

# Complete Blood Count with Differential



## Does this test have other names?

CBC w/ diff

## What is this test?

This panel of tests looks for many illnesses in your blood. These include anemia, infections, and leukemia. It can help see how your overall health is.

The test gets a lot of information from your blood sample:

- **The number and types of white blood cells (WBCs).** Your body has 5 types of white blood cells. All play a role in fighting infections. High numbers of WBCs, or of a specific type of WBC, may mean you have an infection or inflammation somewhere in your body. Low numbers of WBCs may mean you are at risk for infections.
- **The number of red blood cells (RBCs).** RBCs carry oxygen throughout the body and remove excess carbon dioxide. Too few RBCs may be a sign of anemia or other diseases. In rare cases, too many may cause problems with blood flow.
- **How the size of your red blood cells varies.** This test is known as red cell distribution width (RDW, RDW-CV, or RDW-SD). For instance, you may have greater differences in red blood cell size if you have anemia.
- **Hematocrit (HCT).** This means the portion of red blood cells in a certain amount of whole blood. A low hematocrit may be a sign of too much bleeding. Or it might mean that you have an iron deficiency or other disorders. A higher than normal hematocrit can be caused by dehydration or other disorders.
- **Hemoglobin (Hgb, Hb).** Hemoglobin is a protein in red blood cells. It carries oxygen from your lungs to the rest of the body. Abnormalities can be a sign of problems ranging from anemia to lung disease.
- **The average size of your red blood cells.** This test is known as mean corpuscular volume (MCV). MCV goes up when your red blood cells are bigger than normal. This happens if you have anemia caused by low vitamin B-12 or folate levels. If your red blood cells are smaller, this can mean other types of anemia, such as iron deficiency anemia.
- **A platelet (PLT) count.** Platelets are cell fragments that play a role in blood clotting. Too few platelets may mean you have a higher risk of bleeding. Too many may mean a number of possible conditions.
- **Mean corpuscular hemoglobin (MCH).** This test measures how much hemoglobin your red blood cells have.

## Why do I need this test?

You may need this test if your healthcare provider thinks you have a blood disorder. You may need this test if you have:

- Unusual bleeding or bruising
- Infection or inflammation
- Weakness and tiredness that doesn't go away. These may be symptoms of anemia.

You may also have this test if your healthcare provider thinks you may have a certain disease or condition. Or you may have this test as part of a routine exam to check your health. The test may also be used to see how

well certain treatments are working.

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

Your healthcare provider may also order other tests if your results for this test are abnormal. These may include other blood tests, urine tests, and bone marrow or spinal fluid tests.

## 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.

Normal ranges for the different parts of a CBC are:

- Red blood cells (RBC): 3.8 to 5.69 million per cubic millimeter (million/mm<sup>3</sup>)
- Red blood cell distribution width (RDW, RDW-CV, RDW-SD): 11.4% to 13.5%
- White blood cells (WBC): 3.8 to 10.4 thousand per cubic millimeter (thousand/mm<sup>3</sup>)
- Platelets (PLT): 152 to 361 thousand/mm<sup>3</sup>
- Hemoglobin (Hb or Hgb): 11.9 to 14.8 grams per deciliter (g/dL) in women, 13.6 to 16.9 in men
- Hematocrit (HCT): 35% to 43% in women, 40% to 50% in men

## 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?

Certain medicines might affect your results, so talk with your healthcare provider about the medicines you are taking.

## How do I get ready for this test?

You don't need to prepare for this test. 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 illicit drugs you may use.

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