



Leptospirosis Outbreak in Kerala

Source: DTE

Why in News?

Kerala has recently experienced a sigh of relief as the threat of a [Nipah virus outbreak diminished](#), with no new cases reported during the critical 42-day observation period.

- However, this respite has been overshadowed by the outbreak of [Leptospirosis](#), commonly known as "**rat fever**."
- This bacterial infection has emerged as a pressing public health concern, particularly in the wake of monsoon-related challenges.

What are the Key Facts About Leptospirosis?

- **About:** Leptospirosis is caused by pathogenic spirochaetes of the **genus *Leptospira***. These bacteria are [zoonotic](#), meaning they are transmitted from animals to humans.
 - **Leptospire**s are bacteria that can be pathogenic. Pathogenic leptospire s are found in the **kidneys and genital tracts** of certain animals and are the primary cause of leptospirosis in humans.
- **Reservoirs:** Many **mammalian species** can harbour leptospire s in their kidneys, with rodents, cattle, pigs, and dogs being common reservoirs.
 - Rodents are particularly significant as they **can excrete leptospire s throughout their lifespan without showing symptoms**.
 - Not all infected animals exhibit symptoms. **Natural hosts often show no or few ill effects**, but may develop illness after infection with another serovar (a distinct variation within a species of bacteria).
- **Transmission:** The disease is primarily transmitted through **direct contact** with the **urine of infected animals or through contact with water, soil**, or food contaminated with their urine.
 - It can enter the human body through cuts, mucous membranes, or waterlogged skin. Rarely, the disease can be transmitted from human to human.
- **Symptoms:** It presents with a wide range of symptoms, from mild flu-like illness to severe conditions like **Weil's syndrome** (dysfunction of the kidneys and liver), **meningitis**, and **pulmonary hemorrhage**.
 - The incubation period is typically 7-10 days, with symptoms such as fever, headache, and jaundice being common.
 - Leptospirosis is **often underdiagnosed due to its wide range of symptoms that mimic other diseases**, and limited access to diagnostic tests.
- **Epidemiology:** It is a global disease but is **most common** in [tropical and subtropical regions](#) with high rainfall.
 - It is particularly prevalent in **South-East Asia, with India, Indonesia, Thailand, and Sri Lanka** reporting most cases, especially during the rainy season.
 - People in occupations with frequent animal contact, such as farmers, veterinarians, and sewer workers, are at higher risk.
- **Prevention:** Prevention involves **controlling animal reservoirs**, avoiding contact with contaminated water or soil, wearing protective clothing, and maintaining good sanitation practices.
 - Dogs, pigs, and cattle can be vaccinated with serovar-specific vaccines. **Immunisation**

helps prevent disease but may not eliminate renal carriage.

- **Treatment:** It is treated with antibiotics, such as **penicillin G, doxycycline, and ceftriaxone.**

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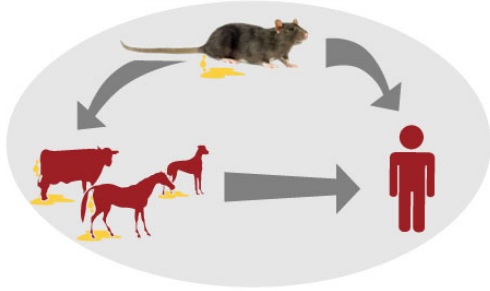
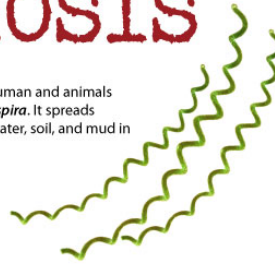




LEPTOSPIROSIS

What is leptospirosis?

Leptospirosis is a possibly fatal bacterial disease that affects human and animals alike. It is caused by spiral shaped bacteria of the genus *Leptospira*. It spreads through the urine of infected animals. It is prevalent in fresh water, soil, and mud in tropical areas.



How do humans get infected?

1. contact with urine (or other body fluids, except saliva) from infected animals
2. contact with water, soil, or food contaminated with urine of infected animals

How does it spread?

Rats and other rodents are the most common carriers of the bacteria but it can infect all kinds of wild and domestic animals including humans. The urine of these animals can contaminate soil and mud and can be spread rapidly to human populations through fresh water or flooding.

How do I prevent leptospirosis?



1. Do not swim or wade in water that might be contaminated with animal urine.



2. Do not come into contact with potentially-infected animals.



3. Wear protective clothes and equipment



4. Disinfect contaminated surfaces



5. Take the antibiotic prophylaxis (for exposed persons in high risk areas)

What are the possible complications of leptospirosis?

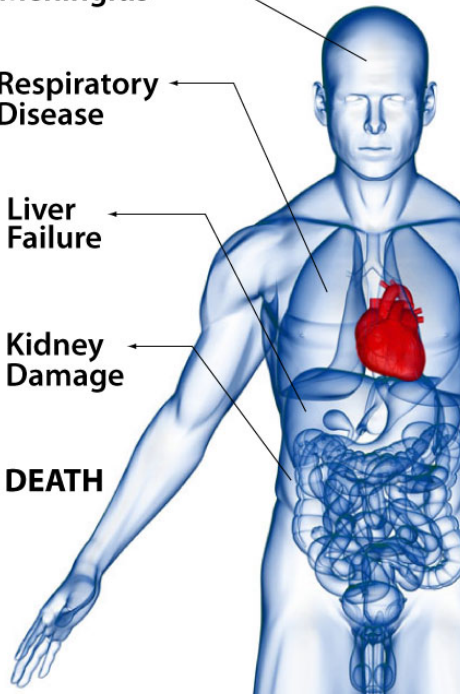
Meningitis

Respiratory Disease

Liver Failure

Kidney Damage

DEATH



What are the symptoms?

Symptoms usually occur 2 days to 4 weeks from time of exposure. Leptospirosis can cause a wide range of symptoms in humans, including:



High fever



Headache



Chills



Muscle aches



Vomiting



Jaundice
(yellow skin and eyes)



Red eyes



Abdominal Pain



Diarrhea



Rash

Note: Some infected persons may have no symptom, at all.



What if I'm infected?

If you or a loved one exhibits symptoms of leptospirosis, consult a doctor immediately.



How long is the recovery time?

The illness may last from a few days to 3 weeks or longer. When left untreated, it may take several months.

India's Initiatives Related to Leptospirosis

- **Programme for Prevention and Control of Leptospirosis:** Launched during the [12th Five-year Plan](#), this program aims to reduce the number of deaths and illnesses caused by leptospirosis.
- **One Health Approach:** This strategy integrates human, animal, and environmental health to control leptospirosis. [One Health Approach](#) emphasises the importance of a holistic approach to manage and prevent the disease.

Common Infections During the Monsoon

- Monsoon season in India brings a surge of infections like [Dengue](#), [Malaria](#), [Cholera](#), [Typhoid](#), [Flu](#), and **Fungal infections** due to waterlogging, with risks of dehydration and [mosquito-borne diseases](#).

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Consider the following statements: (2017)

1. In tropical regions, Zika virus disease is transmitted by the same mosquito that transmits dengue.
2. Sexual transmission of Zika virus disease is possible.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (c)