CONDITION

Thrombocytopenia

Thrombocytopenia is a lower-than-normal platelet count that may increase bleeding risk.

WHAT IT IS
Lower-than-normal number of blood-clotting platelets

BODY SYSTEM
Blood and circulation

MAIN SYMPTOMS
Easy bruising, pinpoint spots, nosebleeds, heavy periods

WHAT CAUSES IT
Reduced production, immune destruction, illness, medicines, or enlarged spleen

HOW IT IS DIAGNOSED
Repeat complete blood count and blood smear

MAIN TREATMENT
Monitoring and treatment of the underlying cause

CAN IT BE CURED?
Sometimes - treatable causes may resolve

IS IT AN EMERGENCY?
Sometimes - uncontrolled bleeding or new neurological symptoms

LONG-TERM OUTLOOK
Often manageable; outlook follows cause and bleeding risk

Overview

Thrombocytopenia means that you have fewer platelets in your blood than expected. Platelets are small cell fragments that gather at an injury and help form a blood clot. This limits bleeding while a damaged blood vessel heals.

A typical adult platelet count is about 150,000 to 450,000 platelets per microlitre of blood, although laboratory ranges differ. A result below the laboratory's reference range is called thrombocytopenia.

A low platelet count is a finding rather than a single disease. It can be temporary or long-lasting, mild or severe. Causes range from a laboratory error or a recent infection to immune conditions, liver problems, medicines, pregnancy complications, and bone marrow disorders.

Some people have no symptoms and learn about the condition through a routine blood test. Others bruise easily or bleed more than usual. The count matters, but it does not predict bleeding by itself. How quickly it fell, why it is low, other medical conditions, and medicines that affect clotting are also important.

Symptoms

Mild thrombocytopenia often causes no symptoms. When symptoms occur, they usually involve bleeding into the skin or bleeding that takes longer than expected to stop.

Possible symptoms include:

Petechiae often appear on the lower legs, but they can occur elsewhere. They usually do not fade when pressed.

Serious internal bleeding is uncommon in mild cases. A sudden severe headache, confusion, weakness on one side, vomiting blood, or black bowel movements can indicate significant bleeding and needs emergency assessment.

- Easy or unexplained bruising
- Petechiae, which are tiny red, purple, or brown spots under the skin
- Purpura, meaning larger purple or reddish patches caused by bleeding under the skin
- Frequent or prolonged nosebleeds
- Bleeding from the gums
- Menstrual bleeding that is heavier or lasts longer than usual
- Bleeding that continues after a minor cut, dental work, or procedure
- Blood in urine, vomit, or bowel movements

Causes and risk factors

Thrombocytopenia develops through one or more main processes: the body makes too few platelets, platelets are destroyed or used too quickly, or too many become trapped in an enlarged spleen.

Reduced platelet production can occur when the bone marrow, the tissue inside bones that makes blood cells, is affected. Possible causes include alcohol use, vitamin B12 or folate deficiency, some viral infections, chemotherapy, radiation treatment, and bone marrow conditions such as aplastic anaemia, leukaemia, or myelodysplastic syndromes.

Increased platelet destruction may be caused by the immune system mistakenly attacking platelets. This happens in immune thrombocytopenia, often called ITP. Autoimmune conditions such as lupus can also contribute.

Some medicines can cause immune destruction or reduce platelet production. Heparin, a medicine used to prevent or treat blood clots, can rarely cause heparin-induced thrombocytopenia. Despite the low platelet count, this reaction creates a high risk of harmful blood clots and requires prompt treatment. Do not stop a prescribed medicine without medical advice unless emergency services tell you to do so.

Platelets may also be rapidly used up during severe infection, major bleeding, disseminated intravascular coagulation, or thrombotic thrombocytopenic purpura. These are serious conditions that usually cause other signs of illness.

Liver disease can reduce platelet production and enlarge the spleen. An enlarged spleen may hold more platelets than usual, leaving fewer in the circulating blood.

A mild decrease is common during pregnancy and often causes no problems. Less commonly, thrombocytopenia can be related to pre-eclampsia, HELLP syndrome, ITP, or another condition requiring close monitoring.

Some people inherit conditions that affect platelet number or function. These may be suspected when low counts have been present since childhood or occur in several family members.

Occasionally, the count only appears low because platelets clump together in the blood sample. This is called pseudothrombocytopenia and is not a true reduction in circulating platelets.

Diagnosis

A complete blood count measures platelets, red blood cells, and white blood cells. An unexpected low result is often repeated to confirm it, especially if you feel well and previous counts were normal.

A blood smear, also called a blood film, allows the blood cells to be examined under a microscope. It can identify platelet clumping, unusually large platelets, abnormal blood cells, or changes that point toward a particular cause. A sample collected in a different type of tube may be used if laboratory clumping is suspected.

Assessment usually includes your symptoms, previous blood counts, recent illnesses, pregnancy status, alcohol use, family history, and all medicines or supplements you take. The skin, mouth, abdomen, and other areas may be checked for bleeding or an enlarged spleen.

Further tests are chosen according to the likely cause. They may include:

A bone marrow test is not needed for everyone. It may be considered if other blood cell counts are abnormal, the blood smear is concerning, or the cause remains unclear.

- Liver and kidney function tests
- Tests of blood clotting
- Tests for selected infections
- Vitamin B12 and folate levels
- Pregnancy-related tests
- Tests for immune or inflammatory conditions

Treatment and management

Treatment is based on the cause, platelet count, bleeding symptoms, and how quickly the count is changing. A mildly low, stable count without bleeding may only need follow-up blood tests.

If a medicine is the suspected cause, the care team may replace or stop it. The decision must account for why the medicine was prescribed. Infections, nutritional deficiencies, liver problems, and other underlying conditions are treated when possible.

