CONDITION

Strongyloidiasis

Strongyloidiasis is an intestinal roundworm infection that can persist for years and become severe if immunity is weakened.

WHAT IT IS
Intestinal infection caused by Strongyloides roundworms

BODY SYSTEM
Digestive system, skin, and lungs

MAIN SYMPTOMS
Abdominal pain, diarrhea, rash, cough

WHAT CAUSES IT
Parasitic infection acquired from contaminated soil

HOW IT IS DIAGNOSED
Stool microscopy, culture, or PCR; sometimes tissue testing

MAIN TREATMENT
Antiparasitic medicine, usually ivermectin

CAN IT BE CURED?
Yes - treatment usually clears the infection

IS IT AN EMERGENCY?
Sometimes - breathing trouble, confusion, or signs of shock

LONG-TERM OUTLOOK
Usually good after treatment; severe spread can be life-threatening

Overview

Strongyloidiasis is an infection caused mainly by Strongyloides stercoralis , a tiny roundworm. The larvae, or immature worms, usually enter through bare skin that touches contaminated soil. They travel through the body and eventually live in the small intestine.

Unlike most intestinal worms, Strongyloides can reproduce inside the body. New larvae can re-enter the intestine or nearby skin instead of leaving in the stool. This process is called autoinfection. It allows the infection to continue for decades if it is not treated.

Many people have no symptoms or only mild digestive, skin, or breathing symptoms. The infection still matters because it can become much more serious if the immune system is weakened. Corticosteroid medicines, such as prednisone, are a particularly important trigger.

Strongyloidiasis is usually curable with antiparasitic treatment. Finding and treating it before immune-suppressing treatment can help prevent severe complications.

Symptoms

Many people with strongyloidiasis do not know they have it. Symptoms may come and go, and they can resemble more common digestive or skin conditions.

Possible symptoms include:

A rapidly moving, raised rash is called larva currens . It often appears around the buttocks, thighs, or waist and may return from time to time. It is suggestive of strongyloidiasis but does not confirm the diagnosis by itself.

Some people develop a high number of eosinophils, a type of white blood cell involved in allergic reactions and responses to parasites. This is found on a blood count rather than felt as a symptom. A normal eosinophil count does not rule out the infection, especially in someone who is very unwell or has reduced immunity.

Severe infection may cause worsening abdominal pain, vomiting, intestinal bleeding, fever, breathlessness, coughing up blood, confusion, or extreme weakness. These symptoms need urgent assessment.

- Abdominal pain, bloating, nausea, or heartburn
- Watery or irregular diarrhea, sometimes alternating with constipation
- Poor appetite or unintended weight loss
- An itchy rash, hives, or a fast-moving red line on the skin
- Dry cough, wheezing, or throat irritation

Causes and risk factors

Strongyloidiasis begins when infective larvae in soil penetrate the skin. This often happens through bare feet. The larvae enter the bloodstream, pass through the lungs, travel up the airway, and are swallowed. They then mature in the small intestine.

Soil becomes contaminated where human waste is not safely managed. Risk is higher in tropical and subtropical regions, but transmission also occurs in some temperate areas. An infection may still be present many years after a person has left the place where it was acquired.

Factors that increase the chance of infection include:

A chronic infection is more likely to become severe in people taking corticosteroids or other medicines that suppress immunity. Risk is also higher with infection by human T-cell lymphotropic virus type 1, known as HTLV-1, and in some people with blood cancers, transplants, or severe malnutrition.

Strongyloidiasis is not inherited. It is not usually spread through ordinary household contact such as hugging, sharing food, or using the same bathroom. Rare transmission has occurred through transplanted organs.

- Living in or spending extended time in an affected area
- Walking barefoot or having direct skin contact with contaminated soil
- Poor access to sanitation
- Work involving contaminated soil or sewage

Diagnosis

Diagnosis starts with your medical and travel history. It is important to mention countries or regions where you have lived, even if that was decades ago. You should also mention planned or current treatment with steroids or other immune-suppressing medicines.

The main diagnostic tests look for Strongyloides larvae or their genetic material in stool. A single stool sample can miss the infection because larvae may be released in low and uneven numbers. Several samples collected on different days may be needed.

Laboratories may use:

A blood antibody test can support the diagnosis, especially when stool tests are negative. However, antibodies may cross-react with other parasites and can remain detectable after treatment. The test may also be less reliable when immunity is reduced. It therefore cannot always show whether an infection is currently active.

In severe cases, larvae may be found in sputum from the lungs, fluid from the airways, or tissue taken during an endoscopy or biopsy. Blood tests, chest imaging, and other investigations may be used to assess complications, but they do not confirm strongyloidiasis on their own.

- Microscopy to look for larvae
- Concentration or culture techniques that improve detection
- Polymerase chain reaction, or PCR, to detect parasite DNA

Treatment and management

Strongyloidiasis is treated with antiparasitic medicine. Ivermectin is generally the preferred treatment. Albendazole is an alternative in some situations, although it is usually less effective against Strongyloides .

The exact treatment plan is based on whether the infection is uncomplicated or severe, whether your immune system is suppressed, and whether you can absorb oral medicine. Pregnancy, breastfeeding, age, other medicines, and certain travel exposures may also affect treatment decisions.

