



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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Schistosomiasis

Schistosomiasis, also known as bilharzia, is a disease caused by parasitic worms. Schistosomiasis is a disease of poverty that leads to chronic ill-health. Infection is acquired when people come into contact with fresh water infested with the larval forms (cercariae) of parasitic blood flukes, known as schistosomes.

Transmission

The parasites that cause schistosomiasis live in certain types of freshwater snails. Freshwater becomes contaminated by *Schistosoma* eggs when infected people urinate or defecate in the water. The eggs hatch, and if certain types of freshwater snails are present in the water, the parasites develop and multiply inside the snails. The parasite leaves the snail and enters the water where it can survive for about 48 hours.

Schistosoma parasites can penetrate the skin of persons who are wading, swimming, bathing, or washing in contaminated water. Within several weeks, the parasites mature into adult worms and live in the blood vessels of the body where the females produce eggs. Most of the eggs are trapped in the tissues and the body's reaction to them can cause massive damage. Some of the eggs travel to the bladder or intestine and are passed into the urine or stools.

Urogenital schistosomiasis is caused by *Schistosoma haematobium* and intestinal schistosomiasis by any of the organisms *S. guineensis*, *S. intercalatum*, *S. mansoni*, *S. japonicum*,

and *S. mekongi*.

Signs and symptoms of schistosomiasis

Within days after becoming infected, you may develop a rash or itchy skin. Fever, chills, cough, and muscle aches can begin within 1-2 months of infection. Most people have no symptoms at this early phase of infection.

When adult worms are present, the eggs that are produced usually travel to the intestine, liver or bladder, causing inflammation or scarring. Children who are repeatedly infected can develop anemia, malnutrition, and learning difficulties. After years of infection, the parasite can also damage the liver, intestine, lungs, and bladder. Rarely, eggs are found in the brain or spinal cord and can cause seizures, paralysis, or spinal cord inflammation.

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

The classical sign of urogenital schistosomiasis is haematuria (blood in urine). In women, urogenital schistosomiasis may present with a range of signs and symptoms including lesions of the cervix and vagina, vaginal bleeding, pain during sexual intercourse and nodules in the vulva. In areas endemic for urogenital schistosomiasis a large proportion of women may have female genital schistosomiasis (FGS).

Genital schistosomiasis also affects men, inducing pathology of the seminal vesicles, prostate

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and other organs. This disease may also have other long-term irreversible consequences, including infertility. Bladder and ureteral fibrosis and hydronephrosis are common findings in advanced cases, and bladder cancer is also a possible late-stage complication.

Intestinal schistosomiasis has a nonspecific clinical picture of abdominal pain, diarrhoea, and blood in the stools. Liver enlargement is common in advanced cases, frequently associated with ascites and other signs of increased portal pressure. In such cases there may also be splenomegaly. Several million people all over the world suffer from severe morbidity as a consequence of schistosomiasis.

Epidemiology

Schistosomiasis is prevalent in tropical and subtropical areas, especially in poor communities without access to safe drinking water and adequate sanitation. It is estimated that at least 91.4% of those requiring treatment for schistosomiasis live in Africa.

Parasite species and geographical distribution of schistosomiasis

	Species	Geographical distribution
Intestinal schistosomiasis	<i>Schistosoma mansoni</i>	Africa, the Middle East, the Caribbean, Brazil, Venezuela and Suriname
	<i>Schistosoma japonicum</i>	China, Indonesia, the Philippines
	<i>Schistosoma mekongi</i>	Several districts of Cambodia and the Lao People's Democratic Republic
	<i>Schistosoma guineensis</i> and related <i>S. intercalatum</i>	Rain forest areas of central Africa
Urogenital schistosomiasis	<i>Schistosoma haematobium</i>	Africa, the Middle East, Corsica (France)

Schistosomiasis mostly affects poor and rural communities, particularly agricultural and fishing populations. Women doing domestic chores in infested water, such as washing clothes, are also at risk and can develop female genital schistosomiasis. Inadequate hygiene and contact with infected water make children especially vulnerable to infection.

Urogenital schistosomiasis is also considered to be a risk fac-

tor for HIV infection, especially in women.

Diagnosis

Schistosomiasis is diagnosed through the detection of parasite eggs in stool or urine specimens. Antibodies and/or antigens detected in blood or urine samples are also indications of infection.

Control and preventive chemotherapy

The strategy for schistosomiasis control aims to prevent morbidity in later life through regular treatment with *praziquantel*, which is currently the only recommended drug for infection and disease caused by the species of schistosome infecting humans. *Praziquantel* has been used successfully over the past 30 years to control schistosomiasis in many countries. The control of schistosomiasis is based on large-scale treatment of at-risk population groups, access to safe water, improved sanitation, hygiene education, and snail control.

Am I at risk?

If you live in or travel to areas where schistosomiasis occurs and your skin comes in contact with freshwater from canals, rivers, streams, ponds, or lakes, you are at risk of getting schistosomiasis.

How can I prevent schistosomiasis?

Avoid swimming or wading in freshwater when you are in countries in which schistosomiasis occurs. Swimming in the ocean and in chlorinated swimming pools is safe.

