The Importance of Blood Testing and What Those Tests Tell You

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Routine blood tests provide your doctor with clues as to how your body is working. The importance of blood testing is that the tests can help diagnose a plethora of health issues.

When you go to the doctor for routine physical exams, your doctor usually sends you to the lab for blood work. This may be an inconvenience, but the importance of blood testing can't be overstated. Your blood provides clues to how your body is working and can be the first indication of a problem.

Types of Blood Work

Not all blood tests are the same or even looking for similar things. Here are some types of blood tests, according to the National Heart, Lung, and Blood Institute, and what they might indicate:

- Complete Blood Count (CBC): This measures your number of red and white blood cells, in addition to your hemoglobin, hematocrit and other important blood values. Numbers outside the normal range can indicate infection, an immune system disorder, anemia and cancer.
- Lipoprotein: This test is used to measure your cholesterol levels or the fats in your blood. They're broken down into HDL (the good cholesterol), LDL (the bad cholesterol) and triglycerides. The results help determine if you're at increased risk for cardiovascular disease.

- **Blood Glucose**: If you're asked to fast for 9 to 12 hours before the blood test, that's partly because your doctor wants to see your blood glucose levels. (Fasting is also sometimes requested for lipoprotein measurement.) With blood glucose, your doctor is looking for signs of diabetes or prediabetes.
- Metabolic Panel: Results from a metabolic panel indicate if there are potential issues with muscles like your heart, kidney or liver function and even your bones. There are also separate blood tests that look for kidney function, like blood urea nitrogen (BUN) and creatinine levels.
- Clotting Factor: If you have certain medical issues or you're taking blood thinners, this test is frequently used to make sure your blood is clotting properly. If the number is out of range, either more testing is needed or your dosing of medication may be changed. It's important to have a normal clotting factor to avoid excessive blood loss.

How Does a Blood Test Indicate Possible Cancer?

For most cancers, blood tests aren't diagnostic, though they provide helpful clues about how your body is working. To diagnose hematologic or blood cancers, however, the importance of blood testing is understandably crucial. Doctors look at the complete blood count for high or low counts of different blood cells and also for abnormal blood cells.

Low white blood cell counts, for example, can indicate malignancies of the blood or bone marrow. There are five types of white blood cell counts, including neutrophils, lymphocytes, monocytes, eosinophils and basophils, and varying levels of just one type can reveal malignancy. Neutropenia, a low neutrophil count, is a known indicator of LGL Leukemia, a specific type of leukemia discovered by UVA Cancer Center director, Thomas P. Loughran, Jr., MD. High lymphocytes or monocytes can indicate certain cancers as well.

Other blood tests that detect cancer include checking blood proteins for immunoglobulins (abnormal immune system proteins), which tend to be elevated in multiple myeloma patients, and blood tests for specific tumor markers, which are chemicals sometimes detectable in blood, according to the Mayo Clinic.

What If the Tests are Abnormal?

If you have an abnormal blood test, your doctor may ask you to retest on a different day. Sometimes the counts are off temporarily due to your diet, menstruation, medications, alcohol intake or physical activity. Different labs also might have slightly different results. Your doctor's next steps will depend on how abnormal the counts are, your current state of health, your personal risk factors for certain diseases and your medical history.

A blood test usually isn't the definitive way to diagnose a medical problem, but your blood can provide vital clues about what's happening inside your body. The importance of blood testing is paired with the significance of checking your vital signs and breathing rates, going over your medical history, conducting a physical exam plus other diagnostic testing. Ask your physician what the results mean if you get abnormal blood test results and whether or not further evaluation is necessary.