People with hyperinfection or infection that has spread beyond its usual route need hospital care. Treatment is continued under specialist supervision until testing shows that larvae are no longer being released. Other care may include fluids, breathing support, and antibiotics like amoxicillin or doxycycline if bacteria have entered the bloodstream.

Follow-up testing is important when larvae were found in stool or when symptoms continue. Repeat stool tests may be arranged after treatment. Antibody levels can take months to fall, so blood tests are interpreted over time rather than immediately.

Do not stop prescribed corticosteroids like prednisone or hydrocortisone suddenly without medical advice. If you may have been exposed to Strongyloides and are taking or about to start steroids, contact the prescribing service promptly. Testing or treatment may be needed, particularly before a transplant, chemotherapy, or other strong immune suppression.

Complications

The main serious complication is hyperinfection syndrome. This happens when autoinfection speeds up and large numbers of larvae move through the intestines and lungs.

Disseminated strongyloidiasis means larvae have spread more widely, sometimes reaching organs that are not part of their usual life cycle. This can lead to severe lung inflammation, intestinal bleeding, meningitis, or organ failure.

As larvae cross the intestinal wall, they can carry gut bacteria into the bloodstream. This may cause sepsis, a dangerous whole-body response to infection.

These complications are uncommon in people with normal immunity. They are much more likely after corticosteroid use or with other major immune suppression, and they require emergency hospital treatment.

Prevention

There is no vaccine against strongyloidiasis.

In places where the parasite occurs, wearing shoes and avoiding direct skin contact with soil that may contain human waste can reduce exposure. Safe toilets, sewage treatment, and access to clean water help prevent soil contamination.

If you have previously lived in or had substantial soil exposure in an affected region, tell your healthcare team before starting corticosteroids or other immune-suppressing treatment. Screening can identify a long-standing infection before it becomes dangerous.

Past infection does not create reliable lifelong immunity. You can be infected again after successful treatment if you have another exposure.

Living with it and what to expect

An untreated infection can remain quiet for many years. Symptoms may be absent, constant, or intermittent. The infection does not necessarily become progressively worse, but it usually does not clear predictably on its own because autoinfection can continue.

Most people with uncomplicated strongyloidiasis can be treated without staying in hospital. Digestive or skin symptoms may improve after the parasite is cleared, although symptoms caused by another condition may continue.

Follow-up may include repeat stool tests, blood antibody tests, or both. Antibody levels usually fall slowly, so a positive result soon after treatment does not automatically mean treatment failed. Persistent larvae, unchanged antibody levels over time, or continuing symptoms may lead to reassessment and another treatment course.

After confirmed clearance, strongyloidiasis usually does not affect day-to-day life. Reinfection remains possible after new contact with contaminated soil. People who later need immune-suppressing treatment should keep a record of their previous diagnosis and treatment.

The outlook is generally good when uncomplicated infection is recognized and treated. Hyperinfection and disseminated infection have a much less favorable outlook, especially when diagnosis is delayed or severe bacterial infection is also present.

When to get medical help

Arrange a routine medical appointment if you have ongoing abdominal symptoms, an

unexplained recurring rash, or unexplained eosinophilia and have lived in or spent substantial time in an area where Strongyloides occurs.

Seek prompt medical advice before starting corticosteroids, chemotherapy, transplant medicines, or other strong immune suppression if you may have had past exposure. This is important even if you feel well and the exposure was many years ago.

Get urgent medical help if you have possible strongyloidiasis and develop:

Call emergency services for severe breathing difficulty, coughing up blood, confusion, fainting, bluish or grey skin, or signs of shock such as cold clammy skin and extreme weakness. These can occur with hyperinfection, severe bleeding, or sepsis.

- Increasing abdominal pain, repeated vomiting, or blood in stool
- Fever, marked weakness, or rapidly worsening cough
- New shortness of breath or difficulty keeping fluids down

Common questions

Can Strongyloides go away on its own?

It should not be assumed to clear without treatment. Because the parasite can reinfect the body from within, strongyloidiasis may continue for decades. Antiparasitic treatment is used to clear the infection and reduce the risk of future complications.

How long can Strongyloides live in your body?

The infection can persist for many years and, in some cases, for the rest of a person's life if untreated. This is why travel or residence from decades earlier can still matter.

Is strongyloidiasis contagious?

It is not usually passed directly from one person to another through everyday contact. The usual route is skin contact with soil contaminated by human waste. Good sanitation interrupts this cycle.

Can I take steroids if I have Strongyloides?

Corticosteroids can trigger dangerous hyperinfection in someone with untreated strongyloidiasis. If you have a diagnosis or possible past exposure, contact the prescribing service promptly. Do not stop an existing steroid suddenly unless a clinician tells you to.

What does a Strongyloides rash look like?

The characteristic rash is an itchy, raised red line that moves quickly across the skin, often near the buttocks, thighs, or waist. Other rashes and hives can also occur. A rash alone cannot

confirm the infection.

How do I know if treatment worked?

Follow-up may use stool testing, symptom review, and blood antibody levels. Stool tests look for remaining larvae. Antibody levels often take several months to decrease, so results need to be compared over time.

Sources

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