



Advanced Women's Hormone & Healthy Aging Panel

MDL Test Number: 691, Tests Included: 27

Specimen Requirements

Specimen	Collection Platform	Stability	Turnaround Time
Serum	2 Serum Separator Tube (SST)	Room Temperature	24 – 72 hrs.
Serum	1 Serum Separator Tube (SST)	Refrigerated	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.

- **One tube is refrigerated immediately.** Calcitonin is not stable at room temperature. The laboratory refrigerates one SST as soon as the specimens are received, which is why this panel should reach the laboratory without delay.
- **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.
- **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 Advanced Women's Hormone & Healthy Aging (AWHHA) Panel?

This panel is built for women past the menopausal transition, where the questions change. Reproductive hormones settle into a postmenopausal pattern and stop being the main issue; what matters instead is bone, thyroid function, nutrition, and the markers that describe cardiovascular and metabolic risk.

The panel covers thyroid function comprehensively, because thyroid disease becomes more common with age, and its symptoms (tiredness, weight change, low mood, constipation, cold intolerance) are easily attributed to ageing itself. It covers bone directly, with the formation marker, the hormone that regulates calcium, and vitamin D. And it covers the nutritional deficiencies that are common in later life and frequently missed: iron, vitamin B12, and folate.

The growth hormone markers and the thyroid tumour markers are included for the smaller number of women in whom those questions arise, and are interpreted only in that context.

Why order the AWHHA Panel?

It is commonly used to:

- Investigate tiredness, weight change, low mood, poor sleep, or cognitive change in an older woman, where several systems could be responsible, and aging should not be assumed to be the explanation.
- Assess thyroid function fully, including autoimmunity, in the age

group where thyroid disease is most common and least likely to be recognized from symptoms.

- Bone formation markers, parathyroid hormone and vitamin D, assess bone health in the population at highest risk of fracture.
- Identify nutritional deficiencies common in later life and readily corrected including iron, vitamin B12, folate, and vitamin D.
- Describe cardiovascular and metabolic risk with the inflammatory marker homocysteine.
- Establish a broad baseline, or reassess when a treated patient stops improving.

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.
- **Bone treatments must be listed:** Bisphosphonates, menopausal hormone therapy, raloxifene, and calcitonin all lower the bone formation marker in this panel, and that is a real effect on bone rather than an effect on the test. Current treatment, and when it started, should be on the request.
- **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
613	Thyroxine, Total (Total T4)	84436	Immunoassay
615	Triiodothyronine, Total (Total T3)	84480	Immunoassay
616	Triiodothyronine, Free (Free T3)	84481	Immunoassay
617	Thyroxine, Free (Free T4)	84439	Immunoassay
618	Parathyroid Hormone, Intact (PTH)	83970	Immunoassay
620	IGFBP-3	83520, 82397	Immunoassay
622	Testosterone, Total	84403	Immunoassay
623	Thyroglobulin	84432	Immunoassay
628	Calcitonin	82308	Immunoassay
631	DHEA-Sulfate (DHEA-S)	82627	Immunoassay
638	Anti-Thyroid Peroxidase Antibody (Anti-TPO)	86376	Immunoassay
639	Sex Hormone-Binding Globulin (SHBG)	84270	Immunoassay
652	Anti-Thyroglobulin Antibody (Anti-TG)	86800	Immunoassay
654	Prolactin	84146	Immunoassay
655	Vitamin B12	82607	Immunoassay
656	Folate	82746	Immunoassay
657	Ferritin	82728	Immunoassay
658	Ostase (Bone-Specific Alkaline Phosphatase)	84080	Immunoassay
659	Vitamin D, 25-OH	82306	Immunoassay
660	Insulin-like Growth Factor 1 (IGF-1)	84305	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:

- A broad panel describes several systems at once; it does not decide which of them is responsible. The pattern across the results, read against the symptoms, is what carries the meaning.
- Some results are expected to fall outside the printed range in a healthy person, particularly where the range assumes a cycle day or a time of day that does not apply. A flagged result is a prompt to look, not a finding on its own.
- Several tests in this panel are used only in specific circumstances — the thyroid tumor markers and the growth hormone markers in particular — and are interpreted only against the reason they were ordered. Outside that context, a mildly abnormal value is not a finding.
- 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. Jonklaas, J. et al. Guidelines for the treatment of hypothyroidism. *Thyroid* **24**, 1670–1751 (2014).
2. Haugen, B. R. et al. 2015 American Thyroid Association management guidelines for adult patients with thyroid nodules and differentiated thyroid cancer. *Thyroid* **26**, 1–133 (2016).
3. LeBoff, M. S. et al. The clinician's guide to prevention and treatment of osteoporosis. *Osteoporos. Int.* **33**, 2049–2102 (2022).
4. Demay, M. B. et al. Vitamin D for the prevention of disease: an Endocrine Society clinical practice guideline. *J. Clin. Endocrinol. Metab.* **109**, 1907–1947 (2024).
5. Devalia, V. et al. Guidelines for the diagnosis and treatment of cobalamin and folate disorders. *Br. J. Haematol.* **166**, 496–513 (2014).
6. Ridker, P. M. A test in context: high-sensitivity C-reactive protein. *J. Am. Coll. Cardiol.* **67**, 712–723 (2016).

