



Hormone Replacement Therapy (HRT) Panel

MDL Test Number: 694, Tests Included: 18

Specimen Requirements

Specimen	Collection Platform	Stability	Turnaround Time
Serum	2 Serum Separator Tube (SST)	Room Temperature	24 – 72 hrs.

Special Handling and Timing

This panel is drawn into serum separator tubes, but several of its tests place requirements on how and when they are collected. taken.

- **Fasting is required:** This panel includes both vitamin B12 and folate, and the manufacturer requires a fasting sample when the two are measured together. Patients should take nothing but water for the period the ordering provider specifies.
- **The day of the cycle should be recorded.** Several hormones in this panel are interpreted against where the patient is in her cycle, and are best drawn in the first few days of it, counting the first day of bleeding as day 1. If periods are irregular or absent, the request should say so rather than leave a cycle day to be assumed.
- **A morning draw is preferred.** Testosterone is highest in the morning and falls throughout the day, and prolactin rises with sleep, stress, and the draw itself. The time of collection should be recorded on the request.

What is the HRT Panel?

Hormone replacement therapy is prescribed to relieve the symptoms of the menopausal transition and, in women with early ovarian failure, to replace what the ovaries are no longer producing. This panel is designed around the management of that treatment rather than around a diagnosis.

It measures the hormones that treatment is intended to change — estradiol, estriol, progesterone, and the androgens — together with the carrier protein that determines how much of each is actually available, which is important because oral estrogen raises it substantially and can alter the picture without any change in the dose.

Alongside these, the panel carries the measures that inform whether treatment is doing what it should and remains appropriate: thyroid function, iron and vitamin status, and the inflammatory and homocysteine markers relevant to cardiovascular risk.

Why order the HRT Panel?

It is commonly used to:

- Establish a baseline before hormone replacement therapy begins.

- Monitor a woman on treatment, particularly where symptoms persist despite it, or where absorption is in question with a patch, gel, or implant.
- Assess the androgen picture, which changes with treatment and is measured properly only as a free or calculated value because the carrier protein moves with estrogen.
- Identify the conditions that account for persisting symptoms when hormone levels look adequate, principally thyroid disease and iron, vitamin B12, folate, or vitamin D deficiency.
- Follow the metabolic and cardiovascular markers that hormone therapy and the menopausal transition both influence.
- Reassess when the treatment regimen changes, or when a decision about continuing it is being made.

Special Instructions:

- **Protection from light:** Vitamin B12 and folate break down on exposure to light, so the sample is protected from the moment it is drawn. This is handled by the laboratory and the draw site and needs nothing from the patient.
- **Hormonal contraception and hormone treatment:** Combined pills, patches, rings, hormonal intrauterine devices, and menopausal hormone therapy change several of these results. Current or recently stopped treatment, and what form it takes, should be listed on the request.
- **Biotin supplements:** Biotin is sold on its own and is present in many hair, skin, and nail products, often at high doses. Several tests in this panel can be affected. Folate, has a measured interference that pushes the result falsely high, and the most sensitive of the others was tested by its manufacturer only up to a level that a high-dose supplement can exceed. Patients should tell the ordering provider what they take and at what dose.
- **Recent supplements and infusions:** Iron tablets, iron infusions, vitamin B12 injections, and high-dose vitamin D taken shortly before the draw can all overstate the corresponding result. When these were last taken should be on the request.
- **Medicines and recent illness:** Steroids, some psychiatric medicines, iron and vitamin supplements, and any recent significant illness can affect these results. A current medication list should accompany the request. The manufacturer of the folate test directs that it not be used for patients currently receiving methotrexate.



Which tests are included in this panel?

Each test below is also available individually, and a separate fact sheet for each one gives its reference ranges, limitations, and the conditions it is used to assess.

Free testosterone and the free androgen index, where included, are calculated from the total testosterone and SHBG results already in this panel. They are not separately charged.

Test No.	Analyte	CPT Code	Method
610	Follicle-Stimulating Hormone (FSH)	83001	Immunoassay
611	Estradiol (E2)	82670	Immunoassay
612	Thyroid-Stimulating Hormone (TSH)	84443	Immunoassay
614	Luteinizing Hormone (LH)	83002	Immunoassay
619	Estriol, Unconjugated (uE3)	82677	Immunoassay
622	Testosterone, Total	84403	Immunoassay
630	Progesterone	84144	Immunoassay
631	DHEA-Sulfate (DHEA-S)	82627	Immunoassay
639	Sex Hormone-Binding Globulin (SHBG)	84270	Immunoassay
653	Anti-Müllerian Hormone (AMH)	82166	Immunoassay
655	Vitamin B12	82607	Immunoassay
656	Folate	82746	Immunoassay
657	Ferritin	82728	Immunoassay
659	Vitamin D, 25-OH	82306	Immunoassay
662	Homocysteine	83090	Immunoassay
663	C-Reactive Protein, High Sensitivity (hsCRP)	86141	Immunoassay
685	Free Testosterone	—	Calculated
696	Free Androgen Index (FAI)	—	Calculated

Limitations

Every laboratory panel has limits. For this one, the main ones are:

- There is no target hormone level in hormone replacement therapy for most women. Treatment is adjusted principally on symptoms, and results are used to support that judgment rather than to replace it.
- What is measured depends heavily on the preparation used and on when the last dose was taken. Patches, gels, tablets, and implants produce quite different profiles, and the request should record which is in use.
- Each result is a snapshot of one moment. Several of these hormones change substantially across the menstrual cycle and through the day, so a single set of results should be interpreted against when the sample was taken.
- Results are interpreted against the reference range printed on the report for each individual test. Those ranges differ by age and, for several of these tests, by where the patient is in her cycle.
- These results are one piece of a larger picture. They are meant to be read together with the patient's symptoms, medical history, and examination — never on their own.

What are some references that discuss the medical necessity of this panel?

1. The NAMS 2022 Hormone Therapy Position Statement Advisory Panel. The 2022 hormone therapy position statement of The North American Menopause Society. *Menopause* **29**, 767–794 (2022).
2. Panay, N. et al. Evidence-based guideline: premature ovarian insufficiency. *Hum. Reprod. Open* **2024**, hoae065 (2024).
3. Harlow, S. D. et al. Executive summary of the Stages of Reproductive Aging Workshop +10: addressing the unfinished agenda of staging reproductive aging. *J. Clin. Endocrinol. Metab.* **97**, 1159–1168 (2012).
4. Krassas, G. E. et al. Thyroid function and human reproductive health. *Endocr. Rev.* **31**, 702–755 (2010).
5. Devalia, V. et al. Guidelines for the diagnosis and treatment of cobalamin and folate disorders. *Br. J. Haematol.* **166**, 496–513 (2014).

