CONDITION

Fifth disease

Fifth disease is a usually mild viral infection that causes a red cheek rash and sometimes joint pain.

WHAT IT IS
Usually mild viral infection with a distinctive rash

BODY SYSTEM
Skin, joints, and blood

MAIN SYMPTOMS
Mild fever, red cheeks, lacy body rash, joint pain

WHAT CAUSES IT
Infection with human parvovirus B19

HOW IT IS DIAGNOSED
Clinical examination; antibody or PCR blood tests when needed

MAIN TREATMENT
Rest, fluids, and symptom relief

CAN IT BE CURED?
Yes - most infections clear without treatment

IS IT AN EMERGENCY?
Sometimes - with breathing difficulty, fainting, or severe weakness

LONG-TERM OUTLOOK
Full recovery is usual; joint pain can last months

Overview

Fifth disease is an infection caused by human parvovirus B19. It is also called erythema infectiosum or "slapped cheek syndrome." Its name comes from an old list of childhood conditions that caused rashes.

The infection is most common in children, but teenagers and adults can also catch it. Children often develop bright red cheeks followed by a pale red, lacy rash on the body. Adults are more likely to have joint pain and may have little or no rash.

Most people recover fully with simple care at home. However, the virus can cause serious anemia-a shortage of red blood cells-in people with certain blood or immune system conditions. Infection during pregnancy also needs prompt medical advice because it can sometimes affect the fetus.

Human parvovirus B19 infects people and is not the same as the parvoviruses that affect dogs and cats.

Symptoms

Symptoms usually begin several days to a few weeks after contact with the virus. Some people have no symptoms.

Early symptoms can resemble a mild cold or flu and may include:

A child may then develop bright redness on both cheeks, often with pale skin around the mouth. A few days later, a pink or red rash may appear on the arms, legs, chest, back, or buttocks. It can have a lacy or net-like pattern.

The rash may itch but often causes little discomfort. It can fade and return for several weeks, especially after exercise, a hot bath, sun exposure, stress, or temperature changes. This does not usually mean the infection has returned or become contagious again.

Adults may not develop the typical cheek rash. Joint pain or swelling can be the main symptom, particularly in the hands, wrists, knees, or ankles. It usually improves but can continue for weeks or months.

Significant anemia can cause unusual paleness, weakness, dizziness, shortness of breath, or severe tiredness. These symptoms need medical assessment.

- A low-grade fever
- Headache, tiredness, or a runny nose
- Sore throat
- Muscle aches

Causes and risk factors

Fifth disease is caused by human parvovirus B19. It spreads mainly through droplets and secretions from the nose and mouth, such as when an infected person coughs or sneezes. It can also spread through blood and from a pregnant person to the fetus.

People are usually most contagious before the rash appears, when they may have only mild cold-like symptoms. Once the typical rash develops, a person is generally no longer contagious. People with severe anemia or weakened immune systems may remain infectious for longer.

Exposure is more likely in households, schools, childcare centres, and other settings involving close contact. Outbreaks often occur in late winter or spring, although infection is possible at any time.

The risk of complications is higher for:

Many adults are already immune because they had the infection earlier in life.

- People with sickle cell disease, thalassemia, hereditary spherocytosis, or another condition that shortens red blood cell life
- People with a weakened immune system, including some people receiving chemotherapy or anti-rejection treatment
- Pregnant people who have not previously developed immunity

Diagnosis

A healthcare professional can often diagnose fifth disease from the typical cheek and lacy body rash. Testing is not usually needed for an otherwise healthy person with mild illness.

Blood tests may be recommended if you are pregnant, have a blood disorder or weakened immune system, or have symptoms of significant anemia.

An antibody test can look for the immune system's response to the virus. One type of antibody may suggest a recent infection, while another may show a past infection and likely immunity. Results must be interpreted alongside the timing of exposure and symptoms.

A PCR test looks for the virus's genetic material. It may be useful when antibody tests are less reliable, such as in someone with a weakened immune system. A complete blood count can check red blood cell levels but does not confirm the infection by itself.

During pregnancy, blood tests can show whether you are immune or may have a recent infection. If infection is confirmed, the maternity team may arrange ultrasound monitoring for signs of fetal anemia or fluid buildup.

Treatment and management

There is no routine antiviral treatment for fifth disease. In most healthy people, the immune system clears the infection without specific treatment.

Rest, fluids, and relief for fever or discomfort are usually enough. A pharmacist or healthcare professional can recommend over-the-counter pain relief appropriate for your age, pregnancy status, health conditions, and other medicines. Aspirin should not be given to children or

teenagers with a viral illness unless specifically prescribed.

Antibiotics like amoxicillin or doxycycline do not work because fifth disease is caused by a virus. Creams do not make it clear faster, although an unperfumed moisturizer or cool environment may soothe an itchy or irritated rash.

