

Pinworms

Madenwürmer



Parents' Guide

Patienten-Ratgeber Englisch

The family businesses InfectoPharm and Pädia are among the leading manufacturers of medicines and health products for children in particular. We develop high-quality innovative products for young and older children to make treatment easier and thereby improve its success. Doctors, midwives and pharmacists put their faith in the quality and effectiveness of our products and appreciate our long-standing experience. This is the reason why patients enjoy using the extensive range of our easy-to-understand service and information materials.

We are very pleased if we can help you and your family with this guide in the current situation and wish you a speedy recovery!



The Zöller Family

Dear Patients, dear Parents,

Your doctor has diagnosed a case of worm infection for you or your child.

There is no cause for alarm: an infection of this kind can be treated successfully with the right medication.

This patient info leaflet is designed to give you some background on the illness and help you to take the right precautions that will support your course of treatment.

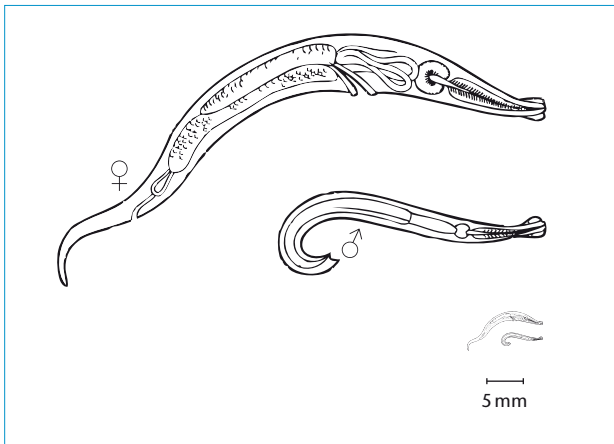
Your team from InfectoPharm and Pädia



Pinworm infections – the most common worm infection

In our part of the world, pinworms (Latin name *Oxyurida*) are the most common type of worm by a large margin. Since they infect only humans, household pets can be excluded as a source of infection.

While a pinworm infection is an unpleasant nuisance, it is a harmless complaint that can affect any one of us. Children attending nursery schools or primary schools are often affected, since the worms can easily be passed on in communal facilities via direct or indirect contact with infected individuals.



Female and male pinworm: magnified (top) and original size (bottom)

This means large groups of people and their families are often affected.

What are pinworms?

Pinworms are parasites that live in our small intestines, where they feed on the remains of the food that we digest. Male worms grow to a length of 3-5 mm, while females are between 8 mm and 13 mm long.

After mating, the female becomes active at night, crawling out of the anus to lay around 10,000 eggs near the anal region. Females generally die after laying their eggs. The eggs are so small that they are invisible to the human eye. Given body heat and a supply of atmospheric oxygen, however, they become infectious within a matter of hours, i.e. the larvae inside the eggs are now ready to hatch.

The egg-laying process causes itching around the anus. Scratching causes eggs to stick to the patient's fingers and become trapped under his or her fingernails. If the person then touches his or her mouth and swallows the infectious eggs, the pinworm infection cycle begins all over again.

Once eggs are swallowed, 2-3 weeks can pass before adult worms develop in the intestine and eggs are once again laid around the person's anus.

The route of infection

How does infection with pinworms occur?

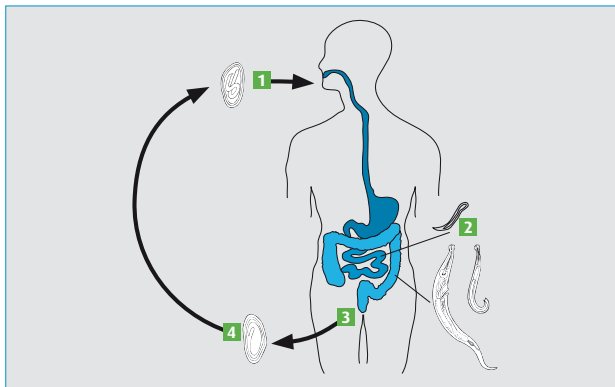
The primary route of infection for other people and for reinfection of the same individual involves the pinworm eggs, which are found on fingers or under fingernails after scratching. This way, the eggs end up in the intestine via food, children's toys or other objects, or via direct contact with the mouth – the cycle then starts again. This means worm eggs can be passed on rapidly within families and in communal facilities such as nursery schools.

