

## Weils Disease I Leptospirosis

Leptospirosis is a disease that can be passed from animals to humans. Leptospirosis is caused by bacteria of the genus *Leptospira*, (referred to as Leptospire) which infect a variety of wild and domestic animals. The animals can then spread the Leptospire in their urine. Common animal reservoirs (maintenance hosts) include rodents, cattle and pigs.

Human infection occurs through exposure to water or an environment contaminated by infected animal urine, and has been associated with a variety of occupations such as farming which can involve direct or indirect contact with infected urine or recreational pursuits. In the UK, such activities include canoeing, windsurfing, swimming in lakes and rivers, pot holing and fishing.

### **How do animals carry Leptospirosis?**

Infected animals carry the bacteria in their kidneys. They can excrete Leptospire in their urine for some time, and spread infection to other animals or humans coming into contact with the urine. Often the infected animal does not become ill. For example, both rats, which carry the type known as *Leptospira Icterohaemorrhagiae*, and cattle, which carry another strain (*L. hardjo*), appear ill.

### **How do humans become infected?**

Humans are considered to be a dead-end or accidental host of Leptospire. Infection may be acquired by direct or indirect contact with affected urine, tissues, or secretions. Leptospire enter the body through cut or damaged skin, but may also pass across damaged or intact mucous membranes, and the eyes.

### **What are the symptoms?**

Leptospirosis can be used to describe infections in both man and animals caused by any pathogenic strain of Leptospire. In humans it causes a wide range of symptoms, although some infected people appear healthy. All forms of Leptospirosis start in a similar way. Leptospirosis is an acute biphasic illness. Some cases may be asymptomatic or may present in the first phase with onset of a flu-like illness, with a severe headache, chills, muscle aches and vomiting. This is known as the bacteraemic phase, when the Leptospire spread through the blood to many tissues, including the brain. This phase may resolve without treatment. In some cases, an immune phase may return with a return of fever, jaundice (yellow skin and eyes), red eyes, abdominal pain, diarrhoea, or a rash. In more severe cases there may be failure of some organs, e.g. the kidneys, or meningitis. Generally, cases will recover within two to six weeks but some may take up to three months. After infection, immunity develops against the infecting strain, but this may not fully protect against infection with unrelated strains.

### **Diagnosis.**

As many of these symptoms are the same as for other diseases, diagnosis of Leptospirosis is based on clinical suspicion confirmed by laboratory testing of a blood sample. There is a specialist reference laboratory for Leptospirosis in the UK, which can be consulted by doctors.

### **How soon after the exposure do symptoms occur?**

Typically, symptoms develop seven to fourteen days after infection, though rarely the incubation period can be as short as two to three days or as long as thirty days.

### **How is Leptospirosis treated?**

Leptospirosis is treated with antibiotics such as penicillin or doxycycline, which should be given early in the course of the disease. Intravenous antibiotics may be needed for people with more severe symptoms.

### **Can Leptospirosis be prevented?**

There is no human vaccine available in the UK that is effective against Leptospirosis. For people who may be at high risk for short periods, especially through their occupation, taking doxycycline (200mg weekly) may be effective.

Ways to avoid contracting Weil's disease are very simple:

- Avoid capsizing or "rolling" in stagnant or slow moving water, particularly where rat infestation is obvious.
- Wash or shower after canoeing.
- Cover minor cuts and scratches with waterproof plasters before getting in your boat.
- Wear trainers or wetsuit boots to avoid cutting your feet.
- If you have flu-like symptoms after canoeing go to your GP and tell him you are a canoeist. **More**

**information can be found here:**

[www.hpa.org.uk](http://www.hpa.org.uk)