

# HORMONE TESTS-WHERE TO START

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**WHERE TO START WITH TESTING:** You want to determine your baseline because your hormonal environment almost always influences your symptoms. In order to do that, I recommend the following tests:

## 1. Basic Blood Panel

- Ask your doctor to order the basics: VAP cholesterol - This is an extensive cholesterol panel that includes LDL, HDL and VLDL.
- Also ask for a CBC or a Complete Blood Count. Go over these two tests with your doctor to make sure everything is where it's supposed to be.

## 2. Hormones

- Ask for a full thyroid panel that includes TSH, Free T4, Free T3, Reverse T3 and TPO and/or thyroid antibodies.
- Cortisol - most conventional doctors will only test cortisol in the morning via blood. I highly recommend a diurnal cortisol test done via saliva because this is the most accurate way to test cortisol levels.
- Sex hormones: Estrogen (estradiol), Progesterone, Testosterone, DHEA-S.

## 3. Blood sugar

- I suggest testing your glucose levels, fasting insulin and Hemoglobin A1C, which provides an average of your blood sugar levels over the last 3 months.

## 4. Vitamins

- Vitamin D - so crucial for our hormonal and overall health.
- Folate/Folic Acid -
- B12 - most conventional ranges are about 200-900 pg/mL, but you really want your level to be above 800!

**If you are having trouble with fertility, PCOS or you have amenorrhea:** I recommend testing free, bioavailable and total testosterone, androstenedione, FSH, LH, pregnenolone, and prolactin in addition to the basic blood panel, hormone testing, blood sugar testing and vitamin testing.

**If you're overweight:** I recommend testing leptin, IGF-1, fasting insulin, and Hemoglobin A1C in addition to the basic blood panel, hormone testing, blood

sugar testing and vitamin testing. Just so you know, leptin is a hormone that plays a pivotal role in hunger and weight control. The right amount of leptin in your body will reduce appetite and over-eating. However, many people have high levels of leptin and it doesn't affect appetite. This is known as leptin resistance, where there are adequate levels of leptin but the body doesn't respond to it as it should.

**IGF-1 is Insulin-Like Growth Factor-1 and it helps promote bone and tissue growth.** IGF-1 may be ordered with other pituitary hormone tests, such as prolactin or FSH and LH, to help diagnose pituitary gland dysfunction and decreased pituitary hormones. It is usually elevated when there is a pituitary tumor. This might be the cause behind sporadic or missing periods.

**Hair loss and/or you have amenorrhea.** I recommend ferritin be tested. Ferritin is the Iron storage protein and is an early indicator of Iron deficiency. Iron deficiency is one of the most common reasons for hair loss in pre-menopausal women. It also contributes to lack of ovulation and poor egg health, potentially resulting in irregular periods or amenorrhea.

Many people have low levels of stomach acid, which is required to extract Iron from foods. When we have a lack of Iron, our body pulls it from hair, and conserves it for more vital processes.

**Fasting glucose:** Less than 87 mg/dL

**Fasting insulin:** Less than 7 micro-IUs/mL

**IGF-1:** Most ranges say 100-300 ng/mL but you should aim for the top half of that - 200-300ng/mL

**Hemoglobin A1C:**

Most ranges say less than 6% but optimally you should aim for less than 5.4%

**Ferritin:**

70 - 90 ng/mL especially if there is hair loss

**Optimal Leptin:**

4-6 mg/mL

**Prolactin:**

5 - 19 ng/mL. Levels closer to 30 can indicate a pituitary tumor

**Pregnenolone:**

90 - 100 ng/mL

**LH:**

2 - 4 IU/L on day 7 or 21 of your cycle

**FSH:**

3 -5 mIU/L on day 2-4 of your cycle. FSH higher than 28 = menopause

**If your doctor won't order these tests, you have a couple of options:**

1. You can find a new doctor who will listen to your concerns and test appropriately. Ultimately you are responsible for your health and you want to find someone who is going to support you in figuring out what's going on with your health.
2. Consider ordering a test kit and doing the testing on your own. You have a few labs to choose from:
  - Canaryclub.org - they sell tests from ZRT Labs. They offer some pretty comprehensive tests, which you can explore on their site. They are all saliva and blood spot tests which are very easy to do on your own and much more stable than vials of blood potentially sitting around all day in a lab. I recommend the Advanced Plus Profile or the Fertility Hormone Test Kit if you've been trying to get pregnant for more than 6 months.
  - Direct Labs.com - they offer a variety of tests. You can order kits online that will be mailed to you or other tests that require blood testing and then visit a lab near you for the testing. I especially recommend the Complete Hormone Kit from Genova Diagnostics that you can order through Direct Labs. It is a seriously comprehensive testing option that will tell you not only the levels of all your hormones but will give you info on your estrogen metabolism, in other words do you have a tendency towards breast cancer. Genova tests are also only available through a practitioner usually.

**ADDITIONAL TESTING:**

1. If you have fatigue, hair loss, weight gain, low sex drive and an underperforming thyroid, you could have heavy metal toxicity. I would recommend testing for mercury from Mercout.com as a start.

2. If you have conditions like: IBS, chemical sensitivity, migraines, Fibromyalgia, Chronic fatigue Syndrome or Multiple Sclerosis, cervical dysplasia, infertility or you've had more than one miscarriage then I highly recommend getting genetic testing through 23andme.com. Once you receive your test results, you can upload the report to geneticgenie.com to get them interpreted. The major gene mutations to look out for are MTHFR, COMT, CBS, VDR and MAO-A. These all play an integral role in our body's ability to utilize B vitamins, produce and use neurotransmitters and detoxify efficiently.
3. Nutreval by Genova Diagnostics - you can also do this test through Direct Labs and it is incredible! If you want to know your exact nutritional deficiencies then this is the test for you! I'm saving up for the test because it's \$950 but it's seriously so worth the practical information you'll get from it.
4. Omega 3/Omega 6 ratio by Genesmart - this will show your ratio of omega 3 to omega 6 levels which is very important because our modern diets are so omega 6 heavy which directly contributes to inflammation in our bodies. If you experience any kind of pain during your menstrual cycle like cramps or migraines, you have any condition caused by inflammation, or you don't currently consume omega 3-rich foods/supplements, then it's a good idea to do this test.

## **STOOL/DIGESTIVE HEALTH TESTING**

As discussed in the session on gut health, there are several underlying gut issues that can lead to a whole host of conditions. As such, I am in favor of comprehensive gut testing to figure out the root cause.

- The first test I recommend is the Genova Diagnostics Comprehensive Digestive Stool Analysis or CDSA. It is available on Direct Labs or through certain practitioners. The CDSA includes analyses of digestion, absorption, bacterial balance, and yeast. This gastrointestinal test profile is recommended for patients with diffuse and non-specific GI-related symptoms such as IBS, indigestion, dysbiosis, constipation, and diarrhea.
- In addition, I also recommend the GI Effects Gastrointestinal Function Comprehensive Profile, which is similar to the CDSA, but it focuses more on gut bacteria and identification of parasites.

## **GLUTEN SENSITIVITY TESTING**

People with gluten sensitivity (even severe) may not show up on traditional testing so it's important to get the right test. The Gold Standard for gluten testing is the Cyrex Panel Three. You'll have to refer to a functional medicine physician to get this test done. I recommend going to [thedr.com](http://thedr.com) to find a certified gluten practitioner to do this testing.