

Ferritin

MDL Test Number: 657

Methodology: Immunoassay

CPT Codes: 82728



Specimen Collection Platform:

Serum in Serum Separator Tube (SST)

Turnaround Time:

24 - 72 hours

Stability:

Room temperature

Test Additions*:

30 days to add tests

Specimen Collection:



1. Immediately after blood collection, invert the tube(s) gently 5 times to ensure mixing of clot activator.



2. Allow the tube to rest upright for at least 30 minutes after collection to ensure proper clotting.



3. Centrifuge for at least 15 minutes at 2200-2500 RPM within one hour of collection.



4. Do not remove the stopper or pour off serum.



What is Ferritin?

Ferritin is the protein that the body uses to store iron. Most of it sits inside cells in the liver, spleen, and bone marrow, holding iron in reserve for making red blood cells and keeping it from causing harm in the meantime. A small amount circulates in the blood, and that amount normally

tracks how much iron is held in storage. Measuring it is the closest a blood test comes to directly assessing the body's iron stores.

Ferritin behaves differently in women and men, which is why the two reference ranges look so different. In women, the level stays flat at roughly 35 to 40 ng/mL through the childbearing years, because monthly blood loss draws iron out at about the rate it comes in, and then climbs sharply after menopause. In men, it rises steadily from young adulthood into middle age. Ferritin is also an inflammation protein, a substance the body makes more of when it is fighting illness or injury, so infection, liver disease, and some cancers raise it, regardless of whatever the iron stores are doing.

Why test for Ferritin?

Ferritin is measured when the question is how much iron the body is holding in reserve, whether too little or too much. It is commonly ordered to:

- **Diagnose iron deficiency**, including the early stage where reserves are falling, but the blood count is still normal, and anemia has not yet appeared.
- **Separate iron deficiency anemia from anemia with a different cause**, which changes the treatment entirely.
- **Work up heavy or prolonged menstrual periods**, which are among the most common reasons for iron loss in women and are often caused by fibroids or adenomyosis.
- **Follow iron stores through pregnancy**, when demand rises steeply, and reserves can fall well before a woman feels anything.
- **Check whether iron replacement is working** and help decide when it can stop.
- **Look for a build-up of too much iron**, including in people who receive blood transfusions regularly.



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Special Instructions:

- **Recent or current illness:** Ferritin rises with infection, injury, and inflammation, and stays up for a while afterward. Any recent illness, flare-up of a long-term condition, or surgery should be noted on the request, because it can lift a result into the normal range even when iron stores are genuinely low.
- **Biotin supplements:** Biotin is sold on its own and is present in many hair, skin, and nail products. At high levels, it can change the result of this test. Patients should tell the ordering provider what they take and at what dose, so the provider can decide whether the timing of the draw needs to change.
- **Iron treatment and treatments that reduce bleeding:** Iron tablets, iron infusions, and blood transfusions all raise ferritin, and a sample drawn soon after one of them can overstate the reserves. Treatments that reduce menstrual blood loss, such as hormonal contraception or a hormonal intrauterine device, also raise ferritin over time. Current and recent treatment should be listed on the request.
- **Comparing results over time:** Different laboratories and different methods can give slightly different results on the same sample. Repeat testing should be done at the same laboratory whenever possible.

Limitations:

Every laboratory test has limits. For ferritin, the main ones are:

- Illness raises ferritin regardless of whatever the iron stores are doing. In someone with an infection, an inflammatory condition, liver disease, or a cancer, a normal or high result does not rule out low iron, and the level at which reserves count as depleted has to be judged higher than usual.
- A low result shows that reserves are low, but not why they are low. Blood loss, poor absorption, and low intake all produce the same number, and finding the cause takes the history and other tests.
- This test uses an enzyme called alkaline phosphatase to produce its signal. The manufacturer states that asfotase alfa (Strensiq), a medicine that is itself a manufactured form of that enzyme, is expected to interfere, and directs that samples from patients taking it be tested by a method that does not rely on alkaline phosphatase.
- Rarely, antibodies that some people carry after routine contact with animals or animal products can interfere with tests built this way and produce a result that does not fit the clinical picture.
- A ferritin result is one piece of a larger picture. It is meant to be read together with the patient's symptoms, medical history, and other test results — never on its own.

Reference Range(s):

Ferritin is reported in nanograms per milliliter (ng/mL). The manufacturer publishes one range for adult women and one for adult men, and the two differ widely because of menstrual iron loss. Both were measured in healthy blood donors rather than in the general population, and the bottom of the female range sits below the level at which iron reserves are usually judged to be depleted. A result inside the range is therefore not by itself evidence that iron stores are adequate.

- **Adult females: 5 – 148 ng/mL**
- **Adult males: 28 – 365 ng/mL**

A result outside these ranges is not automatically a problem, and a result inside them does not rule one out. Only the ordering provider can interpret what a given number means for a given patient. Patients should always go by the reference range printed on their own laboratory report.

Analyte	Disorder	Expected Value*
Ferritin	Iron deficiency	↓↓
Ferritin	Celiac disease	↓
Ferritin	Heavy menstrual bleeding	↓
Ferritin	Acute infection or inflammation	↑
Ferritin	Chronic liver disease	↑

*↑ – Increased ↓ – Decreased ↓↓ – Markedly Decreased.

What are some references that discuss the medical necessity of testing Ferritin?

1. World Health Organization. WHO Guideline on Use of Ferritin Concentrations to Assess Iron Status in Individuals and Populations (World Health Organization, Geneva, 2020).
2. Camaschella, C. Iron deficiency. *Blood*, **133**, 30–39 (2019).
3. Rubio-Tapia, A. et al. American College of Gastroenterology guidelines update: diagnosis and management of celiac disease. *Am J Gastroenterol*, **118**, 59–76 (2023).
4. Munro, M. G. et al. The two FIGO systems for normal and abnormal uterine bleeding symptoms and classification of causes of abnormal uterine bleeding in the reproductive years: 2018 revisions. *Int J Gynaecol Obstet*, **143**, 393–408 (2018).
5. Achebe, M. M. & Gafter-Gvili, A. How I treat anemia in pregnancy: iron, cobalamin, and folate. *Blood*, **129**, 940–949 (2017).
6. Kowdley, K. V. et al. ACG Clinical Guideline: Hereditary Hemochromatosis. *Am J Gastroenterol*, **114**, 1202–1218 (2019).



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