Drink safe water. Although schistosomiasis is not transmitted by swallowing contaminated water, if your mouth or lips come in contact with water containing the parasites, you could become infected. Because water coming directly from canals, lakes, rivers, streams, or springs may be contaminated with a variety of infectious organisms, you should either boil water for 1 minute or filter water before drinking it. Boiling water for at least 1 minute will kill any harmful parasites, bacteria, or viruses present.

Source:

Parasites - Schistosomiasis. Centers for Disease Control and Prevention. Available at : https://www.cdc.gov/parasites/schistosomiasis/gen_info/faqs.html
 Schistosomiasis. World health organization. Available at : <https://www.who.int/en/news-room/fact-sheets/detail/schistosomiasis>

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 19th - 25th Jan 2019 (4th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	341	1225	0	3	0	1	1	2	0	1	7	15	2	5	0	2	0	0	19	49	0	8	0	0	47	100	
Gampaha	177	724	0	0	0	1	0	0	0	10	0	3	0	0	0	0	0	0	19	46	1	2	3	14	48	100	
Kalutara	70	351	1	4	0	3	0	1	20	25	12	58	0	1	0	0	0	0	25	94	4	14	0	3	61	94	
Kandy	69	288	1	5	0	0	0	0	0	2	4	16	3	11	0	0	0	1	3	22	1	5	0	1	57	100	
Matale	17	62	0	2	0	0	0	0	0	0	3	12	0	0	1	2	0	1	6	13	1	2	12	44	60	100	
Nuwareliya	4	26	0	1	0	0	0	0	0	0	1	6	1	5	0	1	0	0	1	5	3	4	0	0	19	100	
Galle	30	130	2	3	0	1	0	1	0	0	3	23	3	11	0	1	0	0	11	37	1	6	0	1	66	96	
Hambantota	29	140	2	3	0	0	0	0	0	0	0	5	6	21	0	1	0	0	10	27	1	1	32	92	73	100	
Matarra	64	219	0	1	1	3	0	0	1	1	2	9	4	14	0	2	0	0	7	30	0	2	16	55	63	100	
Jaffna	190	900	4	14	1	2	0	1	1	1	2	9	35	117	0	0	0	0	2	15	1	3	0	0	25	93	
Kilinochchi	15	34	0	3	0	0	3	4	0	0	0	9	0	4	0	1	0	0	0	0	0	0	0	0	1	44	100
Mannar	3	27	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	50	100
Vavuniya	7	41	0	1	0	1	1	6	0	2	3	6	0	2	0	0	0	0	3	11	1	1	1	1	31	100	
Mullaitivu	2	13	0	2	0	0	1	1	0	0	0	2	0	2	0	0	0	0	0	0	0	0	1	0	1	60	63
Batticaloa	43	191	4	19	0	0	0	0	0	0	2	7	0	0	0	0	0	1	5	13	1	1	0	0	61	100	
Ampara	4	25	0	6	0	0	0	0	0	0	2	7	0	0	0	3	0	0	5	19	0	1	0	0	50	100	
Trincomalee	11	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0	37	79	
Kurunegala	44	215	1	8	0	4	0	1	0	0	4	26	1	4	5	7	0	0	27	66	0	7	25	81	56	100	
Puttalam	16	79	1	5	0	0	0	0	0	0	1	5	1	3	0	0	0	0	3	12	0	0	0	1	60	100	
Anuradhapura	25	64	0	3	1	3	0	0	0	0	2	26	3	4	0	2	0	0	23	54	3	4	6	44	37	100	
Polonnaruwa	7	38	0	5	0	1	0	0	0	0	0	10	0	1	0	2	0	0	13	35	0	4	4	23	58	97	
Badulla	12	79	1	6	0	1	0	1	0	3	7	31	3	11	4	4	0	0	5	21	5	19	0	2	61	100	
Monaragala	12	60	5	7	0	0	0	0	0	0	8	35	4	11	0	1	0	0	5	27	3	11	2	2	70	100	
Ratnapura	48	177	7	13	2	9	1	1	0	2	20	58	0	1	2	2	0	0	14	44	6	18	5	6	38	100	
Kegalle	41	150	0	3	1	2	0	0	1	14	4	15	1	3	1	1	0	0	10	42	0	1	1	2	57	100	
Kalmune	17	107	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	13	1	1	0	0	52	100	
SRILANKA	1298	5454	33	126	6	32	7	22	23	61	87	393	67	233	13	32	1	3	222	701	33	116	10	374	53	98	

Source: Weekly Returns of Communicable Diseases (WRCD).
 *T=Timeliness refers to returns received on or before 25th January, 2019 Total number of reporting units 353 Number of reporting units data provided for the current week: 343 C**=Completeness
 A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

19th – 25th Jan 2019 (4th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2019	Number of cases during same week in 2018	Total number of cases to date in 2019	Total number of cases to date in 2018	Difference between the number of cases to date in 2019 & 2018
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	00	01	00	00	02	01	08	04	100 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	02	02	01	00	03	01	00	00	01	10	06	28	29	- 3.4 %
Measles	02	01	01	02	01	00	00	00	00	07	06	17	29	- 41.3 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	02	00	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	02	00	04	0 %
Whooping Cough	00	01	01	00	00	00	01	00	00	03	00	08	01	700 %
Tuberculosis	54	17	04	03	00	00	00	01	17	132	169	641	631	1.5 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome
NA = Not Available

Number of Malaria Cases Up to End of January 2019,

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All are Imported!!!

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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