

WEST AFRICAN RESCUE ASSOCIATION

SCHISTOSOMIASIS OR BILHARZIA: WHAT YOU NEED TO KNOW

THE DISEASE

Schistosomiasis, also known as bilharzia, is a chronic disease caused by parasitic worms. According to the World Health Organization, over 230 million people require treatment every year.

TRANSMISSION

People become infected when larva forms of the parasite penetrate their skin during contact with infested waters. In the body, the larvae then develop into adult schistosomes. Adult worms live in the blood vessels where the females release eggs. Some of the eggs are passed out of the body in the faeces or urine to continue the life-cycle of the parasite. Others can become trapped in body tissues, causing an immune reaction and progressive damage to organs. This can at time take months or even years to affect ones health.

EPIDEMIOLOGY

Schistosomiasis is common in tropical and sub-tropical areas, especially in poor communities without access to safe drinking water and adequate sanitation. According to the Center of Disease Control and Prevention, an estimated 85% of the world's cases of schistosomiasis are in Africa.

In Ghana, the disease is very widespread. The disease burden reduces productivity in adults, compromises child learning abilities, and causes severe irreversible damage to various organs of the body.

Schistosomiasis particularly affects agricultural and fishing populations. Women doing domestic chores in infested waters are at risk. Hygiene and play habits make children especially vulnerable to infection.

All ages are at risk for infection with travel to endemic areas and freshwater exposure. Swimming, bathing, and wading in contaminated freshwater can result in infection. Human schistosomiasis cannot be acquired by contact with saltwater (oceans or seas) due to the schistosomiasis not surviving in saline water.

SYMPTOMS

A rash can develop within hours or up to a week after contaminated water exposure. **Acute onset of schistosomiasis** is characterized by fever, headache, muscle pain, diarrhea and respiratory symptoms.

Symptoms of **chronic schistosomiasis** are caused by the body's reaction to the worms' eggs, not by the worms themselves.

There are two major forms of schistosomiasis: intestinal and urogenital.

1. INTESTINAL SCHISTOSOMIASIS

Intestinal schistosomiasis can result in abdominal pain, diarrhea, and blood in the stool. Liver enlargement is common in advanced cases, and is frequently associated with an accumulation of fluid in the peritoneal cavity and hypertension of the abdominal blood vessels. In such cases there may also be enlargement of the spleen.

2. UROGENITAL SCHISTOSOMIASIS

The classic sign of urogenital schistosomiasis is haematuria (blood in the urine). Fibrosis of the bladder and urethra, and kidney damage are common findings in advanced cases. Bladder cancer is also a possible late-stage complication.

In women, urogenital schistosomiasis may present with genital lesions, vaginal bleeding, pain during sexual intercourse and nodules in the vulva.

In men, urogenital schistosomiasis can induce pathology of the seminal vesicles, prostate and other organs. This disease may also have other long-term irreversible consequences, including infertility.

The economic and health effects of schistosomiasis are considerable. **In children**, schistosomiasis can cause anemia, chronic malnutrition and a reduced ability to learn, although the effects are usually reversible with treatment. Chronic schistosomiasis may affect people's ability to work and in some cases can result in death. In sub-Saharan Africa, more than 200 000 deaths per year are due to schistosomiasis. Fatigue and weight loss are usually common to both adults and children suffering a chronic infection.

INCUBATION PERIOD

The incubation period for patients with acute schistosomiasis is usually 14-84 days. However, many people are asymptomatic and have subclinical disease during both acute and chronic stages of infection.

DIAGNOSIS

Schistosomiasis is diagnosed through the detection of parasite eggs in stool or urine specimens. Although very specific laboratory tests need to be requested for.

Serologic testing for antischistosomal antibody is useful to diagnose light infections and in travelers and others who have not had schistosomiasis previously. Antibody tests do not distinguish between past and current infection and can complicate confirmed diagnosis of active infections.

Asymptomatic people who may have been exposed to freshwater during travel should get a schistosomiasis screening test.

TREATMENT

Praziquantel is the only available treatment against all forms of schistosomiasis. It is effective, safe and low-cost. The timing of treatment is important since praziquantel is most effective against the adult worm and requires the presence of a mature antibody response to the parasite. Usually, a single course of treatment is curative.

For travelers, treatment should be at least 6-8 weeks after last exposure to potentially contaminated freshwater.

PREVENTIVE MEASURES

- No vaccine is available. No drugs for preventing an infection are available.
- Preventive measures are primarily avoiding wading, swimming, drinking, washing clothes or other contact with freshwater in countries or areas at risk. Research the country risks before exposure when traveling and be an informed traveler so you can avoid the risks.
- In case of accidental exposure, dry the skin vigorously to reduce penetration of the parasite.
- Water can be treated by paper filtering, using of chloridine and heating bathing water to 50°C (122°F) for 5 minutes.
- Swimming in adequately chlorinated swimming pools is virtually always safe.