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Medical Encyclopedia: Platelet count

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Alternative names

Thrombocyte count

Definition

This is a test to measure the number of platelets in blood.

Platelets are a type of blood cell. They play a key role in normal blood clotting. During the clotting process, platelets clump together to plug small holes in damaged blood vessels. The purpose of clotting is to stop bleeding.

Platelets also activate factor VIII and release phospholipids as part of the blood clotting process.

How the test is performed

Blood is drawn from a vein, often on the inside of the elbow. The puncture site is cleaned with antiseptic, and an elastic band is placed around the upper arm to apply pressure and restrict blood flow through the vein. This causes veins below the band to fill with blood.

A needle is inserted into the vein, and the blood is collected in a vial or a syringe. The band and needle are removed, and the puncture site is covered to stop any bleeding.

For infants and young children, the area is cleansed with antiseptic and punctured with a sharp needle or a lancet. The blood may be collected in a pipette (small glass tube), on a slide, onto a test strip, or into a small container. Cotton or a bandage may be applied to the puncture site if there is any continued bleeding.

How to prepare for the test

No preparation is necessary.

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

The number of platelets in your blood can be affected by many diseases. Platelets may be counted to monitor or diagnose diseases or identify the cause of excess bleeding.

Normal Values

150,000 to 400,000/mm³

What abnormal results mean

If the number of platelets is below normal (thrombocytopenia), this may be associated with:

- cancer chemotherapy
- disseminated intravascular coagulation (DIC)
- hemolytic anemia
- hypersplenism
- idiopathic thrombocytopenic purpura (ITP)
- leukemia
- prosthetic heart valve
- massive blood transfusion

If the number is higher than normal (thrombocytosis), this may be associated with:

- polycythemia vera
- post-splenectomy syndrome
- primary thrombocytosis
- certain malignancies
- early CML
- anemia

A platelet count may be performed under many conditions and to assess many diseases.

What the risks are

- excessive bleeding
- fainting or feeling light-headed
- hematoma (blood accumulating under the skin)
- infection (a slight risk any time the skin is broken)
- multiple punctures to locate veins

Special considerations

Drugs that can lower platelet counts include chemotherapy drugs, chloramphenicol, colchicine, H₂ blocking agents, heparin, hydralazine, indomethacin, isoniazid, quinidine, streptomycin, sulfonamide, thiazide diuretic, and tolbutamide.

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.

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