At room temperature and with high relative humidity (approx. 60–80%), pinworm eggs remain infectious for up to 3 weeks. Their small size means that they can be whirled up along with household dust and thereby swallowed. Except at the pre-toddler age, the exact route of infection is not particularly important, however.

In affected families, worm eggs can be found almost anywhere in the home. The bathroom – and the toilet in particular – is especially affected, however, as are children's bedrooms and rooms in which laundry is collected and/or sorted. As other family members become infected and the period of infection grows longer, more and more places will become contaminated with worm eggs.

The life cycle

- 1** The fertilised, viable eggs are swallowed.
- 2** Within 2–3 weeks, the worm eggs develop in the intestine, passing through several larval stages before becoming adult worms.
- 3** At night, females with fertilised eggs emerge from the anus and start laying eggs in the anal region, directly onto the skin. These eggs are then found on clothing worn next to the skin or bed linen and ultimately become part of household dust.
- 4** Within a few hours, the effects of atmospheric oxygen and body heat cause the laid eggs to develop into eggs capable of causing infection.



Identification and treatment

How do I recognise a pinworm infection?

Many people actually have a pinworm infection but are unaware of it since the infection often doesn't cause any symptoms.

Common signs of a pinworm infection include:

- > Sleeping difficulty and daytime irritability
- > Tiredness, making it difficult to concentrate
- > Nervousness
- > Generally feeling unwell
- > Paleness

The symptoms listed above are usually the result of interruptions to night-time sleep that are caused by an itchy anus. In rare cases, skin rashes (eczemas) start to develop around the anus.

Sometimes, adult worms are discovered in a person's sleep-wear or bed linens. Pinworms are also occasionally seen in faeces.

To confirm the diagnosis, pinworm eggs need to be found around the anal region. To do so, an anal swab is taken in the morning, which is then examined under the microscope. Please ask your doctor about the next steps to be taken.

How is a pinworm infection treated?

If your doctor has diagnosed a pinworm infection, then a medication against worms (known as an “anthelmintic”) should always be used as part of the treatment. The active ingredients contained in common anthelmintics have been in use for many years and are very well-tolerated. These medications affect the worms in the intestine and are not absorbed by the human body. The products are also characteristically easy to use for the patient. Please ask your doctor for further details about the course of treatment.



Worm eggs (magnified), original size: 20 x 60 μm

Hygiene is very important!

In addition to taking the medication prescribed by your doctor, you must also ensure you follow a number of hygiene rules:

- > Always ensure that you wash your hands thoroughly after going to the toilet.
- > Remind your child to regularly wash his or her hands while at school or nursery school.
- > Keep fingernails as clean and short as possible for affected individuals.
- > Ensure good anal hygiene.
- > Wash the bed linens and clothing of affected individuals. If the anthelmintic is taken in the evening, it makes sense to do the washing the morning after, if possible.
- > When making the bed, try to avoid stirring up worm eggs by shaking out the bed covers.
- > Use damp cloths to clean the bathroom, toilet and bedrooms. You should then dispose of these cloths or wash them at temperatures higher than 60 °C.
- > If possible, vacuum carpets with a machine that doesn't stir up the dust again, and whose dust bag and filter can be disposed of without shaking up the dust inside them.

The worms are still there – what can I do?

Even if the anthelmintic is taken correctly and even when the rules for good hygiene are followed properly, worm infections can now and then be very difficult to get rid of or can seem to keep coming back. In such cases, one family member is often the “host” for the worms without realising it. It therefore makes sense to treat everyone in the family at the same time. Please also take a moment to consider whether there might be a source of infection outside the family.



Treatment with medication must also be accompanied by good hygiene!



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Hopefully we were able to give you some useful advice in this leaflet that will help you in case you or a member of your family has a pinworm infection.

For any further questions, don't hesitate to contact your doctor or pharmacist.

This leaflet has been made available to you by:

Surgery/pharmacy stamp

Note: The contents of this leaflet are for information purposes only and cannot replace professional medical advice under any circumstances. If you have any specific questions, please consult a doctor.

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