



Blood Collection (Venipuncture)

A Patient's Guide to Blood Collection

What to expect and how to prepare for your exam

Why do I need a blood test?

The results of blood tests may give your doctor important clues about your health. Specifically, blood tests can help doctors.

- Evaluate how well your organs are working
- Diagnose diseases and conditions
- Find out whether you have risk factors for heart disease
- Check whether medicines you are taking are working
- Assess how well your blood is clotting

A few types of blood tests:

- **A complete blood count (CBC)** is one of the most common blood tests. A CBC measures several different parts of your blood, including the number of red blood cells (cells that carry oxygen from your lungs to the rest of your body), hemoglobin (the protein that transports oxygen), white blood cells (cells that fight infections and diseases), and platelets (blood cell fragments that help your blood clot). Another part of a CBC is the mean corpuscular volume, which is a measure of the average size of your red blood cells. A CBC is usually done as part of a routine checkup and can help detect a number of blood disorders (such as anemia), infections, clotting problems, blood cancers, and immune system problems.
- **Troponin tests** measure the amount of troponin (a type of protein that affects how heart muscle contracts) in the blood. If the levels of troponin in the blood (troponin T or troponin I) are high, the heart muscle was most likely injured. The amount of troponin released into the blood correlates with the degree of damage to the heart muscle.
- **Arterial blood gas studies** measure how well the blood is being oxygenated in the lungs.



- **A lipoprotein (cholesterol) profile** measures how much fat or lipid is in the blood, such as LDL, HDL, and triglycerides. LDL (“bad” cholesterol) is the main source of cholesterol buildup and blockages in the arteries.
- **Blood cultures** can be used to determine if microorganisms (such as the bacteria that causes endocarditis) are present in the body’s system. After the blood is drawn, it is placed on a culture for any bacteria that may be in the blood to grow. The bacteria is then analyzed to determine what type it is and what medicines can be used to kill it.
- **Blood clotting tests** measure the blood’s ability to clot. Clotting stops the blood from flowing out of the body when a vein or artery is broken.

How is blood collection performed?

During blood collection, a small sample of blood is drawn from your body and transferred to a vial or tube. Most of the time, a needle is used to draw blood from a vein located on the inside of the elbow. Blood collection usually takes less than 3 minutes.

Steps for blood collection from a vein:

- The site is cleaned with germ-killing medicine (antiseptic).
- An elastic band is put around the upper arm to apply pressure to the area. This causes the vein below it swell with blood.
- A needle is inserted into the vein, and the blood collects into an airtight vial or tube attached to the needle.
- The elastic band is removed from your arm, and the needle is taken out. The spot is covered with a bandage to stop the bleeding.
- Most of the time, you can remove the pressure after a minute or two. You may want to keep a bandage on for a few hours.

You may feel a slight sting when the needle goes in or comes out. If you are nervous or scared, it can help to look away or talk to someone to distract yourself.



How do I prepare for blood collection?

Before you have your blood drawn, your doctor will give you any special instructions that you need to follow. For example, some blood tests require that you stop taking any medicines or fast beforehand (no eating or drinking anything but water for a certain amount of time). Do not stop or change your medicines without talking to your doctor first. If you do not have any special instructions, there are still some steps you can take to try to make the process easier:

- Drink plenty of water before your appointment. When you are hydrated, your blood volume goes up, and your veins are plumper and easier to access.
- Wear a short-sleeved shirt or layers. This makes accessing your veins easier. You may wish to mention if you have a preferred arm for your blood to be drawn from. This could be your nondominant arm or an area where you know a person taking your blood has had success before.

What happens after my blood is collected?

Results can take anywhere from a few hours to a few weeks to come back. Your doctor will contact you or schedule a follow-up office visit to review your test results.

Additional Resources

Medline Plus Encyclopedia – Venipuncture

NHLBI, NIH – Blood tests