

Background

Ferritin is an intracellular protein that stores iron and releases it in a controlled fashion. It is found in most tissues, but small amounts are secreted into the serum where it functions as an iron carrier. Plasma ferritin is an indirect marker of the total amount of iron stored in the body.

Serum ferritin is used as a diagnostic test for iron-deficiency anaemia and along with Iron studies as a screening test for haemochromatosis.

It should be noted it also behaves as an acute phase protein and can go up with any pro-inflammatory process as well as kidney disease, liver disease and malignancy.

When to test

- Suspected Iron Deficiency Anaemia is the main reason for testing in Primary Care,
- Microcytic Anaemia
- Non-anaemic Pregnant women identified as at risk of iron deficiency
- Poor diet/ intra-parenteral feeding,
- Malabsorption syndromes,
- Dialysis/ Chronic kidney disease, Erythropoiesis-stimulating agents (ESAs) (Usually secondary care)
- Investigation for possible Haemochromatosis
- Haemoglobinopathy where risk of iron loading (usually secondary care)

When not to test

- Repeat testing within 4 weeks of a result.

When to repeat a test

- To assess response to iron replacement in conjunction with Full Blood Count. Typically after 3 months of replacement.
- Worsening symptoms with previous borderline result.
- Monitoring for specific patient groups such as Haemochromatosis patients, Haemoglobinopathy patients at risk of iron loading and dialysis patients would usually be undertaken by the relevant secondary care team.

References and Further Reading

- British Society of Gastroenterology guidelines for the management of iron deficiency anaemia in adults. Snook J, et al. Gut 2021;0:1–22.

- Guideline for the laboratory diagnosis of iron deficiency in adults (excluding pregnancy) and children. Fletcher A, et al. British Journal of Haematology, 2022,196,523–529
- UK guidelines on the management of iron deficiency in pregnancy. Pavord, S et al. British Journal of Haematology, 2020,188,819–830

Editorial Box

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