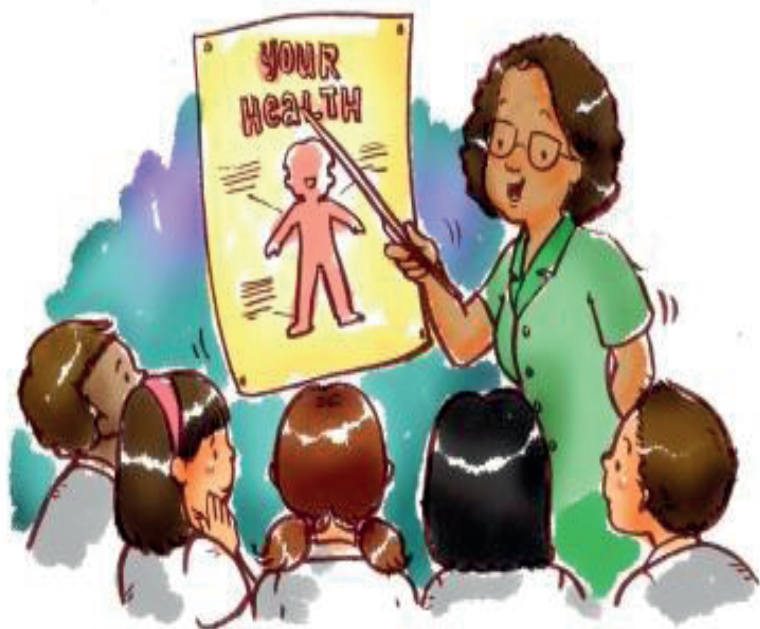


No Schistosomiasis For Me

A Campaign on Preventing and Controlling
Worm Infections for Health Promoting Schools



Urbani
School Health Kit



World Health
Organization

Western Pacific Region

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A Campaign on the Prevention and Control
of Schistosomiasis for Health Promoting Schools

What is schistosomiasis?

Schistosomiasis (or snail fever) is a disease common among residents (such as farmers, fisherfolk and their families) of communities where there they are exposed to infected bodies of water (such as irrigation systems, rice paddies, swamps). It is caused by worms (blood fluke) called *Schistosoma japonicum* that live in the intestines (particularly in the hepatic portal vein of the blood vessels) of infected persons. People get these worms by being exposed to waters where a type of tiny snail is present. The cercaria (or larva) that emerged from tiny snails can penetrate the skin submerged in the water. Once inside the body, the cercariae loses its tail and become schistosomula (the immature form of the parasite) that follows blood circulation, migrate to the blood vessels of the intestines and liver and cause illness.

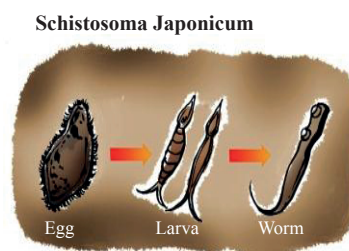
The schistosomiasis worm has three distinct stages of development (see picture) during a lifetime, namely: (1) **egg**, (2) **larva**, and (3) **worm**.

Egg: Persons who are infected with schistosomiasis will pass out worm eggs through their feces.

Larva: When persons defecate in bodies of water, eggs are released into the water, where they hatch and release tiny fast-moving miracidia (the first larval stage of the parasite). These tiny miracidia penetrate the body of a specific snail called *Oncomelania quadrasi* where they further develop for 6-8 weeks and then they come out as cercaria, which need to penetrate a human or animal host within 26-46 hours (time period of viability which means they die after this period when they cannot penetrate a host).

Young **worm or Cercaria:** The miracidia inside the snail undergoes sporocyst formation and cell division and is released into bodies of water 6-8 weeks later as cercaria.

What should children know about schistosomiasis?



Adult **worm**: Male or female adult worms, also called schistosoma japonicum develop inside the blood vessels of the hepatic portal vein of infected persons. When they become reproductively mature, they migrate to the mesenteric portal veins of the intestines and shed eggs. These eggs get inside the gut through ulcerations and they are passed out through feces; however, 50 % of the ova remain inside the body – causing the pathology (or the disease). These produce eggs which are released in the stool.

What are the signs and symptoms of schistosomiasis?

More often, people with schistosomiasis are asymptomatic (which means no symptoms may show) in light infections. Those with moderate to heavy infections, experience the following signs and symptoms at different stages of the disease:

Early stage: itchiness of the skin, stools with blood streaks, low grade fever that come on and off, abdominal pain, dysentery-like symptoms or diarrhea (frequent loose stools).

