

# Hemoglobin



## Does this test have other names?

Hb, Hgb, H and H, Hemoglobin and hematocrit

## What is this test?

This is a blood test to find out how much hemoglobin is in your blood. Hemoglobin is the main part of your red blood cells. Hemoglobin is made up of a protein called globin and a compound called heme. Heme consists of iron and a pigment called porphyrin, which gives your blood its red color.

Hemoglobin serves the important role of carrying oxygen and carbon dioxide through your blood. Hemoglobin is carried by your red blood cells. If your hemoglobin is too low, you may not be able to supply the other cells in your body with the oxygen they need to survive.

## Why do I need this test?

You may need this test if it is part of routine blood testing. You may also need to have your hemoglobin checked if you have anemia or symptoms of anemia. Anemia can be caused by blood loss, decreased production of red blood cells, or increased destruction of red blood cells. Your healthcare provider can use your hemoglobin test to help find the cause of your anemia. These are other reasons you may need this test:

- To diagnose a disease that causes anemia
- To see how severe your anemia is
- To see whether your anemia is responding to treatment
- To evaluate a disease called polycythemia

Symptoms of anemia may include:

- Shortness of breath
- Dizziness
- Fatigue
- Headache
- Cold, pale skin
- Chest pain

Polycythemia is a disease that causes your body to make too many red blood cells. Polycythemia may cause:

- Heart attack
- Stroke
- Headache
- Blurred vision
- Dizziness

- Weakness
- Excessive sweating
- Itching

## What other tests might I have along with this test?

Hemoglobin is usually tested as part of a complete blood count, or CBC. A CBC is a blood test that counts all the different cells in your blood. A hemoglobin test may also be paired with a hematocrit test. When the two are tested together it is often called an H and H. The hematocrit blood test tells what percent of your blood is made up by red blood cells.

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

Hemoglobin measurement is given in grams per deciliter (g/dL). Normal hemoglobin is different for men, women, and children. Here are the approximate normal values:

- 12 to 16 g/dL for women
- 14 to 17.4 g/dL for men
- 9.5 to 24.5 g/dL for children, depending on the child's age. If your child is having this test, you should discuss the results with your child's healthcare provider.

High hemoglobin levels can be caused by polycythemia, heart failure, and chronic obstructive pulmonary disease. Low hemoglobin may be caused by:

- Anemia
- Iron deficiency
- Liver disease
- Cancer and other diseases
- Hypothyroidism

## How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

## Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

## What might affect my test results?

Your hemoglobin may be affected by several things:

- Living at high altitudes may make hemoglobin go up.
- Certain medicines can make hemoglobin go down or up.

- An extreme amount of exercise can make hemoglobin go up.
- Pregnancy may make hemoglobin go down.
- Taking in too much fluid can make hemoglobin go down.

## How do I get ready for this test?

You don't need to prepare for this test. Make sure to tell your healthcare provider about:

- Any chance you are pregnant
- Any extreme exercising you have been doing

Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

© 2000-2027 The StayWell Company, LLC. All rights reserved. This information is not intended as a substitute for professional medical care. Always follow your healthcare professional's instructions. This information is not intended as a substitute for professional medical care. Always follow your Healthcare professional's instructions. Copyright Krames LLC.