogen can be high or low – making perimenopause a different experience for each woman.

Did You Know?
Estrogen to testosterone ratio has been shown to be predictive of Overtraining Syndrome.

As a general rule, estrogen declines more slowly than progesterone, making us feel like we have too much estrogen in comparison to progesterone levels. This can lead to heavy periods, headaches, insomnia, weight gain around the hips and thighs, fibrocystic breasts, hot flashes, and night sweats.

Progesterone

The dominant hormone in the last two weeks of your cycle.

When to check it?

Day 21 – that's 7 days before your next expected period.

Have an irregular cycle? Consider using ovulation predictor urine tests to find your ovulation day, then do progesterone testing 7 days after ovulation.

Tracking cervical fluids can also help predict ovulation time.

If there's ovulation, progesterone rises to ensure growth of a healthy uterine lining for embryo implantation. No embryo? Then we have a period.

However, 50% of women over 40 years old do not ovulate with each cycle, so there's only a small rise in progesterone, and you may see changes in your period flow.

Did You Know?
Progesterone is a natural diuretic and can throw your thirst mechanism off.

Progesterone helps keep the thyroid functioning well, boosts metabolism, and has anti-inflammatory effects.

But **in our 40s,** progesterone production declines making us feel like we have too much estrogen in comparison (often in a bad way). This combination of high estrogen and low progesterone can cause water retention and bloating.

Testosterone

The major player as muscle mass builder

What to check?

Bio-available testosterone is best to measure since it is easily used by your body.

Total testosterone is more frequently. It includes the bio-available plus testosterone attached to carrier molecules.

When to check it?

Anytime in your cycle works. Note that your levels are highest in the morning.

Testosterone is made in the ovaries and the adrenal glands and can be converted into different estrogens (good ones and bad ones).

Testosterone and estrogen are needed for gaining muscle, libido and decreasing recovery time. Women with PCOS (polycystic ovarian syndrome) have higher-than-average testosterone levels.

Over the course of a training session, testosterone levels decline. A good night's sleep allows testosterone levels to bounce back.

Did You Know?
Female long-distance runners appear to have lower testosterone and DHEA than strength and power athletes.

In our 40s, testosterone starts to decline, reducing our sports performance. We need to focus more on weight training with heavy weights and add plyometrics to our routines to keep our strength and power.

Cortisol

The stress hormone

Cortisol is released due to stress and has a daily rhythm. In the right amounts, it makes you feel ready for action!

Too much overall cortisol or cortisol at the wrong time of day causes feelings of anxiety, increased heart rate, insomnia, poor stress resiliency, and leads to burnout.

When to check it?

Cortisol is best assessed by saliva at four points in 24 hours. A naturopathic doctor or functional medicine practitioner can best help you.

If testing by blood is the only option, have it done right away in the morning before coffee or tea.

Don't do an intense workout the day before testing or in the morning before the test.

Did You Know?
Long bouts of intense exercise raises cortisol, making you feel awesome. Boost it at night, and your sleep will pay the price.

In our 40s, it becomes super important to test, track, and support healthy cortisol.
Why? Because many frustrating menopausal symptoms are due to cortisol dysregulation.

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TSH

The thyroid stimulating hormone

TSH is often used as a screening test to get a quick overview of thyroid function.

However it does not tell the whole picture.

Thyroid-stimulating hormone (TSH) is actually made by the anterior pituitary gland in the brain. It tells the thyroid to do work and make thyroid hormones such as T4.

This test is useful to monitor thyroid medications, but alone it does not give an accurate picture of what your thyroid is actually doing or not doing. A result considered "normal" does not always indicate a healthy functioning thyroid. Get free-T4, and free-T3 tested.

Did You Know?
Some research suggests that excessive long cardio reduces thyroid function.

When to check it?

TSH has a natural spike around ovulation. For this reason, try to have repeated testing done at the same time in your cycle.

Athletes beware! In Low-Energy-Availability-Syndrome, formerly known as the Female Triad of Overtraining, the low energy status of the body drives down thyroid function.

Free T4 and Free T3

Hormones made by the thyroid

T4 is thyroxine and contains 4 iodine atoms.

T3 is triiodothyronine since it only contains 3 iodine atoms. This is the active form used by cells in your body.

When to check it?

Be sure to get these levels tested in the morning for best and most accurate results.

In response to an increase in TSH levels, your thyroid makes T4 which then gets converted into T3 in the body. A happy functioning gut enables you to convert T4 into the active T3.

These thyroid hormones boost metabolism, improve muscle growth and repair and pump up energy.

Bonus
Get your blood ferritin (iron) levels tested to enhance thyroid hormone function.

In athletes, free T4 and free T3 tend to be lower, and so we all need to send more love. The type of exercise you do can greatly affect thyroid function directly and through cortisol's influence. In addition, iron is needed to convert T4 into the active hormone T3.

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Vitamin D

The pseudo-hormone

Double duty – vitamin D is used directly to build strong bones, but it also allows your body to absorb calcium for further bone health.

Being out in the sunshine allows your body to naturally make vitamin D. However sunscreen prevents your skin from absorbing the UV rays needed to make vitamin D. Based on skin type, season and cancer risk, be mindful of your sunscreen use.

For athletes, vitamin D helps us go faster since fast-twitch muscle fibres, aka Type-2 fibres, need vitamin D. Turns out that due to high muscle demand from training, we use a lot of vitamin D, causing a decrease in vitamin availability for the rest of the body.

Did You Know
Even outdoor summer sport athletes can be deficient in vitamin D

When to check it?

Have your blood levels of vitamin D tested in early fall to be able to safely dose any supplements needed.

In our 40s, getting vitamin D testing and supplementation is essential to maintaining speed and vertical jump height.

Great, now what?

I hope this checklist has given you the knowledge and confidence you need to take charge of your hormonal superpowers. Now, get your levels tested with your health care provider, naturopathic doctor, functional medicine practitioner or physician.

If you're currently an active female or athlete in her 40s who is looking to up her game, take control of her hormones, and step into her feminine strength, then joining my Facebook group Fit Fun Fabulous is the next step for you.

This amazing community is full of women who value sport and exercise and feel supercharged and confident when they sweat it out. You'll get coaching on nutrition, learn how to synch with your hormones and training tips from me.

It's easy to join; just click the button below.

Join Now

Step into your feminine strength!

Dr Andréa