

## Key aspects briefly summarized

- Avoid bathing, washing, or walking in fresh water in areas endemic for schistosomiasis, also called bilharzia.
- Consult a general practitioner or a specialist in travel and tropical medicine after suspected skin contact with fresh water during a trip.
- Specific diagnostic tests and an effective treatment are available, which can prevent long-term complications.

## Disease

Schistosomes are parasitic worms that infect humans while bathing or walking in fresh water ponds, lakes, or slow-flowing rivers. The larvae of the worm penetrate the skin and migrate in the body until they settle as adults in the veins surrounding the intestines or the genital and urinary tracts, depending on the parasite type. Chronic complications are due to the worms' eggs, which trigger inflammation and fibrosis (scar tissue) in affected organs.

## Occurrence / Risk areas

Schistosomiasis occurs in Sub-Saharan Africa and the Arabian Peninsula, Asia (China, the Philippines, South-East Asia), north-eastern South America, and some Caribbean islands.

## Transmission

The larvae of schistosomes are shed by fresh water snails and penetrate the skin of humans when they bath or swim in the water. The worms develop in various organs of the human body, producing eggs that later migrate through the walls of the intestines and the urinary bladder where they trigger an inflammation and can impair the function of the respective organ systems over the course of months or years. The eggs are deposited in fresh water bodies when humans defecate or urinate into them. Larvae hatch from these eggs and infect water snails, thus completing the parasitic cycle.

## Symptoms

Many infections do not cause any signs or symptoms. These depend on the stage of infection: soon after the larvae penetrate the human skin in fresh water, an itching rash may appear ('swimmer's itch'). An immunological reaction after 4-8 weeks sometimes occurs with fever and feeling sick, the so-called 'Katayama fever'. Chronic symptoms such as bloody urine, pain in passing urine, (bloody) diarrhea, and abdominal pain eventually occur after months or years. If those symptoms occur and treatment is not given, damage to the urinary and gastrointestinal tract can lead to dysfunction of the organs.

## Treatment

Consult a tropical disease specialist for diagnosis and management. Specific drugs are effective and prescribed when eggs are detected in the urine or stool, or when the blood test shows antibodies against the worms (see below).

## Prevention

Avoid bathing, washing, or walking in fresh water ponds or slow-flowing rivers in endemic areas. Correctly treated swimming pools and sea water are safe! There is not enough evidence for post-exposure treatment.

## Of note

- If any suspicious fresh water contacts occurs during a trip, a tropical medicine specialist or general practitioner should be consulted for a blood test, approximately 2 months after exposure.