



## Pinworms

(*Enterobius vermicularis*)

### What are pinworms?

Pinworm infections are caused by a round worm called *Enterobius vermicularis*.

### Who is at risk for pinworm infections?

Anyone can become infected. However, preschool and school-aged children, household contacts of infected children and people in a hospital, nursing home, or other group settings are more likely to become infected than other people.

### What are the symptoms of pinworm infections?

Although not all infected people will have symptoms, many will experience itching around the rectum. Some females may also experience itching in the genital area.

### How soon do symptoms appear?

Symptoms usually are noticed one to two months after infection.

### How are pinworms spread?

Humans are the only known source of pinworms; pets and other animals do not have pinworms. People become infected when they eat the eggs of the worm. The worm matures inside the person and the adult female crawls out of the rectum at night to lay eggs.

Transmission also can occur through objects that have been contaminated with human feces or contaminated by hands used to scratch the affected skin. This contamination then ends up on the hands of other people who may put their hands in their mouth, and thus, the egg is now eaten by another person. This is called a “fecal-oral transmission route.”

### When and for how long is a person able to spread the disease?

A person will remain infectious for as long as there are worms laying eggs on the skin around his or her rectum. Pinworm eggs can remain infectious in an indoor environment for two to three weeks.

### How is a person diagnosed?

Diagnosis can be made by seeing the adult worms around the rectum. As always, consult a health-care professional if you think you or your child has pinworms.

### What is the treatment?

Your health-care provider can prescribe medications to kill the adult worms.

If left untreated, the intense itching and scratching associated with these infections will result in secondary bacterial infections. Some of these may be difficult to treat. Untreated people can continue to infect other people.

### **Does past infection make a person immune?**

No. Re-infection with pinworms occurs easily.

### **Should children or others be excluded from child care, school, work or other activities if they have pinworms?**

Children may return to child care if they are well enough to participate in activities and they have received their first treatment dose, have bathed and have trimmed and scrubbed their nails.

All others may attend work, school and other activities provided good hygiene and hand-washing is practiced.

### **What can be done to prevent the spread of pinworms?**

Treatment shortens the time during which pinworms can be spread. Hand washing is the most important preventive measure. People with pinworms should wash their hands frequently, especially after using the bathroom, and scratching affected skin and before preparing meals and eating. Infected people should bathe or preferably shower in the mornings to remove eggs from the rectal area. Frequent changes of underwear and bedding may help prevent re-infection. Families and staff and children in day cares may need to be treated as a group if repeated infections occur.

### **Additional Information:**

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

### **Resources:**

1. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. [Children in Out-Of-Home Care]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 132-151.
2. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. [Pinworm]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 621-622.