Immunoglobulins

An immunoglobulins test is done to measure the level of immunoglobulins, also known as antibodies, in your blood.

Antibodies are substances made by the body's immune system in response to bacteria, viruses, fungus, animal dander, or cancer cells. Antibodies attach to the foreign substances so the immune system can destroy them.

Antibodies are specific to each type of foreign substance. For example, antibodies made in response to a tuberculosis infection attach only to tuberculosis bacteria. Antibodies also work in allergic reactions. Occasionally antibodies may be made against your own tissues. This is called an autoimmune disease.

If your immune system makes low levels of antibodies, you may have a higher chance of developing repeated infections. You can be born with an immune system that makes low levels of antibodies, or your system may make low levels of antibodies in response to certain diseases, such as cancer.

The five major types of antibodies are:

- **IgA.** IgA antibodies are found in areas of the body such the nose, breathing passages, digestive tract, ears, eyes, and vagina. IgA antibodies protect body surfaces that are exposed to outside foreign substances. This type of antibody is also found in saliva and tears. About 10% to 15% of the antibodies present in the body are IgA antibodies. A small number of people do not make IgA antibodies.
- **IgG.** IgG antibodies are found in all body fluids. They are the smallest but most common antibody (75% to 80%) of all the antibodies in the body. IgG antibodies are very important in fighting bacterial and viral infections. IgG antibodies are the only type of antibody that can cross the placenta in a pregnant woman to help protect her baby (fetus).
- **IgM.** IgM antibodies are the largest antibody. They are found in blood and lymph fluid and are the first type of antibody made in response to an infection. They also cause other immune system cells to destroy foreign substances. IgM antibodies are about 5% to 10% of all the antibodies in the body.
- **IgE.** IgE antibodies are found in the lungs, skin, and mucous membranes. They cause the body to react against foreign substances such as pollen, fungus spores, and animal dander. They may occur in allergic reactions to milk, some medicines, and some poisons. IgE antibody levels are often high in people with allergies.
- **IgD.** IgD antibodies are found in small amounts in the tissues that line the belly or chest. How they work is not clear.

The levels of each type of antibody can give your doctor information about the cause of a medical problem.

Why It Is Done

A test for immunoglobulins (antibodies) in the blood is done to:

- Find certain autoimmune diseases or allergies.
- Find certain types of cancer (such as multiple myeloma or macroglobulinemia).
- See whether recurring infections are caused by a low level of immunoglobulins (especially IgG).
- Check the treatment for certain types of cancer affecting the bone marrow.
- Check the treatment for Helicobacter pylori (*H. pylori*) bacteria.
- Check the response to immunizations to see whether you are immune to the disease.