

Hormones Detox

Reset Your Hormones

Hormone Testing Checklist

Blood panel (serum)	Saliva Panel
<u>Complete Thyroid Panel</u> TSH Free T4 Free T3 Reverse T3 TPO Antibodies TGB Antibodies <u>Vitamins and minerals</u> Ferritin Vit D Vit B12 <u>Sugar levels</u> Glucose (fasting blood sugar) HA1C Insulin <u>Lipid Panel</u> Total Cholesterol LDL HDL Triglycerides	<u>Female Hormones</u> Estradiol (E2) Estrone (E1) Estriol (E3) Progesterone (Pg) Pg/E2 ratio Estrogen Quotient ($EQ = E3 / (E1 + E2)$) DHEA Testosterone <u>Stress Hormone</u> Cortisol – 4-point: am, mid-day, pm and night.

Hormones Detox

Reset Your Hormones

What is the difference between saliva and blood panel testing?

In functional medicine, the group of peptide hormones such as thyroid can be measured accurately by blood (aka serum) testing panels. Steroid hormones such as estrogen, progesterone and cortisol need to be measured by saliva (or urine) for accuracy. Steroid hormones in blood show “total” value which comprises of both bound and “free”. For meaningful diagnosis and treatment, we need to know the “free” part of the steroid hormones.

What is the significance of each hormone?

Estradiol – also known as E2, the “aggressive” estrogen highest in pre-menopausal women. When high, it causes “estrogen dominance.” It has been linked to breast cancer. Has to be tested by saliva (or urine) for accuracy. Blood is not a good indicator.

Progesterone – a key female hormone released by the ovaries, can be converted into cortisol. Low amount to progesterone can cause insomnia, anxiety, night sweats, irregular periods, PMS and infertility. Should also be tested by saliva or urine.

Pg/E2 ratio – a very important marker to establish the relationship between progesterone and estradiol to rule out estrogen dominance. The ratio should be 200 and above.

Estrogen quotient – shows the relationship between the three estrogens – estradiol (E2), the “aggressive” estrogen, estriol – the “protective” estrogen and estrone – the “weaker” estrogen. This is also a good estrogen dominance indicator which can be used for breast cancer prevention and management.

Cortisol – a stress and steroid hormone produced by the adrenal glands. It plays a role in metabolism, immune function, stress response and bone formation. Should also be tested by saliva or urine, not blood.

DHEA – one of the androgens, or “male hormones” which acts as a precursor to estrogen and testosterone production. Low levels in woman have been linked to low sex drive, poor wellbeing and aging.

TSH – Thyroid Stimulating Hormone is released by the pituitary gland. This is the most commonly used (but not the most indicative) marker of thyroid health. TSH increases when T4 drops as the pituitary gland tries to “wake up” the thyroid by releasing more TSH to stimulate T4 production. In hypothyroid cases, TSH is typically high. This is a good starting point of a diagnosis but should not be used as the only marker. Typical lab range is 0.5-5.0 mU/L whereby functional practitioners like to use 1-2 mU/L range.

Hormones Detox

Reset Your Hormones

Free T4 (FT4) – measures the amount of free thyroxine found in the blood. T4 is produced by the thyroid gland when it binds with iodine. It is largely an inactive hormone that gets converted to T3, which is the active hormone.

Free T3 (FT3) – measures free triiodothyroxine (Free T3) and is the best marker for measuring the amount of an active hormone available for our body cells to utilize.

Reverse T3 – this marker is elevated if a person went through a major trauma, surgery or severe chronic stress. When the body is under stress, instead of converting T4 to T3 (the active form of thyroid hormone), the body conserves energy by making what is known as Reverse T3 (rT3), an inactive form of the T3 hormone. A high rT3 will block T3 from entering the cells making all symptoms of hypothyroidism even worse.

TPO Antibodies – thyroid peroxidase antibodies are an excellent marker to indicate the inflammation level of the immune system. TPOs are elevated in 75% of Hashimoto's patients. They are often not tested by doctors as there is no medication they can prescribe to lower the antibodies.

TGB Antibodies – thyroglobulin antibodies are used for two reasons: to evaluate the effectiveness of treatment for thyroid cancer and to monitor for thyroid cancer recurrence. Secondly, they can show up high when a woman is taking birth control pills and/or has elevated estrogen levels.