



## *X-Plain™* *Leishmaniasis*

### Reference Summary

Leishmaniasis is an infectious disease spread by the bite of infected sand flies. It is also known as Kala-Azar.

The infection can cause ugly skin sores if not treated. Internal infections can happen and are more serious.

Leishmaniasis can be treated. However, it is better to prevent it before it happens.

This reference summary discusses Leishmaniasis infections: their symptoms, diagnosis, treatment, and prevention.

#### **What is Leishmaniasis?**



Leishmaniasis infection is caused by the *Leishmania* parasite, a microscopic animal that can live inside sand flies.

Infected sand flies can bite people and give them the *Leishmania* parasite, which results in the disease Leishmaniasis.

Sand flies are very small and may be hard to see. They are only about one-third the size of typical mosquitoes. They fly without making any noise.

Sand flies become infected with the parasite by biting an infected animal such as a rodent, a dog, or biting an infected person. The infected sand flies can then spread the parasite by biting other animals and people.

Rarely, Leishmaniasis is spread from a pregnant woman to her baby. Blood transfusions or contaminated needles also can spread Leishmaniasis.

There are different types of Leishmaniasis. The most common form causes skin sores and is called cutaneous Leishmaniasis.

Another type is called visceral Leishmaniasis because it affects some of the internal organs of the body such as the spleen, liver, or bone marrow. The visceral type is more dangerous than the cutaneous type but it is more rare.

#### **Symptoms & Risks**

People with cutaneous Leishmaniasis usually develop skin sores within a few weeks of being bitten. Sometimes it takes months to develop the skin sores.

People with visceral Leishmaniasis usually become sick within several months of being bitten. Rarely, it may take years to develop the symptoms.

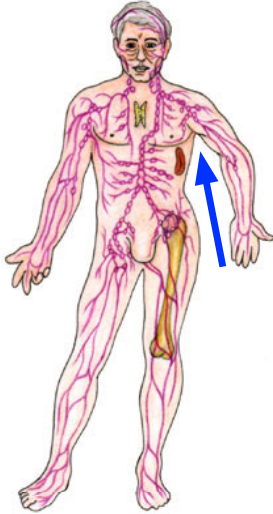
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People who have cutaneous Leishmaniasis have one or more sores on their skin.

The sores can change in size and appearance over time. They often end up looking somewhat like a volcano, with a raised edge and a central crater.

A scab covers some sores. The sores can be painless or painful.



Some people have swollen glands near the sores. For example the glands under the arm can swell if the sores are on the arm or hand.

The skin sores of cutaneous Leishmaniasis will heal by themselves, but this can take months or even years. The sores can leave ugly scars.

Visceral Leishmaniasis causes chronic exhaustion, brought on by fever, weight loss, swelling of the spleen and liver, and anemia . .If not treated, visceral Leishmaniasis kills the patient.

## Occurrence

Leishmaniasis is found in approximately 90 tropical and subtropical countries around the world and in southern Europe.

More than 90% of the world's cases of cutaneous Leishmaniasis are in Afghanistan, Algeria, Brazil, Iran, Iraq, Peru, Saudi Arabia, and Syria. The number of new cases of cutaneous Leishmaniasis each year in the world is about 1.5 million.

More than 90% of the world's cases of visceral Leishmaniasis occur in Bangladesh, Brazil, India, Nepal, and Sudan. The number of new cases of visceral Leishmaniasis is about half a million.

## Diagnosis

Diagnosing Leishmaniasis can be difficult. Sometimes the laboratory tests are negative even if a person has Leishmaniasis.

Your doctor will ask you about any signs or symptoms of Leishmaniasis you may have, such as skin sores that have not healed.

If you have skin sores, your doctor will likely want to take some samples directly from the sores. These samples can be examined for the parasite under a microscope.



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The doctor may also want to grow some cultures and do other tests to look for the infectious parasite, the organism that causes the infection.

A blood test for detecting antibodies to the parasite can be helpful, particularly for cases of visceral Leishmaniasis.

### **Treatment**

If you have been diagnosed with Leishmaniasis, your doctor will inform you what type of treatment is best for you. Treatments include injections, oral, local, or topical treatments.

Most people who have cutaneous Leishmaniasis do not need to be hospitalized during their treatment.

Vaccines and drugs for preventing infection are not yet available. To decrease the risk of being bitten, people should protect themselves from sand fly bites.

### **Prevention**

People can develop cutaneous Leishmaniasis more than once. This is why it is important to follow preventive measures even if a person had the infection before. The following are some recommended measures to decrease the risk of being bitten by sand flies:

Avoid outdoor activities from dusk to dawn, when sand flies are the most active. If you have to go outside, cover as much of your body as possible. For instance, you can wear long-sleeved shirts, long pants, and socks. Tuck your shirt into your pants.



Apply insect repellent on uncovered skin and under the ends of sleeves and pant legs. The most effective repellents are those that contain the chemical DEET.

Spray clothing with permethrin-containing insecticides. The insecticide should be reapplied after every five washings.

Spray living and sleeping areas with an insecticide to kill insects.

Using screens on doors and windows can reduce contact with sand flies. If you do not have window and door screens, bed nets can help.

### **For Travelers**

Travelers of all ages are at risk for Leishmaniasis if they live in or travel to these areas.

Leishmaniasis usually is more common in rural than urban areas, but it is found in the outskirts of some cities.

Adventure travelers, Peace Corps volunteers, and other persons who work outdoors at night are examples of those who might have an increased risk for Leishmaniasis, especially the

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cutaneous form. It is very rare for travelers to get visceral Leishmaniasis

Even persons with short stays in areas known to have infected sand flies can become infected.

See your health care provider, particularly if you have traveled to an area where Leishmaniasis is found and you have developed skin sores that aren't healing. Be sure to tell your health care provider where you have traveled and that you might be at risk for Leishmaniasis.

### **Summary**

Leishmaniasis is an infectious disease spread by the bite of infected sand flies.

The infection can cause ugly skin sores if not treated. Internal infections can happen and are more serious.

Leishmaniasis can be treated. However, it is better to prevent it before it happens.

This patient education tutorial suggests several preventive measures that aim at reducing the risk of being bitten by sandflies. For more information about Leishmaniasis, ask your doctor and healthcare provider.

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