CONDITION

Trichinosis

Trichinosis is a roundworm infection caught by eating raw or undercooked meat containing Trichinella larvae.

WHAT IT IS
Roundworm infection acquired from undercooked meat

BODY SYSTEM
Digestive system, muscles, heart, lungs, and nervous system

MAIN SYMPTOMS
Diarrhea, fever, muscle pain, swelling around the eyes

WHAT CAUSES IT
Infection with Trichinella roundworm larvae

HOW IT IS DIAGNOSED
Trichinella antibody blood test; muscle biopsy rarely

MAIN TREATMENT
Antiparasitic medicine and treatment for inflammation

CAN IT BE CURED?
Sometimes - early treatment may clear active infection

IS IT AN EMERGENCY?
Sometimes - breathing trouble, chest pain, confusion, or severe weakness

LONG-TERM OUTLOOK
Most people recover, but symptoms may last months

Overview

Trichinosis is an infection caused by tiny roundworms called Trichinella . It is usually caught by eating raw or undercooked meat that contains the worms' immature form, called larvae. The condition is also commonly called trichinellosis.

The larvae are released in the stomach and grow into adult worms in the intestine. New larvae then travel through the bloodstream and settle in skeletal muscles, which are the muscles used to move your body. This can cause fever, muscle pain, weakness, and swelling around the eyes.

Some people have no symptoms or only mild digestive symptoms. A larger exposure can cause more intense illness. Rarely, inflammation affects the heart, lungs, or brain.

Early medical assessment matters because antiparasitic treatment works best before many larvae have reached the muscles. Treatment may also reduce inflammation and discomfort.

Symptoms

Symptoms are influenced by how many larvae were in the meat, the type of Trichinella , and your general health. They often occur in two stages, although the stages can overlap.

Digestive symptoms may begin within one or two days of eating contaminated meat. They can include:

Later symptoms may begin after the larvae leave the intestine and enter the muscles. This commonly happens over the following days or weeks. Possible symptoms include:

Muscle symptoms may be more noticeable during movement. Muscles used for breathing, chewing, speaking, or swallowing can sometimes be affected.

Mild infections may be mistaken for food poisoning, flu, or another viral infection. Severe symptoms are less common but can develop if the heart, lungs, or nervous system becomes inflamed.

- Nausea, vomiting, or diarrhea
- Stomach pain or cramps
- Loss of appetite
- Fever and chills
- Muscle pain, tenderness, or weakness
- Swelling around the eyes or face
- Headache
- Tiredness
- Red or irritated eyes
- An itchy rash

Causes and risk factors

Trichinosis is caused by eating meat containing living Trichinella larvae. The larvae are too small to see during ordinary food preparation.

Sources can include:

Commercial pork production controls have reduced the risk in some countries, but pork is not automatically safe if it is raw or undercooked. Wild game remains an important source because several wild animal species naturally carry the parasite.

Meat grinders and preparation surfaces can spread contaminated meat into other foods. A sausage may also contain meat from more than one animal, so several people can become ill after sharing the same batch.

You cannot catch trichinosis through everyday contact with an infected person. It does not spread through coughing, touching, or sharing a home.

- Wild boar, bear, walrus, or other wild game
- Raw or undercooked pork, particularly from pigs raised outdoors
- Sausages or other products containing inadequately cooked meat
- Meat prepared by drying, smoking, salting, or microwaving without enough heat

Diagnosis

A healthcare professional will ask about your symptoms and whether you recently ate raw or undercooked pork, sausage, or wild game. It is useful to mention whether anyone who shared the same meat has similar symptoms.

Blood tests may show an increased number of eosinophils. These are white blood cells that often increase during certain parasite infections or allergic reactions. Muscle enzymes may also rise when muscle tissue is inflamed. These findings support the diagnosis but do not confirm it by themselves.

A blood test can look for antibodies made by the immune system against Trichinella . Antibodies may not be detectable early in the infection, so a test may need to be repeated if suspicion remains high.

A muscle biopsy can confirm the condition by finding larvae in a small sample of muscle. This is rarely needed because it is an invasive test and blood testing is usually preferred.

Ordinary stool tests are generally not helpful. The adult worms remain in the intestine for a limited time, and their larvae are not usually found in stool.

If several people became ill after eating the same meat, public health or food safety teams may arrange testing of any meat that remains.

Treatment and management

Antiparasitic medicines such as albendazole or mebendazole may be used to kill adult worms and developing larvae. Treatment is most effective when started early, before larvae have become established in muscle tissue.

Once larvae are inside the muscles, antiparasitic treatment may not remove every larva or immediately stop symptoms. It may still be recommended based on the timing and severity of the infection.

Treatment can also include:

Corticosteroids like prednisone or hydrocortisone reduce inflammation but also affect immune activity, so they are used under medical supervision. The choice of treatment takes account of symptom severity, how long ago the meat was eaten, age, pregnancy, other health conditions, and possible medicine side effects.

