



Serology

Serology is a blood test to detect the presence of [antibodies](#) against a microorganism. Certain microorganisms stimulate the body to produce antibodies during an active infection.

How the Test is Performed

Blood is drawn from a vein, usually from the inside of the elbow or the back of the hand. The site is cleaned with germ-killing medicine (antiseptic). The health care provider wraps an elastic band around the upper arm to apply pressure to the area and make the vein swell with blood.

Next, the health care provider gently inserts a needle into the vein. The blood collects into an airtight vial or tube attached to the needle. The elastic band is removed from your arm.

Once the blood has been collected, the needle is removed, and the puncture site is covered to stop any bleeding.

In infants or young children, a sharp tool called a lancet may be used to puncture the skin and make it bleed. The blood collects into a small glass tube called a pipette, or onto a slide or test strip. A bandage may be placed over the area if there is any bleeding.

The blood is then analyzed in a laboratory to determine how certain antibodies react with specific antigens. The test can be used to confirm the identity of the specific microorganism.

There are several serology techniques that can be used depending on the suspected antibodies. Serology techniques include agglutination, precipitation, complement-fixation, fluorescent antibodies, and others.

How to Prepare for the Test

There is no special preparation.

How the Test Will Feel

When the needle is inserted to draw blood, some people feel moderate pain, while others feel only a prick or stinging sensation. Afterward, there may be some throbbing.

Why the Test is Performed

A serology test can determine if you have ever been exposed to a particular microorganism, but this does not necessarily indicate a current infection.

Normal Results

Normally, no antibodies are found in the blood sample.

Note: Normal value ranges may vary slightly among different laboratories. Talk to your doctor about the meaning of your specific test results.

What Abnormal Results Mean

Detection of antibodies can be used to either diagnose an active or previous infection, or to determine if you are immune to reinfection by an organism. As the disease gets worse, more antibodies will be present. If a disease is suspected, the test may need to be repeated 10 days to 2 weeks after the first test.

If antibodies are found, you may:

- Have a current infection
- Have been infected in the past
- Have immunity to a certain organism and are unlikely to become sick

Some of the different diseases that can be detected include:

- [Amebiasis](#)
- [Anthrax](#)
- [Brucellosis](#)
- Human immunodeficiency virus (HIV)
- Fungal infection
- [Measles](#)
- [Rubella](#)
- [RSV](#)
- [Syphilis](#)
- [Tularemia](#)
- Viral hepatitis (various types)

Additional conditions under which the test may be performed:

- [Amebic liver abscess](#)
- [Fifth disease](#)
- [Fungal arthritis](#)
- [Meningitis, cryptococcal](#)

- [Meningitis, H. influenza](#)
- [Meningitis, meningococcal](#)
- [Viral arthritis](#)

Risks

Veins and arteries vary in size from one patient to another and from one side of the body to the other. Obtaining a blood sample from some people may be more difficult than from others.

Other risks associated with having blood drawn are slight but may include:

- Excessive bleeding
- Fainting or feeling light-headed
- Hematoma (blood accumulating under the skin)
- Infection (a slight risk any time the skin is broken)