



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
Ministry of Health & Indigenous Medical Services

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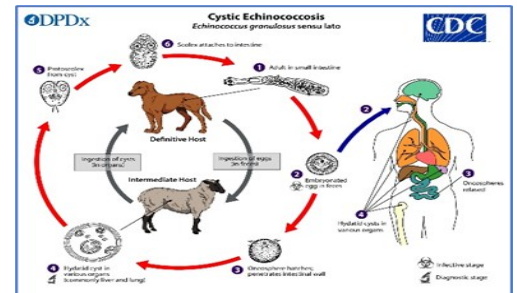
## Neglected Tropical Diseases - Dracunculiasis (Guinea-worm disease)

### Dracunculiasis (Guinea-worm disease)

Dracunculiasis is a parasitic illness at the brink of eradication, with only 54 cases reported in 2019. These 54 were reported from 4 African countries. The parasite enters the human body through ingestion of water contaminated with fleas that are infected with the parasite. The water fleas are killed in the stomach, liberating the larvae inside them. These larvae penetrate the intestine wall and migrate within tissues, and in the process grow to their full size (60-100cm). The fertilized adult female worm emerges from its exit –usually a lower limb, where it forms a painful blister. When infected persons immerse their legs in water to soothe the pain, the worm releases its larvae into the water. These larvae are ingested by tiny crustaceans known as water fleas, where they mature into their infective stage. This process takes about 10-14 months. Even though the disease is rarely fatal, it renders those who are infected non-functional for weeks. The disease has no specific treatment. It is however preventable. Successful preventive techniques such as a behavioural change, source control, environmental (water) sanitation, vector control and heightened surveillance has brought this crippling disease close to eradication

### Echinococcosis

Echinococcosis is a parasitic illness caused by a tape-worm species of the genus *Echinococcus*. A number of herbivorous and omnivorous animals serve as intermediate hosts of the parasite, while carnivorous animals act as definitive hosts. Humans are an accidental intermediate host,



which interprets as they acquire infection in the same way as other intermediate hosts but are not involved in transmitting the infection to the definitive host. The disease is transmitted to humans through ingestion of food, water or soil contaminated with the parasite eggs, or after direct contact with animal hosts. There are 4 forms of Echinococcosis, each caused by a different organism of the genus *Echinococcus*:

Form	Causative organism
cystic echinococcosis also known as hydatid disease or hydatidosis	<i>Echinococcus granulosus</i> ;
alveolar echinococcosis	<i>E. multilocularis</i>
neotropical echinococcosis	<i>E. vogeli</i>
unicystic	<i>E. oligarthrus</i>

The two most important forms, which are of medical and public health relevance in humans, are cystic echinococcosis (CE) and alveolar echinococcosis (AE). Infection with *E. granulosus* results in the development of one or more hydatid cysts in humans, most commonly in the liver and lungs. The cysts can grow for years undetected until they become large enough to produce symptoms. Cysts in the liver can result in abdominal pain, nausea and vomiting while

**WEB SRI LANKA 2020**

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those in lungs can lead to chronic cough, chest pain and shortness of breath. In infection with *E. multilocularis*, patients remain asymptomatic for 5-15 years, which is followed by the development of a slow growing tumour-like lesion, usually in the liver. The disease is detected by radiological investigations i.e. ultrasonography and X-ray. The disease requires complex treatment which includes: chemotherapy, percutaneous treatment of hydatid cysts; surgery is the definitive treatment.

With about 1 million prevalent cases worldwide at any given time, Echinococcosis exerts a substantial burden in affected countries. It is commonly seen in certain parts of South America, East Africa, Central Asia and China. Prevention and control of Echinococcosis is a challenging task as the disease is asymptomatic in animals which have the most contact with humans i.e. livestock and dogs. Cleanliness and proper sanitation during animal husbandry, deworming of dogs wherever possible are some examples of prevention and control.

