



## **Leishmaniasis**

### **Frequently Asked Questions**

#### ***What is leishmaniasis?***

Leishmaniasis (LEASH-ma-NIGH-a-sis) is a parasitic disease spread by the bite of infected sand flies. There are several different forms of leishmaniasis. The most common forms are cutaneous leishmaniasis, which causes skin sores, and visceral leishmaniasis, which affects some of the internal organs of the body (for example, spleen, liver, and bone marrow). The number of new cases of cutaneous leishmaniasis each year in the world is thought to be about 1.5 million. The number of new cases of visceral leishmaniasis is thought to be about 500,000.

#### ***How is leishmaniasis spread?***

Leishmaniasis is spread by the bite of some types of phlebotomine sand flies. Sand flies become infected by biting an infected animal (for example, a rodent or dog) or person. Since sand flies do not make noise when they fly, people may not realize they are present. Sand flies are very small and may be hard to see; they are only about one-third the size of typical mosquitoes. Sand flies usually are most active in twilight, evening, and night-time hours (from dusk to dawn). Sand flies are less active during the hottest time of the day. However, they will bite if they are disturbed, such as when a person brushes up against the trunk of a tree where sand flies are resting. Rarely, leishmaniasis is spread from a pregnant woman to her baby. Leishmaniasis also can be spread by blood transfusions or contaminated needles.

#### ***What are the symptoms of cutaneous leishmaniasis?***

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 central crater. Some sores are covered by a scab. The sores can be painless or painful. Some people have swollen glands near the sores (for example, under the arm if the sores are on the arm or hand).

#### ***What are the symptoms of visceral leishmaniasis?***

People who have visceral leishmaniasis usually have fever, weight loss, and an enlarged spleen and liver (usually the spleen is bigger than the liver). Some patients have swollen glands. Certain blood tests are abnormal. For example, patients usually have low blood counts, including a low red blood cell count (anemia), low white blood cell count, and low platelet count.

### ***Where is leishmaniasis found?***

Leishmaniasis is found in parts of about 88 countries. Approximately 350 million people live in these areas. Most of the affected countries are in the tropics and subtropics. The settings in which leishmaniasis is found range from rain forests in Central and South America to deserts in West Asia. More than 90 percent of the world's cases of visceral leishmaniasis are in India, Bangladesh, Nepal, Sudan, and Brazil.

Leishmaniasis is found in some parts of the following areas:

- in Mexico, Central America, and South America -- from northern Argentina to southern Texas (not in Uruguay, Chile, or Canada)
- southern Europe (leishmaniasis is not common in travelers to southern Europe)
- Asia (not Southeast Asia)
- the Middle East
- Africa (particularly East and North Africa, with some cases elsewhere)

Leishmaniasis is not found in Australia or Oceania (that is, islands in the Pacific, including Melanesia, Micronesia, and Polynesia).

### ***How concerned should I be about leishmaniasis in Georgia?***

Leishmaniasis is extremely rare in Georgia. There has never been a locally-acquired case of leishmaniasis reported in Georgia. Although the risk of acquiring leishmaniasis is negligible, military personnel are returning to the United States and Georgia from areas where leishmaniasis is endemic. In response, health care providers should consider the possibility of cutaneous and visceral leishmaniasis in persons with appropriate clinical signs.

### ***What is the treatment for leishmaniasis?***

Travelers should be advised to consult with an infectious disease or tropical medicine specialist for diagnosis and treatment. The relative merits of various treatments can be discussed with the specialist. Physicians may consult with the Centers for Disease Control and Prevention to obtain information about the diagnosis and treatment of leishmaniasis. Additional information can be found on the CDC's Division of Parasitic Diseases' website:

<http://www.cdc.gov/parasites/leishmaniasis/index.html>.

### ***How can I prevent myself from being infected with leishmaniasis when I am traveling or stationed in an area where leishmaniasis is common?***

The best way for travelers to prevent leishmaniasis is by protecting themselves from sand fly bites. Vaccines and drugs for preventing infection are not yet available. To decrease their risk of being bitten, travelers should:

- Stay in well-screened or air-conditioned areas as much as possible. Avoid outdoor activities, especially from dusk to dawn, when sand flies are the most active.
- When outside, 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. ALWAYS FOLLOW the INSTRUCTIONS on the LABEL of the repellent. The most effective repellents are those that contain the chemical DEET (N,N-diethylmetatoluamide). The concentration of DEET varies among repellents. Repellents with DEET concentrations of 30-35% are quite effective, and the effect should last about 4 hours. Lower concentrations are recommended for use on children (no more than 10% DEET). Repellents with DEET should be used sparingly on children from 2 to 6 years old. For children 2 years old and younger, contact your primary health care provider before applying repellent. The American Academy of Pediatrics states that DEET-based repellents can be used on children as young as 2 months.
- Other repellents recommended for use by the CDC include those that contain Picaridin, PMD, and IR3535 ([http://dph.georgia.gov/sites/dph.georgia.gov/files/related\\_files/site\\_page/ADES Choo\\_sing\\_Repellents\\_2012.pdf](http://dph.georgia.gov/sites/dph.georgia.gov/files/related_files/site_page/ADES_Choo_sing_Repellents_2012.pdf)).
- Spray clothing, not skin, with permethrin-containing insecticides. The insecticide should be reapplied after five washings.
- Spray living and sleeping areas with an insecticide to kill insects.
- If you are not sleeping in an area that is well screened or air-conditioned, use a bed net and tuck it under your mattress. If possible, use a bed net that has been soaked in or sprayed with permethrin. The permethrin will be effective for several months if the bed net is not washed. Keep in mind that sand flies are much smaller than mosquitoes and therefore can get through smaller holes. Fine-mesh netting (at least 18 holes to the inch; some sources say even finer) is needed for an effective barrier against sand flies. This is particularly important if the bed net has not been treated with permethrin. However, it may be uncomfortable to sleep under such a closely woven bed net when it is hot.

**NOTE:** Bed nets, repellents containing DEET, and permethrin should be purchased before traveling and can be found in hardware, camping, and military surplus stores.

**Whom should I contact for more information?**

- For general information about leishmaniasis and surveillance for vector-borne diseases in Georgia, call your county health department or the Georgia Department of Public Health at 404-657-2588. You may also visit the Georgia Department of Public Health website at <http://dph.georgia.gov/>.
- For national leishmaniasis information, visit the CDC website at <http://www.cdc.gov/parasites/leishmaniasis/index.html>.
- For worldwide leishmaniasis information, visit the World Health Organization's website at <http://www.who.int/topics/leishmaniasis/en/>.
- Persons deployed previously to Southwest/Central Asia who have questions about their general health or leishmaniasis should contact the Deployment Health Clinical Center of the Department of Defense (866-559-1627) or visit <http://www.pdhealth.mil>.