

What is pinworm infection?

This infection is caused by a small, white intestinal worm called *Enterobius vermicularis* (EN-ter-O-be-us ver-MIK-u-lar-is).

Pinworms are about the length of a staple and live in the rectum of humans. While

an infected person sleeps, female pinworms leave the intestines through the anus and deposit eggs on the surrounding skin.

What are the symptoms of a pinworm infection?

Itching around the anus, disturbed sleep, and irritability are common symptoms. If the infection is heavy, symptoms may also include loss of appetite, restlessness, and difficulty sleeping. Symptoms are caused by the female pinworm laying her eggs. Most symptoms of pinworm infection are mild; many infected people have no symptoms.

Who is at risk for pinworm infection?

Pinworm is the most common worm infection in the United States. School-age children, followed by preschoolers, have the highest rates of infection. In some groups nearly 50% of children are infected. Infection often occurs in more than one family member. Adults are less likely to have pinworm infection, except mothers of infected children. Child care centers, and other institutional settings often have cases of pinworm infection.

How is pinworm infection spread?

Pinworm eggs are infective within a few hours after being deposited on the skin. They can survive up to 2 weeks on clothing, bedding, or other objects. You or your children can become infected after accidentally ingesting (swallowing) infective pinworm eggs from contaminated surfaces or fingers.

How is pinworm infection diagnosed?

If pinworms are suspected, transparent adhesive tape (often called the "scotch tape test") or a pinworm paddle (supplied by your health care provider) are applied to the anal region. The eggs become glued to the sticky tape or paddle and are identified by examination under a microscope. Because bathing or having a bowel movement may remove eggs, the test should be done as soon as you wake up in the morning. You may have to provide several samples to your health care provider for examination. Since scratching of the anal area is common, samples taken from under the fingernails may also contain eggs. Eggs

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are rarely found during lab examinations of stool or urine. At night, the adult worms can sometimes be seen directly in bedclothes or around the anal area.

(enterobius vermicularis)

How is pinworm infection treated?

With either prescription or over-the-counter drugs. You should consult your health care provider before treating a suspected case of pinworm. Treatment involves a two-dose course. The second dose should be given 2 weeks after the first.

What if the pinworm infection occurs again?

The infected person should be treated with the same two-dose treatment. Close family contacts should also be treated. If the infection occurs again, you should search for the source of the infection. Playmates, schoolmates, close contacts outside the house, and household members should be considered. Each infected person should receive the usual two-dose treatment. In some cases it may be necessary to treat with more than two doses. One option is four to six treatments spaced 2 weeks apart.

How can I prevent the spread of infection and reinfection?

- Bathe when you wake up to help reduce the egg contamination.
- Change and wash your underwear each day. Frequent changing of night clothes are recommended.
- Change underwear, night clothes, and sheets after each treatment. Because the eggs are sensitive to sunlight, open blinds or curtains in bedrooms during the day.
- Personal hygiene should include washing hands after going to the toilet, before eating and after changing diapers.
- Trim fingernails short.
- Discourage nail-biting and scratching bare anal areas. These practices help reduce the risk of continuous self reinfection.

Cleaning and vacuuming the entire house or washing sheets every day are probably not necessary or effective. Screening for pinworm infection in schools or institutions is rarely recommended. Children may return to day care after the first treatment dose, after bathing, and after trimming and scrubbing nails.

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