Do not take veterinary parasite treatments or leftover antiparasitic medicine. These may be unsafe or may not treat the infection correctly.

- Pain relief for fever, headache, and muscle discomfort
- Fluids and rest during the digestive stage
- Corticosteroid medicine for significant inflammation or serious organ involvement
- Hospital monitoring if breathing, heart, or nervous system problems develop

Complications

Most infections do not cause lasting complications. When a person has swallowed many larvae, inflammation can occasionally affect organs outside the digestive system and skeletal muscles.

Possible complications include:

Heart or brain involvement can be life-threatening, although this is uncommon. Warning signs include chest pain, trouble breathing, fainting, confusion, seizures, or rapidly worsening weakness.

- Myocarditis, meaning inflammation of the heart muscle
- An abnormal heart rhythm
- Pneumonitis, meaning inflammation within the lungs
- Encephalitis, meaning inflammation of the brain

- Meningitis, meaning inflammation around the brain and spinal cord
- Severe muscle weakness or problems swallowing

Prevention

There is no vaccine against trichinosis. Infection can usually be prevented by cooking meat thoroughly and preventing raw meat from contaminating other food.

Use a food thermometer rather than judging meat only by its colour. Follow current food safety temperatures for the specific type and cut of meat. Wild game requires particular care because cooking may be the only reliable way to kill every Trichinella species.

Other practical steps include:

Freezing can kill some Trichinella larvae in pork under controlled conditions. However, larvae from some wild animals tolerate freezing, even for long periods. Freezing wild game should not be treated as a substitute for thorough cooking.

Feeding pigs or other animals raw meat scraps can help maintain the parasite's life cycle. People who raise livestock should follow local animal health and feeding rules.

- Do not taste raw sausage mixture or raw minced meat
- Keep raw meat separate from ready-to-eat foods
- Wash hands, knives, boards, and grinders after handling raw meat
- Clean meat grinders thoroughly between batches
- Do not rely on smoking, drying, curing, or salting alone
- Do not rely on a microwave to heat meat evenly

Living with it and what to expect

Many people with mild trichinosis recover without long-term problems. Digestive symptoms may settle within days, while fever, swelling, tiredness, and muscle pain can take weeks to improve.

Muscle discomfort or weakness may continue for several months. Symptoms usually fade as inflammation decreases, although recovery speed is not the same for everyone. A larger exposure or involvement of the heart, lungs, or nervous system can lead to a longer recovery.

Larvae in muscle can remain there for years and eventually become inactive or calcified,

meaning surrounded by calcium deposits. Their presence does not necessarily mean you will continue to feel ill or remain contagious. Trichinosis does not spread from person to person.

During recovery, activity may need to increase gradually if fatigue or muscle pain continues. Routine follow-up may include checking symptoms, strength, blood test results, or the effects of treatment. Persistent fever, worsening muscle weakness, swallowing problems, or new symptoms need reassessment rather than waiting for a routine appointment.

People who recover do not have guaranteed protection against another infection. Eating contaminated meat again can cause trichinosis again.

When to get medical help

Arrange prompt medical advice if you develop fever, muscle pain, facial swelling, or unusual weakness after eating raw or undercooked pork, sausage, bear, wild boar, or other game. Mention what you ate, when you ate it, how it was prepared, and whether anyone else became ill.

Contact a healthcare professional promptly if symptoms are worsening, you cannot keep fluids down, or weakness is interfering with walking, chewing, or swallowing.

Seek emergency help for:

These symptoms can indicate inflammation involving the heart, lungs, brain, or muscles used for breathing and swallowing.

- Trouble breathing
- Chest pain, fainting, or a racing or irregular heartbeat
- Confusion, a seizure, or difficulty staying awake
- Sudden or severe weakness
- Inability to swallow saliva or fluids

Common questions

How soon after eating infected meat do symptoms start?

Digestive symptoms may start within one or two days. Fever, facial swelling, and muscle symptoms often appear later, over the next several days or weeks. The timing alone cannot confirm the infection.

Can trichinosis go away without treatment?

Mild infections may improve as the adult worms die and inflammation settles. However, you cannot tell from symptoms alone how extensive the infection is. Early antiparasitic treatment may limit the number of larvae reaching the muscles, so suspected exposure with symptoms deserves prompt assessment.

Can I catch trichinosis from another person?

No. It is caught by eating meat containing living larvae, not through contact with an infected person. Several people may become ill together because they ate the same contaminated meat.

Does freezing meat kill trichinosis?

Not reliably in every type of meat. Some larvae in pork may be killed by controlled freezing, but species found in wild game can survive freezing. Thorough cooking is the safer approach.

Can fully cooked pork still cause trichinosis?

Proper cooking kills Trichinella larvae. Risk remains if part of the meat did not reach a safe temperature or if cooked food was contaminated by raw meat, utensils, or a grinder.

How long does trichinosis last?

Digestive symptoms may last days, while muscle pain, tiredness, or weakness can continue for weeks or months. Serious organ inflammation may lengthen recovery and require ongoing follow-up.

Sources

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