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Glucose-6-phosphate dehydrogenase test

Glucose-6-phosphate dehydrogenase (G6PD) is a protein that helps red blood cells work properly. The G6PD test looks at the amount (activity) of this substance in red blood cells.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

No special preparation is usually necessary.

How the Test will Feel

When the needle is inserted to draw blood, some people feel moderate pain. Others feel only a prick or stinging. Afterward, there may be some throbbing or a slight bruise. This soon goes away.

Why the Test is Performed

Your health care provider may recommend this test if you have signs of G6PD deficiency. This means you do not have enough G6PD activity.

Too little G6PD activity leads to the destruction of red blood cells. This process is called hemolysis. When this process is actively occurring, it is called a hemolytic episode.

Hemolytic episodes can be triggered by infections, certain foods (such as fava beans), and certain medicines, including the following medicines. This list does not include all possible medicines:

- Medicines used to reduce fever
- Nitrofurantoin
- Phenacetin
- Primaquine
- Sulfonamides
- Thiazide diuretics
- Quinidine

Normal Results

Normal values vary and depend upon the laboratory used. Some labs use different measurements or test different samples. Talk to your provider about the meaning of your specific test results.

What Abnormal Results Mean

Abnormal results mean you have a G6PD deficiency. This can cause hemolytic anemia in certain conditions.

Risks

There is little risk involved with having your blood taken. Veins and arteries vary in size from one person 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 lightheaded
- Multiple punctures to locate veins
- Hematoma (blood buildup under the skin)
- Infection (a slight risk any time the skin is broken)

Alternative Names

RBC G6PD test; G6PD screen

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