Hookworm Infection

Hookworm is an intestinal parasite of humans that usually causes mild diarrhea or cramps. Heavy infection with hookworm can create serious health problems for newborns, children, pregnant women, and persons who are malnourished. Hookworm infections occur mostly in tropical and subtropical climates. Hookworm is estimated to infect about 1 billion people. This is about one-fifth of the world's population.

One of the most common species, Ancylostoma duodenale, is found in:

- Southern Europe.
- Northern Africa.
- Northern Asia.
- Parts of South America.

CAUSES

You can become infected by direct contact with contaminated soil. Infection usually occurs by walking barefoot or accidentally swallowing contaminated soil.

Hookworms have a complex life cycle. The life cycle begins and ends in the small intestine. Hookworm eggs require warm, moist, shaded soil to hatch into larvae. These barely visible larvae penetrate the skin (often through bare feet). They are also carried to the lungs, go through the respiratory tract to the mouth, are swallowed, and eventually reach the small intestine. This journey takes about a week. In the small intestine, the larvae develop into half-inch-long worms. They attach themselves to the intestinal wall, and suck blood. The adult worms produce thousands of eggs. These eggs are passed in the stool *(feces*). If the eggs contaminate soil and conditions are right, they will hatch, molt, and develop into infective larvae again after 5 to 10 days.

People who have direct contact with soil that contains human feces in areas where hookworm is common are at high risk of infection. Children are at high risk because they play in dirt and often go barefoot. Since transmission of hookworm infection requires development of the larvae in soil, hookworm cannot be spread person to person. Contact among children in institutional or child care settings should not increase the risk of infection.

SYMPTOMS

Itching and a rash at the site of where skin touched soil or sand is usually the first sign of infection. These symptoms occur when the larvae penetrate the skin. While a light infection may cause no symptoms, heavy infection can cause:

- Anemia.
- Abdominal pain.
- Diarrhea.
- Loss of appetite.
- Weight loss.

Heavy, chronic infections can cause stunted growth and mental development.

The most serious results of hookworm infection are the development of anemia and protein deficiency caused by blood loss. When children are continuously infected by many worms, the loss of iron and protein can retard growth and mental development, sometimes irreversibly. Hookworm infection can also cause:

- Tiredness.
- Difficulty breathing.
- Enlargement of the heart.
- Irregular heartbeat

Sometimes hookworm infection is fatal, especially among infants.

DIAGNOSIS

Visit your caregiver. Infection is diagnosed by identifying hookworm eggs in a stool sample.

TREATMENT

In countries where hookworm is common and reinfection is likely, light infections are often not treated. For children under the age of 2, the decision to treat should be made by their caregiver. Another stool exam should be repeated 1 to 2 weeks after therapy. If the infection is still present, treatment will be given again. Iron supplements will be ordered if you have anemia.

PREVENTION

Do not walk barefoot or contact the soil with bare hands in areas where hookworm is common or there is likely to be feces in the soil or sand.

Information courtesy of the CDC.

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