CONDITION

Hypersplenism

Hypersplenism is a condition in which the spleen removes blood cells too quickly, usually after enlarging.

WHAT IT IS
Overactive spleen causing low blood cell counts

BODY SYSTEM
Blood, immune system, and spleen

MAIN SYMPTOMS
Often none, fatigue, easy bruising, frequent infections

WHAT CAUSES IT
Another illness enlarging and overactivating the spleen

HOW IT IS DIAGNOSED
Blood counts, spleen imaging, exclusion of other causes

MAIN TREATMENT
Treating the cause; sometimes spleen-directed procedures

CAN IT BE CURED?
Sometimes - treating the cause restores counts

IS IT AN EMERGENCY?
Sometimes - severe bleeding or sudden left-sided pain

LONG-TERM OUTLOOK
Often manageable; outlook follows the underlying illness

Overview

Hypersplenism means that your spleen is removing blood cells from circulation faster than your body can replace them. It is a condition caused by another health problem, rather than a disease on its own.

The spleen is an organ under the ribs on the upper left side of your abdomen. It filters blood, removes old or damaged blood cells, stores some blood components, and supports the immune system.

In hypersplenism, the spleen is usually enlarged. An enlarged spleen can trap and break down too many red blood cells, white blood cells, or platelets. Low levels of these cells are called cytopenias .

Hypersplenism matters because each blood cell type has a different job. Red blood cells carry oxygen, white blood cells help fight infection, and platelets help stop bleeding. Mild reductions may cause no symptoms. Larger reductions can lead to tiredness, infections, bruising, or bleeding.

The severity and outlook are closely linked to the condition causing the spleen to enlarge.

Symptoms

Many people have no symptoms from hypersplenism itself. It may be found when a routine blood test shows low blood cell counts.

Possible symptoms include:

Symptoms may also come from the underlying illness. For example, liver disease may cause abdominal swelling or yellowing of the skin and eyes. An infection may cause fever. A blood disorder may cause night sweats, weight loss, or swollen lymph nodes.

These symptoms have many possible causes. Having one of them does not mean that you have hypersplenism.

- Tiredness, weakness, shortness of breath, or pale skin from low red blood cells
- Frequent or slow-to-clear infections from low white blood cells
- Easy bruising, nosebleeds, bleeding gums, or small red skin spots from low platelets
- Fullness or discomfort under the left ribs from an enlarged spleen
- Feeling full after eating a small amount because the spleen presses on the stomach

Causes and risk factors

Hypersplenism usually develops when another condition increases blood flow or immune activity in the spleen, causing it to enlarge and remove more blood cells.

A common setting is portal hypertension . This means increased pressure in the veins carrying blood through the liver. It often develops in people with advanced liver scarring, called cirrhosis. The pressure causes blood to back up into the spleen.

Other possible causes include:

Your risk is mainly related to whether you have one of these underlying conditions. Hypersplenism is not contagious, although an infection causing it may sometimes be contagious.

- Blood cancers and bone marrow disorders, including lymphoma, leukemia, and myelofibrosis
- Long-lasting infections, such as malaria or some bacterial and viral infections
- Autoimmune and inflammatory conditions, in which the immune system attacks the body
- Disorders that destroy red blood cells
- Blood clots or other problems affecting veins near the liver or spleen
- Storage disorders, in which certain substances build up in organs
- Some inherited blood conditions

Diagnosis

There is no single test that proves hypersplenism. Diagnosis usually combines blood tests, evidence of an enlarged spleen, and an assessment for other reasons why blood counts may be low.

A complete blood count , often called a CBC or full blood count, measures red blood cells, white blood cells, and platelets. One, two, or all three cell types may be reduced.

A blood smear may be examined under a microscope. This can show the size and shape of blood cells and may point to a blood or bone marrow disorder.

Ultrasound is often used to measure the spleen and examine the liver and nearby blood vessels. A CT or MRI scan may be used when more detail is needed.

Further testing is chosen according to the suspected cause. It may include liver tests, infection tests, immune system tests, or tests for abnormal blood cell breakdown. A bone marrow test is sometimes needed if the cause remains uncertain or a marrow disorder is suspected.

Doctors also consider other explanations for low blood counts, including medicines, vitamin deficiencies, bleeding, immune destruction, and reduced blood cell production in the bone marrow. An enlarged spleen alone does not confirm hypersplenism.

Treatment and management

Treatment focuses first on the underlying cause. If that condition can be controlled, the spleen may become less active and blood counts may improve.

For example, treatment may target an infection, inflammatory condition, blood disorder, or complication of liver disease. Some causes can be reversed, while others require long-term

management.

If blood counts are very low or causing symptoms, supportive treatment may be needed. Depending on the situation, this can include blood or platelet transfusions or medicines that support blood cell production. These treatments do not remove the cause and are not needed by everyone.

Removing the spleen, called a splenectomy , may be considered when hypersplenism is severe, persistent, or interfering with essential treatment. It is not usually the first option. Removing the spleen often raises blood cell counts, but it does not cure the liver, blood, or immune condition that caused hypersplenism.