**Foodborne trematodiasis**

Foodborne trematode infections are primarily zoonotic diseases caused by trematodes (i.e. flatworms/flukes) which are transmitted to humans through the consumption of food contaminated with the parasite. These worms have a complex lifecycle involving intermediate hosts such as molluscs, crustaceans and fish. The infections are mostly mild in humans; however, there are 4 genera that cause severe disease:

Genus	Disease
<i>Clonorchis</i> spp.	Clonorchiasis
<i>Opisthorchis</i> spp	Opisthorchiasis
<i>Fasciola</i> spp.	Fascioliasis
<i>Paragonimus</i> spp.	Paragonimiasis

Figure – food borne trematode infections with severe pathology in humans

fections with severe pathology in humans

These infections are commonly seen in East and South-East Asia, consistent with the diets containing raw fish and crustaceans in these regions. It is estimated that over 40 million people are affected world over. Adequate sanitation, behavioural change, especially with regard to culinary practices and source control by treatment (praziquantel) are the mainstay modes of prevention and control.

**Human African Trypanosomiasis (Sleeping Sickness)**

Sleeping sickness is a vector-borne parasitic disease caused by a protozoan belonging to the genus *Trypanosoma* and mainly transmitted by the bite of tsetse flies. These flies are a species of blood sucking flies which acquire the infection from infected humans/ other animals during feeding. Tsetse flies are commonly seen in agricultural and rural settings in Sub-Saharan Africa. The disease also exhibits other modes of transmission via blood and blood products as well.



Photo by Geoffrey M. Attardo

Figure- Tsetse fly

There are two types of the disease: i) *Trypanosoma brucei gambiense* which accounts for 98% of the reported cases; and ii) *Trypanosoma brucei rhodesiense*. The former causes chronic infection which can extend up to months or years without manifesting symptoms and signs, while the latter causes a more acute infection.

There are two stages in the disease course. In the first stage, known as the haemo-lymphatic stage, the organisms multiply within blood, lymph and subcutaneous tissues. This stage is characterized by the onset of bouts of fever, headache, lymphadenopathy, arthralgia and itching. The second stage, known as the neurological or meningo-encephalic stage, occurs when the organism crosses the blood-brain barrier and infects the central nervous system of the host. Changes of behaviour, confusion, sensory disturbances, poor coordination and disturbance of the sleep cycle are characteristic features of this stage.

Diagnosis of the disease is in 3 stages:

- Screening for potential infection by serological testing (only available for *T.b.gambiense*) and checking for clinical signs such as swollen cervical lymph nodes.
- Diagnosing by establishing whether the parasite is present in body fluids.

Staging to determine the state of disease progression. This consists of clinical examination and cerebrospinal fluid analysis. The mode of treatment is based on the stage of the disease: Pentamidine and Suramin are used in the first stage and drugs such as melarsoprol, eflornithine, nifurtimox are used in the second stage, while fexinidazole is a new drug which caters to both stages. Prevention and control depend mainly on vector control and surveillance.

**Compiled By**

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**References:**

World Health Organisation: Fact sheets on NTDs  
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<https://www.who.int/news-room/fact-sheets/detail/echinococcosis>  
[https://www.who.int/foodborne\\_trematode\\_infections/infections\\_more/en/](https://www.who.int/foodborne_trematode_infections/infections_more/en/)  
[https://www.who.int/news-room/fact-sheets/detail/trypanosomiasis-human-african-\(sleeping-sickness\)](https://www.who.int/news-room/fact-sheets/detail/trypanosomiasis-human-african-(sleeping-sickness))

