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Travelers Beware: International Insect Diseases

General Recommendations

The diseases listed on this page are transmitted by insect bites. To reduce mosquito bites, travelers should:

- remain in well-screened areas
- use mosquito nets
- wear clothes that cover most of the body
- use insect repellents and/or flying insect killing spray, as described below

Insect Repellent: Travelers should take insect repellent with them to use on any exposed areas of the skin. The most effective repellents are those which contain 20-50% DEET, 15% Picardin or Kbr 3023, 30% oil of lemon eucalyptus/PMD, and 15% IR3535. Avoid applying › 30% DEET to the skin of children.

Flying Insect Sprays: Travelers should also purchase flying insect killing spray to use in living and sleeping areas during the evening and night. For greater protection clothing and bednets can be soaked in or sprayed with PERMETHRIN, which is an insect repellent licensed for use on clothing. If applied according to the directions, permethrin will repel insects from clothing for several weeks. Portable mosquito bednets, repellents, and permethrin can be purchased in hardware or back packing stores, and at the pharmacy at Cornell Health.

Insect Diseases

Filariasis (Bancroftian) – Central and South America, Africa, Indian Subcontinent, Asia: A parasitic round worm infestation transmitted through the bite of mosquitoes. Once inside a host, the worm lives in the lymph vessels and tissues; blockage may cause marked enlargement of the legs or other extremities (elephantiasis.) No vaccine is available.

Leishmaniasis – Central and South America, Africa, Indian Subcontinent, Europe: (cutaneous (skin), mucocutaneous (inside the mouth and nose), and visceral (kala-azur). Leishmaniasis is caused by a parasite protozoan transmitted by the bite of sand flies. Symptoms include fever, weakness, swollen spleen (kala-azar) and skin sores (cutaneous leishmaniasis). No vaccine, but treatment is available.

Onchocerciasis (River Blindness) – Central and tropical South America and Africa: A parasitic worm infestation transmitted by the bite of black flies. Symptoms include lumps under the skin, itchy rash, or eye lesions (potential blindness). No vaccine, but treatment is available.

American Trypanosomiasis (CHAGAS Disease) – South and Central America: American trypanosomiasis is caused by infection with a protozoal parasite transmitted by contact with the feces of the reduviid bug, also known cone nose or kissing bug, which infests mud, adobe, and thatch buildings. May cause fever or no symptoms during early stages. In later stages, heart disease and enlarged intestines may develop. Avoiding overnight stays in buildings infested with the reduviid bug eliminates risk. Blood transfusion may transmit this infection in some countries. No vaccine available. Treatment is limited.

African Trypanosomiasis (Sleeping Sickness) – West, Central, and East Africa: African trypanosomiasis is caused by infection with a protozoal parasite transmitted by the tsetse fly. Symptoms include a boil like sore at the site of the bite several days after the bite. Fever, headaches and severe illness follow. The main risk is for the traveler on safari in rural areas. No vaccine is available.

Bartonellosis (Oroya Fever) – South America: Bartonellosis is caused by infection with a rickettsia organism (an organism smaller than a bacteria) transmitted by the bite of a sand fly. Symptoms include exhaustion due to anemia, high fever, followed by wart like eruptions on the skin. No vaccine, but treatment is available.

Yellow Fever – Tropical South America and Africa: A viral infection transmitted by mosquitoes. Symptoms include fever, jaundice (yellowing of the skin) and hemorrhaging (bleeding). A vaccine is available, but no treatment exists.

Plague – Southeast Asia, Central Asia, South America, and Western North America: A bacterial infection transmitted by the bite of an infected flea or sometimes through exposure to plague infected animals or their tissue. Plague can be spread from person to person. Epidemic plague is generally associated with domestic rats.

Almost all of the cases reported during the decade were rural and occurred among people living in small towns, villages, or agricultural areas rather than in larger, more developed towns and cities. The bacterium may be introduced through flea bites or a cut or break in the skin during

exposure to rodents or rabbits. Classic plague symptoms include a very painful, usually swollen, and often hot to the touch lymph node, fever, and extreme exhaustion.

Relapsing Fever – South America, Africa, Asia, Western North America: A bacterial infection transmitted through the bite of either lice or ticks. Symptoms include fever, headaches, vomiting, diarrhea, enlarged liver or spleen, and a rash. If untreated, the fever can re-occur approximately every other week. No vaccine for prevention, but treatment is available.

Chikungunya Fever – Africa, Indian Subcontinent, Southeast Asia: Sporadic cases as well as large outbreaks have occurred in these areas. Chikungunya Fever is a viral infection transmitted by mosquitoes. Symptoms include fever, headache, nausea, rash, and the abrupt onset of pain in one or more joints. Deaths rarely occur, but residual joint stiffness can last for weeks or months. No vaccine is available. Treatment is limited.

Oropouche Virus Disease – Brazil, Panama, and Trinidad: Large outbreaks have occurred of this nonfatal viral infection which is transmitted by gnats or midges found in some urban areas of the Amazon Basin. Symptoms include abrupt high fever, severe headache, muscle and joint pain, nausea, and diarrhea. No vaccine is available. Treatment is limited.

Ross River Virus (Epidemic Polyarthritis) – Australia and a few South Pacific Islands: Ross River Virus infection is transmitted by mosquito bites. Symptoms include the abrupt onset of low grade fever, joint pain and a rash. After infection, a prolonged arthritis can occur, but generally the arthritis will clear up in weeks or months. No vaccine is available. Treatment is limited.

Congo-Crimean Hemorrhagic Fever – Eastern Europe, Central Asia, Indian Subcontinent and Africa: This viral infection is transmitted by the bite of an infected tick. Symptoms include sudden onset of fever, chills, aches and pains, headache and severe pain in the arms or legs. A rash may appear and internal bleeding occurs sometimes. The illness can be severe and deaths have been reported. No vaccine is available. Treatment is limited.

Lassa Fever, Rift Valley Fever, Ebola and Marborg Disease – Africa: These diseases are caused by viruses, and although they can cause severe illness, they are not a significant health problem to most travelers. Lassa Fever transmission is associated with rats, while Rift Valley Fever is transmitted via mosquitoes. In addition, these viruses can be transmitted through contact with an infected person or animal. No vaccines are available. Treatment is limited.

Zika Virus – Africa, Asia, The Caribbean, Central America, The Pacific Islands, South America: A virus spread mostly by the bite of an infected mosquito. Zika can be passed from a pregnant women to her fetus. Infection during pregnancy can cause certain birth defects. Many people infected with Zika virus won't have symptoms or will only have mild symptoms. Symptoms appear in approximately 1 of 5 infected. No vaccine or preventable drugs are currently available. Treatment is limited.

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