Your Test: Blood Cell Count

Blood is made up of red blood cells, white blood cells, platelets, and plasma, which is the fluid that carries blood cells.

A blood cell count finds the type and numbers of cells in your blood. A blood count can give your doctor important information about your health.

White blood cell (WBC) count
If you have an infection, white blood cells attack and destroy the bacteria or virus causing it. White blood cells are bigger than red blood cells, and you normally have fewer of them. When you have an infection, the number of white cells can increase. Your doctor may use the number of white blood cells you have to help identify an infection or see how your body reacts to cancer treatment.

There are several types of white blood cells. Each plays a different role in protecting the body. By looking at the numbers of each type of cell, your doctor can tell how well your immune system is working. This can help identify infection, a reaction to certain medicines or chemicals, or an illness such as leukemia.

Red blood cell (RBC) count
Red blood cells carry oxygen from the lungs to the rest of the body. They also carry carbon dioxide back to the lungs so you can breathe it out. If your RBC count is low (which is called anemia), your body may not be getting the oxygen it needs. If the count is too high (a condition called polycythemia), there is a risk that your red blood cells will clump together and block tiny blood vessels.

Two other RBC tests, hematocrit and hemoglobin, can also help show if you have anemia or polycythemia.

Hematocrit (HCT, packed cell volume, PCV)
This test measures the amount of space (volume) that red blood cells take up in your blood. The value is given as a percentage. For example, a hematocrit of 38 means that 38% of your blood’s volume is made up of red blood cells. The rest is mostly plasma.

Hemoglobin (Hgb)
Red blood cells are mostly made of hemoglobin. It carries oxygen and gives your blood its red color. The hemoglobin test measures the amount of hemoglobin in your blood. It can show how well your blood can carry oxygen throughout your body.

Platelet (thrombocyte) count
Platelets (thrombocytes) are the smallest type of blood cell. They help your blood clot. When you bleed, your platelets swell, clump together, and form a sticky plug that helps stop the
bleeding. If there are too few platelets, you may have trouble stopping the bleeding. If you have too many platelets, you may have an increased risk of forming a blood clot.

**Blood smear**

In this test, a drop of blood is spread (smeared) on a slide and stained with a special dye. The slide is then examined under a microscope. The test shows the number, size, and shape of red blood cells, white blood cells, and platelets. Blood cells with unusual shapes or sizes can help diagnose many blood diseases, such as leukemia, malaria, or sickle cell anemia.

*Do you have any questions or concerns after reading this information?* It's a good idea to write them down and take them to your next doctor visit.