A procedure called partial splenic embolization is an alternative in selected cases. It blocks blood flow to part of the spleen so that less tissue remains active. It can cause pain and fever after the procedure and has risks such as infection or damage to nearby tissue.

The spleen helps protect against certain serious infections. Before a planned splenectomy, vaccinations are usually arranged as part of a medical plan. People without a functioning spleen also need clear instructions about what to do if they develop a fever. Some may be advised to take preventive or emergency antibiotics like amoxicillin or doxycycline based on their circumstances.

Complications

Complications mainly result from low blood cell counts or from the underlying illness.

Too few red blood cells can cause anemia, with tiredness, dizziness, or shortness of breath. A very low white blood cell count can make some infections more likely or harder to control. Too few platelets can increase bruising and bleeding.

An enlarged spleen is more vulnerable to injury. Although rupture is uncommon, a hard impact to the abdomen can cause internal bleeding. This is why contact sports and activities with a high risk of abdominal injury may be restricted while the spleen remains enlarged.

Treatment also has potential complications. Splenectomy creates a lifelong increase in the risk of certain serious infections. Blood clot risk may also rise in some people. Partial splenic embolization can cause pain, fever, infection, or an abscess, which is a pocket of infection.

Prevention

Hypersplenism often cannot be directly prevented. Some causes, including inherited blood

conditions, autoimmune disorders, and many blood cancers, are not preventable.

Reducing the risk of liver damage may lower the chance of hypersplenism related to cirrhosis and portal hypertension. This can include avoiding unsafe exposure to hepatitis viruses and following medical advice about alcohol, weight, medicines, and treatment of existing liver disease.

If you already have a condition that can enlarge the spleen, regular follow-up may identify changing blood counts before they cause symptoms. Early treatment of the underlying problem may help, but it cannot always stop hypersplenism from developing.

Avoiding blows to an enlarged spleen does not prevent hypersplenism, but it can reduce the risk of splenic injury.

Living with it and what to expect

The course of hypersplenism is different for each underlying cause. Mildly low blood counts may remain stable for months or years and require only monitoring. Other people need active treatment because their counts continue to fall or they develop symptoms.

Follow-up often includes repeat blood counts and checks on the condition affecting the spleen. Imaging may be repeated if the spleen changes in size, symptoms develop, or the underlying illness progresses.

If the cause is treated successfully, blood counts may improve. With long-term portal hypertension, bone marrow disease, or an inherited disorder, hypersplenism may persist. Treatment may then focus on keeping counts at a safe level and managing symptoms.

Most daily activities may remain possible, especially when reductions in blood cells are mild. You may need to pace activity if you have anemia. If your spleen is enlarged, ask what forms of exercise are safe. Non-contact exercise may be suitable, while contact sports or activities with a high risk of falls may need to be avoided.

After splenectomy, blood counts often improve, but infection precautions continue for life. Keep vaccination records and any written fever or antibiotic plan where you can find them easily.

When to get medical help

Arrange routine follow-up if you have known hypersplenism and notice increasing tiredness, more frequent bruising, repeated infections, or greater fullness under the left ribs. These

changes may mean that your blood counts or spleen size need to be reassessed.

Seek prompt same-day medical advice if you develop:

Call emergency services for:

Sudden left-sided pain after an impact can be a sign of splenic injury and needs emergency assessment.

- Fever when you have been told your white blood cell count is very low
- Fever after your spleen has been removed, especially if you feel unwell
- New bleeding from the gums or nose that keeps returning
- Many new bruises or pinpoint red or purple skin spots
- Rapidly worsening weakness, breathlessness, or signs of infection
- Bleeding that will not stop
- Vomiting blood or passing black, tar-like stools with weakness or dizziness
- Sudden severe pain under the left ribs or in the left shoulder, especially after an injury
- Fainting, confusion, severe breathing difficulty, or signs of shock

Common questions

Is hypersplenism the same as an enlarged spleen?

No. An enlarged spleen is called splenomegaly. Hypersplenism means the spleen is also removing enough blood cells to cause low counts. A spleen can be enlarged without causing hypersplenism.

Is hypersplenism cancer?

Hypersplenism is not cancer. However, some blood cancers can enlarge the spleen and lead to hypersplenism. Many non-cancerous conditions can cause it as well.

Can hypersplenism go away?

Sometimes. It may improve if the underlying infection, inflammation, liver problem, or blood disorder can be treated. It may remain long term when the cause cannot be reversed.

Will I need my spleen removed?

Most people do not automatically need splenectomy. It may be considered when low blood counts are severe, cause important symptoms, or prevent treatment of the underlying condition. The possible benefit is weighed against lifelong infection and other surgical risks.

Can I exercise with an enlarged spleen?

Gentle or non-contact activity may be possible, but activities that could cause a blow to the abdomen may be unsafe. The advice should reflect the size of your spleen, your blood counts, and the cause of the enlargement.

Can you live normally without a spleen?

Many people live active lives without a spleen. However, the risk of certain infections remains higher for life. Vaccination, prompt assessment of fever, and an agreed infection plan are important.

Sources

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