Late stage: enlarged liver and spleen, weight loss, severe liver parenchymal disease, anemia (decreased red blood cells in the body resulting to pallor), jaundice (yellowing of skin), ascites (enlarged abdomen).

Complications: Cor pulmonale, Jacksonian type of seizure or heart failure and epilepsy.

Simplify definition of terms and messages to be given to young children. You can discuss more technical terms with older children, especially those who are in their fifth or sixth grade.

How can we prevent the spread of schistosomiasis?

Protect people from exposure to snail-infested waters.

Persons who live in or travel to areas where schistosomiasis occurs and who have skin contact with fresh water (river, streams, lakes, canals) are at risk of getting schistosomiasis.

- Wear protective gear (rubber boots and gloves) when working in irrigation systems and fields.
- Avoid wading, washing, bathing or swimming in bodies of water infested with tiny snails, *Oncomelania quadrasi*.
- Use foot bridges as waterway crossings to avoid contact with infested water.

Keep the environment clean.

- Use sanitary toilets, especially the water-sealed type to prevent spread of infected feces.
- Control stray animals that might spread infected feces.
- Use safe sources of water for drinking and domestic use. Protect sources of clean water (such as natural springs).

Control snails responsible for schistosomiasis.

- Do not pollute the snail with fecal matters – those of humans and animals.
- Clear vegetation to expose snails to sunlight.
- Drain or fill bodies of water which are snail-infested.
- Do not use the rivers, creeks, streams with *Oncomelania* snails as wading pools of carabaos or other work animals (horses, cows, others) prior to plowing.

Detect and treat the disease early.

- If a person is suspected of infection, submit for consultation at the nearest health center. Have your stools examined through Kato Katz.
- If found positive for schistosomiasis, make sure the person is given appropriate treatment with Praziquantel.
- Schools and communities where schistosomiasis is known to occur should participate in the yearly mass chemotherapy (taking prescribed medicines over a specific time period) to prevent and treat Schistosomiasis infection.

Children should be able to demonstrate the following skills:

In areas where schistosomiasis is known to be present, children should be taught ways to avoid skin contact with bodies of water that are likely to be snail-infested. These snail-infested waters are commonly shallow freshwater, such as fields, streams, lakes, canals, rivers, irrigation canals.

Ways of protecting oneself from exposure to snail-infested waters:

- wearing protective gear (rubber boots and gloves) when in snail-infested waters
- avoiding wading, washing, bathing or swimming in snail-infested waters
- using foot bridges as waterway crossings over snail-infested waters

Children should also be taught some environmental measures to help stop spread of schistosomiasis.

Ways of stopping the spread of schistosomiasis through:

- proper waste disposal
- proper use of toilets
- use of safe water supply
- controlling snails through cleaning of vegetation & drainage
- controlling stray or domesticated animals

Older children should also be able to demonstrate how to collect stool sample for sending to laboratory centers in health centers or hospitals for examination of schistosomiasis worm.

What skills should children learn in keeping the environment clean?



REMEMBER:**1. Ways of protecting oneself from exposure to snail-infested waters:****Role-playing: How to protect oneself from infected snails (for younger children)**

Write scenarios for pupils to demonstrate ways of protecting them from being exposed to snail-infested waters. Call several children to act out the scenes you have prepared.

Process what happened during the role play. Emphasize the health message of protecting oneself from snail-infested waters:

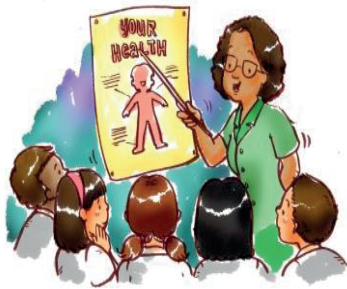
- wearing protective gear (rubber boots and gloves) when in snail-infested waters
- avoiding wading, washing, bathing or swimming in snail-infested waters
- using foot bridges over snail-infested waters

2. Ways of stopping the spread of schistosomiasis:**Poster-making: How to stop the spread of schistosomiasis**

Ask pupils to make posters on the following themes to stop the spread of schistosomiasis.

- proper waste disposal
- proper use of toilets
- use of safe water supply
- controlling snails thru cleaning of vegetation & drainage
- controlling stray or domesticated animals

Let each student show his/her poster and call another student to describe each poster. Highlight the key messages on how to stop the spread of schistosomiasis.



What attitude should children develop in preventing schistosomiasis?

Children should learn the value of protecting themselves from being exposed to a harmful environment. Using sanitary toilets and bathing only with clean water, can prevent the spread of disease. It is also important that they appreciate the importance of early disease detection and prompt treatment in order to stop the disease from getting worse, and prevent its transmission to other persons.

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