Table 1: Selected notifiable diseases reported by Medical Officers of Health 01<sup>st</sup>-07<sup>th</sup> Aug 2020 (32<sup>nd</sup> 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	53	3585	0	22	0	9	0	5	0	14	3	226	0	2	0	3	0	0	1	185	1	34	0	2	56	100
Gampaha	31	2137	0	8	1	5	0	6	0	19	7	173	3	4	0	5	0	0	1	228	2	22	0	40	42	98
Kalutara	14	1519	0	10	0	5	0	4	0	4	15	490	0	13	0	5	0	0	3	254	0	33	0	0	51	100
Kandy	105	2494	0	21	0	1	1	9	2	13	7	166	0	82	0	4	0	0	1	142	0	21	2	55	63	100
Matale	4	527	1	7	0	3	0	5	0	6	2	87	0	6	0	7	0	1	0	47	0	2	7	221	63	100
NuwaraEliya	1	150	0	23	0	1	0	1	0	9	2	87	1	68	0	3	0	0	0	69	0	10	0	0	23	100
Galle	15	1485	0	27	0	17	0	4	0	14	19	500	3	48	0	3	0	0	2	279	2	43	0	4	30	99
Hambantota	3	317	0	7	0	4	0	2	1	44	1	169	3	46	0	2	0	1	0	155	1	38	18	495	68	100
Matara	3	464	0	21	0	14	0	1	0	3	4	382	2	10	0	7	0	0	1	114	1	17	11	288	16	100
Jaffna	6	1970	2	72	0	0	0	20	1	23	0	20	4	496	0	0	0	1	1	94	0	9	1	1	31	93
Kilinochchi	2	124	0	37	0	2	1	11	0	13	0	18	1	28	0	1	0	0	0	12	0	10	0	13	64	100
Mannar	0	130	0	0	0	0	0	1	0	2	0	6	0	2	0	0	0	0	0	2	1	7	0	0	39	100
Vavuniya	2	248	1	11	0	0	0	5	1	3	0	40	0	1	0	0	0	0	0	29	0	4	0	1	66	100
Mullaitivu	0	79	0	8	0	0	0	6	0	2	0	20	0	9	0	3	0	2	0	9	0	4	0	6	41	94
Batticaloa	6	2283	2	66	0	4	0	1	0	45	0	26	0	0	0	5	0	1	3	81	0	18	0	1	52	100
Ampara	0	303	1	15	1	4	0	0	0	0	0	79	0	0	0	2	0	0	0	99	0	15	0	4	67	100
Trincomalee	2	2268	0	12	0	0	0	0	0	2	0	28	3	9	0	0	0	0	0	81	0	8	0	0	46	92
Kurunegala	11	804	0	19	0	8	0	3	0	36	2	157	1	25	0	5	0	3	2	284	1	26	1	304	47	99
Puttalam	10	427	1	9	0	4	0	3	0	1	3	53	0	14	0	0	0	1	1	71	2	42	0	6	57	100
Anuradhapur	1	383	0	16	0	1	0	4	2	28	5	210	0	20	0	12	0	1	1	164	1	42	0	158	42	96
Polonnaruwa	1	221	0	5	0	0	0	0	0	5	1	116	0	1	0	17	0	1	0	117	1	14	1	179	62	89
Badulla	3	428	0	15	0	5	0	3	0	4	13	259	8	73	0	13	0	0	1	127	0	30	0	17	59	95
Monaragala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ratnapura	38	1658	2	69	0	23	0	5	3	32	26	1135	1	36	1	14	0	0	1	155	1	85	2	93	50	100
Kegalle	17	664	1	17	1	8	0	3	0	17	6	328	0	37	0	9	0	0	1	141	2	43	2	24	55	99
Kalmune	5	873	0	45	0	3	0	0	0	6	0	16	0	2	0	3	0	0	0	267	0	34	0	0	70	100
<b>SRILANKA</b>	<b>333</b>	<b>25541</b>	<b>11</b>	<b>562</b>	<b>3</b>	<b>121</b>	<b>2</b>	<b>102</b>	<b>10</b>	<b>345</b>	<b>11</b>	<b>4791</b>	<b>30</b>	<b>1032</b>	<b>1</b>	<b>123</b>	<b>0</b>	<b>12</b>	<b>20</b>	<b>3206</b>	<b>16</b>	<b>611</b>	<b>45</b>	<b>1912</b>	<b>49</b>	<b>95</b>

Source: Weekly Returns of Communicable Diseases (WRCD).

\*T=Timeliness refers to returns received on or before 07<sup>th</sup> Aug, 2020 Total number of reporting units 356 Number of reporting units data provided for the current week: 322 C\*\*=Completeness

**Table 2: Vaccine-Preventable Diseases & AFP**

**01st– 07th Aug 2020 (32nd Week)**

Disease	No. of Cases by Province									Number of cases during current week in 2020	Number of cases during same week in 2019	Total number of cases to date in 2020	Total number of cases to date in 2019	Difference between the number of cases to date in 2020 & 2019
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	01	01	00	26	47	- 46.8 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	00	00	00	00	00	00	00	00	11	116	224	- 46.7 %
Measles	00	00	00	00	00	00	00	00	00	00	08	35	223	- 83.7 %
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	03	13	- 76.9 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	02	00	00	00	00	00	00	31	10	210 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	05	36	- 86.1 %
Tuberculosis	31	08	08	00	04	00	05	00	15	71	138	3681	5255	- 29.9 %

**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

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.**

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@sitnet.lk](mailto:chepid@sitnet.lk). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

**ON STATE SERVICE**

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