ITP may be monitored without immediate treatment when bleeding risk is low. When treatment is needed, options can include corticosteroids like prednisone or hydrocortisone , intravenous immune globulin, medicines that encourage platelet production, immune-targeting medicines, or removal of the spleen. The choice differs according to the person's age, bleeding, other conditions, treatment response, and preferences.

Platelet transfusions may be used for serious bleeding or around some urgent procedures. They are not a routine long-term treatment because transfused platelets survive for a limited time, and some conditions quickly destroy or consume them.

Certain causes require urgent, specialised treatment. Thrombotic thrombocytopenic purpura is generally treated with plasma exchange and other therapies. Suspected heparin-induced thrombocytopenia requires heparin to be stopped and treatment to prevent or manage blood clots.

If your count is very low, you may be advised to avoid contact sports or activities with a high risk of head injury. Aspirin and non-steroidal anti-inflammatory drugs, such as ibuprofen or naproxen, can interfere with platelet function. Ask before using them rather than stopping

prescribed treatment on your own.

Complications

The main complication is bleeding. This may range from prolonged bleeding after a cut to blood loss from the digestive or urinary tract. Bleeding in the brain or another internal organ is rare but serious.

Repeated heavy menstrual bleeding can contribute to iron-deficiency anaemia. This may cause tiredness, shortness of breath, headaches, or reduced exercise tolerance.

Treatment can also have effects that need monitoring. For example, medicines that suppress immune activity may increase infection risk, while treatments that raise the platelet count can sometimes increase clotting risk.

Some causes of thrombocytopenia can lead to blood clots even though the platelet count is low. Heparin-induced thrombocytopenia and thrombotic thrombocytopenic purpura are important examples. This is why the cause matters as much as the number.

Prevention

Many cases cannot be prevented. This includes inherited platelet conditions, ITP, pregnancy-related changes, and many bone marrow disorders.

You can reduce some avoidable risks by taking medicines only as directed, telling healthcare professionals about previous medicine reactions, and avoiding heavy alcohol use. Balanced nutrition can help prevent some vitamin deficiencies, but food alone will not correct most causes of thrombocytopenia.

If you already have a low platelet count, preventing injury and recognising bleeding early may reduce complications. Follow any activity, medicine, dental, or procedure precautions provided for your specific count and cause.

Living with it and what to expect

The course depends mainly on the cause. Thrombocytopenia following a short-lived infection or medicine exposure may improve once the trigger has passed. Mild pregnancy-related thrombocytopenia commonly resolves after birth, although follow-up testing may be needed.

ITP can be brief or can continue for months or years. The platelet count may rise and fall. Some

people need no treatment for long periods, while others need repeated or ongoing treatment. A normal platelet count is not always required for everyday life; the goal is often a count that limits meaningful bleeding.

Thrombocytopenia caused by chronic liver disease, an inherited condition, or a bone marrow disorder may remain long term. Monitoring then focuses on changes in the count, bleeding, the underlying condition, and preparation for procedures.

Many people with mild or stable thrombocytopenia work, exercise, travel, and take part in usual activities. Restrictions are more likely when the count is very low, active bleeding is present, or an activity has a high injury risk.

Keep an up-to-date list of medicines and tell dental and medical teams about the condition before procedures. Attend planned blood tests even when you feel well, because platelet changes do not always cause early symptoms.

When to get medical help

Arrange routine follow-up if a blood test shows a low platelet count but you feel well and have no significant bleeding. Follow-up helps confirm the result, compare it with previous counts, and investigate the cause.

Seek prompt medical advice for new petechiae, frequent nosebleeds, worsening bruising, blood in the urine, unusually heavy periods, or bleeding that takes longer than usual to stop. During pregnancy, report new bleeding, severe headache, vision changes, upper abdominal pain, or sudden swelling promptly.

Get emergency help for:

These symptoms may indicate significant bleeding or, in some conditions, a blood clot.

- Bleeding that is heavy or does not stop with firm pressure
- Vomiting blood or passing black, tar-like, or clearly bloody stools
- A sudden severe headache, confusion, fainting, seizure, or new weakness
- A head injury when you have severe thrombocytopenia
- Heavy vaginal bleeding with dizziness, weakness, or fainting
- Breathing difficulty, chest pain, or a painful swollen limb

Common questions

Is thrombocytopenia cancer?

Usually not. Infections, medicines, immune conditions, liver disease, pregnancy, alcohol, and nutritional deficiencies are among the possible causes. Some blood cancers and bone marrow disorders can cause low platelets, but a low count by itself does not mean cancer.

What platelet count is dangerous?

There is no single number that predicts danger for everyone. Bleeding risk generally increases as the count becomes very low, but symptoms, the speed of the fall, platelet function, medicines, and the underlying cause also matter. Active bleeding is important regardless of the latest count.

Can my platelet count return to normal?

It can if the cause is temporary or treatable. Counts may recover after an infection, correction of a deficiency, treatment of an immune condition, or removal of a triggering medicine. Inherited and chronic causes may not return fully to normal.

Can food increase my platelet count?

No specific food has been shown to reliably raise platelets in most forms of thrombocytopenia. Replacing vitamin B12 or folate can help when a confirmed deficiency is responsible. Supplements marketed as platelet boosters may interact with medicines and should not replace medical assessment.

Can I exercise with low platelets?

Many people can remain active, but the safest type of exercise depends on the count, bleeding symptoms, and risk of injury. Walking and other low-impact activities may be suitable when contact sports are not. Follow any temporary restrictions given after bleeding or when counts are very low.

Is thrombocytopenia contagious?

No. Thrombocytopenia itself cannot spread between people. Some infections that cause a temporary low platelet count can be contagious, but the platelet condition is not.

Sources

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