Low platelets or ITP

A plain-English guide for you and your family

WHAT IS HAPPENING

Platelets are tiny cell fragments that plug holes in blood vessels to stop bleeding. Normal count is 150,000 to 450,000 per microliter of blood, and each platelet lives about 10 days before the body recycles it and makes new ones. Your bone marrow makes platelets constantly, and they travel through your blood waiting to rush to any cut or leak. When platelets drop too low, you bleed or bruise more easily because there are not enough plugs to stop the leaks. The most common causes are: your immune system mistakenly attacking your own platelets (called ITP), a medicine that triggers the immune attack, a virus or infection that confuses the immune system, your bone marrow not making enough platelets because of disease or chemotherapy, or a big spleen trapping platelets inside it instead of letting them circulate. The doctor will check your blood count, look at a blood smear under a microscope, ask about all your medicines (including over-the-counter and herbs), and sometimes check your bone marrow or do other tests to find the cause. Treatment depends on the cause: if a drug is the culprit, stop it; if it is ITP and you are bleeding or the count is very low, steroids or an infusion called IVIG can help; if your spleen is the problem, sometimes it needs to be removed. The goal is to find the upstream cause and fix it so your platelets can recover and keep you safe from dangerous bleeding.

What you might feel

- Pinpoint red or purple dots on the skin (petechiae)
- Easy bruising from small bumps
- Bleeding gums or nosebleeds that are hard to stop
- Heavy or prolonged menstrual periods
- Blood in the urine or stool
- Sudden, severe headache or confusion
- No symptoms at all (found only on routine blood test)

Call the doctor right away if...

- Blood in urine or stool, or vomit that looks like coffee grounds

- Sudden severe headache, confusion, vision changes, or weakness on one side of the body (signs of bleeding in the brain)
- Heavy bleeding that will not stop after 10 minutes of firm pressure
- Platelet count below 10,000 per microliter (very high risk of serious bleeding)
- Fever, fast heart rate, confusion, and yellow skin together with low platelets (may be thrombotic thrombocytopenic purple bleeding blotches (purpura) or TTP, not ITP)

What the care team will do

- Check the platelet count result and ask the lab if the sample was drawn in an EDTA tube (purple top), then request a recheck in a blue top or direct finger stick smear
- Assess for active bleeding by checking gums, nose, skin for pinpoint bleeding spots (petechiae) or large bruises (ecchymoses), and ask about blood in urine, stool, or heavy menstrual bleeding
- Institute bleeding precautions including no rectal temperatures or suppositories, no intramuscular injections, electric razor only, soft toothbrush, and fall precautions with bed alarm and non-slip socks
- Review the medication list with the provider and stop any drugs known to lower platelets, especially heparin, aspirin, ibuprofen, naproxen, sulfa antibiotics, and quinine
- Monitor neurologic status every 2 to 4 hours by checking for new headache, confusion, vision changes, slurred speech, or weakness on one side
- Administer corticosteroids exactly as ordered, either prednisone 1 milligram per kilogram by mouth daily or dexamethasone 40 milligrams by mouth for 4 days, and teach the patient to take with food
- Prepare to give IVIG (intravenous immunoglobulin) 1 gram per kilogram slowly over 6 to 8 hours if platelets are under 10,000 or the patient has active bleeding, and watch for headache or allergic reaction
- Teach the patient to avoid contact sports, heavy lifting over 10 pounds, and activities with fall or injury risk until platelet count is above 50,000

Medicines you may be given — and why

Prednisone

Prednisone calms down the immune system's attack on platelets. In ITP, the immune system mistakes platelets for invaders and tags them for destruction. Prednisone tells the immune cells (especially B cells and T cells in the spleen and bloodstream) to back off, so fewer platelets get destroyed and platelet counts can climb back up.

Dexamethasone (high-dose pulse)

Dexamethasone is a stronger, longer-lasting steroid than prednisone. Given in short, high-dose pulses (usually 40 mg daily for 4 days), it hits the immune system hard and fast to stop the attack on platelets. It quiets the same immune cells (B cells, T cells, macrophages) but with a bigger punch in a shorter time, often bringing platelet counts up quickly.

IVIG (Intravenous Immunoglobulin)

IVIG is a bag of pooled antibodies from thousands of healthy donors. When infused, it floods the bloodstream with normal antibodies that confuse and distract the immune system. The spleen's garbage-disposal cells (macrophages) get so busy clearing the infused antibodies that they stop destroying the patient's own platelets. IVIG also blocks some of the harmful antibodies stuck to platelets. Platelet counts usually rise within 1–3 days.

Rituximab

Rituximab is a lab-made antibody that locks onto a marker (CD20) found on B cells, the immune cells that make antibodies. Once rituximab binds, the immune system tags those B cells for destruction. With fewer B cells around, fewer harmful anti-platelet antibodies are made, and platelet counts can recover. It takes weeks to work because old antibodies must fade and new B cells take months to grow back.

Eltrombopag

Eltrombopag mimics thrombopoietin, the natural hormone that tells the bone marrow to make more platelets. It binds to receptors (TPO receptors) on megakaryocytes (the large bone-marrow cells that break into platelets) and switches on their growth and platelet production. Over days to weeks, platelet counts climb. It does NOT calm the immune attack; it simply out-produces the destruction.

Romiplostim

Romiplostim is an injected protein that acts like thrombopoietin, the hormone that signals the bone marrow to make platelets. It binds and activates TPO receptors on megakaryocytes (platelet-making cells), ramping up platelet production. Unlike eltrombopag (a pill), romiplostim is a shot given under the skin once a week. Platelet counts typically rise within 1–2 weeks.

Platelet transfusion

Platelet transfusion delivers a bag of donor platelets directly into the bloodstream. It is a fast but temporary fix for life-threatening bleeding or very low counts (usually <10,000 or <20,000 with infection or planned surgery). In ITP the transfused platelets are often destroyed quickly

by the same immune attack, so the benefit is short-lived (hours to a day or two). Transfusion buys time while other treatments (steroids, IVIG) take effect.

Tranexamic acid (TXA)

Tranexamic acid blocks plasmin, the enzyme that breaks down clots. Normally, after a clot forms, the body slowly dissolves it to clean up. TXA puts the brakes on that breakdown, so small clots in the mouth, nose, or bladder last longer and stop bleeding more effectively. It does NOT raise platelet counts—it just helps the few platelets you have hold a clot together longer.

Splenectomy (surgical removal of the spleen)

The spleen is the main organ where antibody-tagged platelets are destroyed in ITP. Removing it takes away the chief destruction site. After splenectomy, even though harmful antibodies may still circulate, there is no spleen to filter out and destroy platelets, so counts usually rise and stay higher. About two-thirds of people with ITP go into long-term remission after splenectomy.

Stop heparin and switch to a non-heparin anticoagulant (for HIT)

In HIT, heparin triggers antibodies that activate platelets, causing dangerous clots and a drop in platelet count. Stopping all heparin (even flushes and line coatings) removes the trigger. You must switch immediately to a different blood thinner that does NOT cross-react—such as argatroban (a direct thrombin inhibitor) or fondaparinux (a synthetic factor Xa blocker)—to prevent new clots while platelet counts recover.

Where this information comes from

- American Society of Hematology 2019 ITP guideline
- UpToDate clinical decision support
- Blood (American Society of Hematology journal)
- Cochrane systematic reviews

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