Complications may need specialist treatment. Severe anemia can require hospital monitoring and a blood transfusion. People with weakened immune systems and long-lasting infection may receive intravenous immunoglobulin, a treatment made from donated antibodies.

If infection occurs during pregnancy, treatment usually focuses on monitoring the fetus. Severe fetal anemia can sometimes be treated with a blood transfusion before birth at a specialist centre.

Complications

Complications are uncommon in otherwise healthy children and adults.

Parvovirus B19 temporarily slows red blood cell production. Most people do not notice because their existing cells continue to work. However, in someone whose red blood cells already break down quickly, infection can cause a sudden, serious fall in red blood cells called a transient aplastic crisis.

People with weakened immune systems may have difficulty clearing the virus, leading to persistent infection and long-lasting anemia.

During pregnancy, the virus can cross the placenta. Most exposed pregnancies are not seriously affected, particularly if the pregnant person is already immune. However, a new infection can sometimes cause severe fetal anemia, fluid buildup known as hydrops, or pregnancy loss. The risk is greater when infection occurs in the first half of pregnancy.

Joint pain can continue after the fever and rash have gone. It usually resolves without permanent joint damage, although this may take weeks or occasionally months.

Prevention

There is no vaccine against human parvovirus B19. Because the virus often spreads before the rash appears, keeping someone home only after the rash develops may not prevent transmission.

Everyday measures can reduce spread:

A child with the typical rash is generally no longer contagious and can often return to school or

childcare if they feel well. Follow local school or public health policies, especially if the diagnosis is uncertain.

If you are pregnant or have a condition that raises the risk of severe anemia, tell a healthcare professional about known exposure. Routine exclusion from work is not always needed, but your immunity, exposure, and workplace circumstances may need review.

- Wash your hands regularly with soap and water
- Cover coughs and sneezes and dispose of used tissues
- Avoid sharing cups, cutlery, or other items that contact the mouth
- Clean frequently touched surfaces during an outbreak

Living with it and what to expect

The fever and cold-like symptoms usually settle first. The cheek and body rashes then fade, although they may temporarily reappear over the following weeks. These flare-ups do not usually mean you are still infectious.

Children can usually return to normal activity as their energy improves. The rash does not need to disappear completely first.

Adults may need longer to recover if joint pain is prominent. Gentle movement can help prevent stiffness, but reduce activity during painful periods. Seek follow-up if pain or swelling worsens, limits daily life, or continues without improvement.

Most people develop lasting immunity, so a second episode is uncommon. Fifth disease does not usually cause long-term skin problems.

People with a blood disorder or weakened immune system may need blood tests and specialist follow-up until red blood cell production has recovered or the infection has cleared.

When to get medical help

Arrange prompt medical advice if you have symptoms or a known exposure and you:

If you are pregnant, contact your maternity team promptly after close exposure even if you feel well. Blood tests can check whether you are immune or may have a recent infection. Follow urgent maternity guidance for reduced fetal movement, bleeding, severe abdominal pain, or other concerning pregnancy symptoms.

Seek emergency care for fainting, severe breathing difficulty, confusion, blue or grey lips,

extreme weakness, or symptoms that worsen quickly. These may indicate severe anemia or another urgent condition.

A mild rash in an otherwise well child is not usually an emergency. Arrange routine review if the rash is difficult to identify, the fever persists, or the child is not recovering as expected.

- Are pregnant
- Have sickle cell disease, thalassemia, or another red blood cell disorder
- Have a weakened immune system
- Develop marked paleness, increasing tiredness, dizziness, or shortness of breath
- Have joint pain or swelling that is severe, worsening, or persistent

Common questions

How long is fifth disease contagious?

People are usually contagious during the early cold-like stage, before the rash appears. Once the typical slapped-cheek or lacy rash is present, most otherwise healthy people are no longer contagious. People with severe anemia or weakened immunity may remain infectious and need specific advice.

Can adults get fifth disease?

Yes. Adults may develop fever, tiredness, a mild rash, or no rash. Joint pain and stiffness-especially in the hands, wrists, knees, and ankles-are more common in adults than children.

Is fifth disease the same as hand, foot, and mouth disease?

No. Fifth disease is caused by human parvovirus B19. Hand, foot, and mouth disease is caused by other viruses and usually produces mouth sores and spots or blisters on the hands and feet.

Is fifth disease dangerous during pregnancy?

Most pregnancies are not seriously affected, and many pregnant people are already immune. However, a new infection can sometimes cause fetal anemia and other complications. Contact your maternity team promptly after symptoms or known exposure.

Why does the rash keep coming back?

The rash can temporarily reappear with heat, sunlight, exercise, stress, or temperature changes. This may happen for several weeks and does not usually mean the infection has returned.

Can you get fifth disease twice?

Most people develop long-lasting immunity, so repeat infection is uncommon. Other viral illnesses and skin conditions can cause similar rashes, so a later rash may have another cause.

Sources

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