TEST

Ferritin blood test

A ferritin blood test estimates how much iron your body has stored.

WHAT IT MEASURES
Ferritin, a protein that stores iron in the body

SAMPLE
Blood from a vein

FASTING NEEDED?
No, unless other blood tests require it

HOW LONG IT TAKES
Usually less than 10 minutes

RESULTS IN
Often within one day; laboratory turnaround differs

USED FOR
Detecting iron deficiency and investigating iron overload

MAIN LIMITATION
Inflammation can raise ferritin despite low iron stores

Overview

A ferritin blood test helps estimate your body's iron stores. Ferritin is a protein that holds iron inside cells and releases it when needed. A small amount circulates in the blood and can be measured.

Iron is needed to make haemoglobin, the protein in red blood cells that carries oxygen. Ferritin may fall before haemoglobin does, allowing depleted iron stores to be detected before iron-deficiency anaemia develops.

Ferritin can also be high. This may reflect excess iron, but infection, inflammation, liver injury, kidney disease and other long-term conditions can also raise it. The result must therefore be interpreted with your symptoms, health history and other tests.

Why the test is ordered

A ferritin test may be ordered if iron deficiency is suspected. Possible reasons include tiredness, weakness, reduced exercise tolerance, headaches, restless legs, hair loss or

changes on a full blood count. These symptoms can have many causes.

Testing may also be considered when blood loss or increased iron needs are possible, such as with heavy menstrual bleeding, pregnancy, frequent blood donation, digestive tract bleeding or difficulty absorbing nutrients.

A ferritin test can help investigate:

Ferritin may be checked repeatedly during treatment. Trends are often more useful than one result.

- Anaemia or unusual red blood cell results
- Suspected iron deficiency before anaemia develops
- Possible iron overload
- Liver disease or unexplained inflammation
- Response to iron replacement or treatment for iron overload

Who should have the test

You may be offered testing if your symptoms, history or other results suggest an iron problem. It is not automatically needed for everyone with tiredness.

Testing may be particularly relevant if you have ongoing blood loss, restricted dietary iron intake, a stomach or bowel condition, chronic kidney disease, heavy periods, pregnancy or a history of repeated blood transfusions.

People with a family history of hereditary haemochromatosis may also be tested. This inherited condition can cause excessive iron absorption, but ferritin alone cannot diagnose it.

How to prepare

You usually do not need to fast. You can normally eat, drink water and take prescribed medicines as usual.

However, ferritin is often ordered with tests that have different instructions. A clinician or laboratory may request a morning or fasting sample for serum iron and transferrin saturation. Follow the instructions on your test request.

Tell the person arranging the test about:

Do not stop prescribed medicines or iron treatment unless specifically told to do so.

- Iron tablets, liquid iron or recent intravenous iron
- Vitamins or supplements, especially high-dose biotin
- Recent infection, surgery or significant inflammation
- Recent blood donation or transfusion
- Pregnancy

What happens during the test

A healthcare professional places a band around your upper arm and cleans the skin. A needle is inserted into a vein, usually inside the elbow, and blood is collected into a tube.

You may feel a brief scratch or sting. The needle is removed and pressure applied. The blood draw usually takes only a few minutes.

Understanding your results

Ferritin is commonly reported in micrograms per litre (µg/L) or nanograms per millilitre (ng/mL). These units have the same numerical value.

There is no single reference range for everyone. Interpretation varies by laboratory, age, sex, pregnancy status, medicines and clinical context. Use the range on your laboratory report.

Low ferritin usually indicates depleted iron stores and can support a diagnosis of iron deficiency, even before anaemia develops. Further assessment may be needed to look for blood loss, increased iron needs, low intake or poor absorption.

A result within the laboratory range does not always rule out iron deficiency because inflammation can raise ferritin and hide low stores.

High ferritin does not automatically mean iron overload. Possible causes include inflammation, infection, liver disease, regular heavy alcohol use, kidney disease and metabolic conditions. Transferrin saturation and other findings help determine whether iron overload is likely.

What affects the results

Ferritin is an "acute-phase" protein, meaning it can rise during illness or tissue injury even when stored iron has not increased.

Important influences include:

These influences do not necessarily indicate a laboratory error; the result must be interpreted in context.

- Infection or inflammation: May temporarily raise ferritin and mask deficiency.
- Liver injury: Can release ferritin from damaged liver cells.
- Kidney disease: Inflammation and altered iron handling complicate interpretation.
- Pregnancy: Increased blood volume and iron requirements change expected results.
- Age, sex and menstrual blood loss: Iron stores vary across life stages.
- Iron treatment: Oral or intravenous iron can raise ferritin; intravenous iron may cause a marked temporary rise.
- Blood transfusion: Recent or repeated transfusions add iron.
- Strenuous exercise: Can cause short-term changes affecting ferritin.
- Alcohol use: Regular heavy intake may raise ferritin, especially with liver injury.
- Laboratory methods: Results can vary slightly. Rarely, antibodies or high-dose biotin interfere with some assays.

Accuracy and limitations

Clearly low ferritin is strong evidence of depleted iron stores. However, infection, inflammation, liver disease or kidney disease can push ferritin upward and conceal iron deficiency.

High ferritin is not reliable proof of iron overload. Many raised results are caused by inflammation or liver-related conditions. Ferritin also cannot identify why iron is low.

Other tests may include a full blood count, transferrin saturation, C-reactive protein, liver tests and kidney tests. Selected cases may require genetic testing, imaging or specialist assessment. A bone marrow test can assess stored iron directly but is invasive and rarely needed for this purpose.

Risks and complications

The risks are those of a routine blood draw. You may have brief discomfort, a small bruise or feel light-headed. Serious complications are uncommon.

What happens next

A result within the expected range may need no action, although further review may be appropriate if symptoms continue. Unexpected results are usually discussed through a routine appointment or message.

If ferritin is low, your clinician may check for anaemia and investigate iron loss or increased requirements. Treatment should be tailored to the cause and your circumstances.

If ferritin is high, repeating the test after an illness has settled may help. Other tests can distinguish between inflammation, liver disease and possible iron overload.

A ferritin result alone is rarely an emergency. Seek urgent medical help for severe difficulty breathing, chest pain, fainting, uncontrolled bleeding, vomiting blood or black tar-like stools rather than waiting for routine review.

Common questions

Can I drink coffee before a ferritin test?

Usually, yes. If other fasting tests were ordered, follow the laboratory's instructions.

Does the time of day matter?

Ferritin itself does not usually require a particular time. Combined iron studies may be scheduled in the morning because serum iron varies during the day.

Can I exercise before the test?

Ordinary activity is unlikely to matter. Avoid unusually strenuous exercise beforehand if possible, especially when rechecking an unexplained high result.

Should I stop taking iron supplements?

Do not stop prescribed iron unless instructed. Report what you take, the dose and when you last took it.

Can I have the test during my period?

Yes. Mention heavy menstrual bleeding because it can gradually reduce iron stores.

Should I wait until I recover from an infection?

Infection can temporarily raise ferritin. If testing is not urgent, the person arranging it may recommend waiting until you recover or checking an inflammation marker.

Sources

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