

Bugs and their Vectors

by Benjamin A. Solky, MD, and Jennifer L. Jones, MD. (Updated July 2015*)

| DISEASE | CAUSE | VECTOR |
|---|---|--|
| Acrodermatitis Chronica Atrophicans | Borrelia afzelii (Europe) | Ixodes ricinus |
| African Trypanosomiasis | Trypanosoma brucei gambiense (West Africa); Trypanosoma brucei rhodesiense (East Africa) | Tsetse fly (Glossina morsitans) |
| Babesiosis | Babesia microti | Ixodes dammini (scapularis) |
| Bacillary Angiomatosis | Bartonella hensalae Bartonella quintana | Domestic cats (Felis domesticus) or bites from cat fleas (Ctenocephalides felis); Human body louse (Pediculus humanus corporis) |
| Bovine Farcy | Nocardia Farcinica | Cattle |
| Carrion's Disease (Oroya Fever) | Bartonella bacilliformis | Lutzomyia verrucarum (sandfly) |
| Cat Scratch Disease | Bartonella hensalae | Ctenocephalides felis (cat flea) |
| Cercarial Dermatitis | Cercariae of Schistosomes (Non-human) | Snails |
| Chagas' Disease (American Trypanosomiasis) | Trypanosoma cruzi | Reduviid bug (assassin bug, kissing bug) |
| Chiclero Ulcer | Leishmaniasis mexicana | Lutzomyia flaviscutellata |
| Cutaneous Larva Migrans | Hookworms: Ancylostoma braziliense (cats) and Ancylostoma caninum (dogs) | Contact with animal feces |
| Cystercercosis Cutis | Taenia solium | Contaminated food |
| Dengue Fever | Arbovirus - RNA virus | Aedes aegypti (mosquito) |
| Dracunculiasis (Guinea Worm Disease, Medina Worm) | Dracunculus medinensis | Cyclops water flea in drinking water |
| Ehrlichiosis: Human Monocytic Human Granulocytic | Ehrlichia chaffeensis E. phagocytophila and E. equi | Tick bites: Amblyomma americanum (Lone star tick) Ixodes scapularis, I. pacificus |
| Elephantiasis Tropica (Filariasis) | Wuchereria bancrofti; Brugia malayi; Brugia timori | Culex, Aedes, and Anopheles mosquitos |
| Erysipeloid of Rosenbach | Erysipelothrix rhusiopathiae | Pigs, shellfish & turkeys |
| Glanders (Farcy) | Pseudomonas (Burkholderia) mallei | Horses, mules & donkeys |
| Leishmaniasis, New World | L. mexicana; L. braziliensis braziliensis L. braziliensis guyanensis; L. b. panamensis; L. amazonensis | Lutzomyia (Sandfly) |
| Leishmaniasis, Old World | L. tropica; L. major; L. aethiopia; L. infantum; L. donovani | Phlebotomus perniciosus (Sandfly) RESEVOIR: rodents (gerbils) |
| Loaiasis (Calabar, Tropical and Fugitive Swelling) | Loa loa | Chrysops species (Mango Fly or Deer Fly - Tabanid) |
| Lyme Disease | UNITED STATES: Borrelia burgdorferi EUROPE: B. garinii and B. afzelii | NE & MIDWEST U.S.: Ixodes scapularis (dammini) WESTERN U.S.: I. pacificus EUROPE: I. ricinus |
| Malaria | Plasmodium falciparum, P. vivax, P. ovale, P. malariae | Anopheles mosquito |
| Mediterranean Fever (Boutonneuse Fever, S. African Tick Bite Fever) | Rickettsia conorii | Rhipicephalus sanguineus (Dog Tick) |
| Melioidosis (Whitmore's Disease) | Burkholderia pseudomallei | Swamp Water |
| Myiasis | Dermatobia hominis (Botfly) Cordylobia species (Tumbu) | Mosquito |
| Onchocerciasis (River Blindness) | Onchocerca volvulus | Simulium species (Black Fly) |
| Plague | Yersinia pestis | Xenopsylla cheopis (Rat Fleas) |
| Rat-Bite Fever (Haverhill Fever, Sodoku) | Spirillum minor; Streptobacillus moniliformis | Rat Bites |
| Relapsing Fever | Borrelia duttonii, B. hermsii B. recurrentis | Ornithodoros tholozani/moubata (Tick) Pediculus humanus (Louse) |

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| Rickettsialpox | Rickettsia akari | Allodermanyssus sanguineus & Liponyssoides sanguineus (House Mouse Mites); RESEVOIR: Mus Musculus (house mouse) |
| Rocky Mountain Spotted Fever | Rickettsia rickettsii | Dermacentor andersoni, D. variabilis, & Amblyomma americanum (Lone Star Tick) |
| Schistosomiasis | S. mansoni, S. haematobium, & S. japonicum | Snails |
| Scrub Typhus (tsutsugamushi fever) | Rickettsia (Orientia) tsutsugamushi | Trombiculid red mite (Chigger) |
| Southern Tick-Associated Rash Illness (STARI) | Borrelia lonestari | Amblyomma americanum (Lone Star Tick) |
| Sparganosis | Spirometra (dog and cat tapeworm larvae) | Application or ingestion of infected flesh from frogs or snakes |
| Toxoplasmosis | Toxoplasma gondii | Cat feces & undercooked meat |
| Trench Fever | Bartonella quintana | Pediculus humanus corporis (body louse) |
| Trichinosis | Trichinella spiralis | Pig, bear, and walrus meat |
| Tularemia (Ochona's Disease, Deer Fly Fever) | Francisella tularensis | Wild rabbits Dermacentor andersonii (tick) Amblyomma americanum (Lone Star Tick) Chrysops discalis (deer fly) |
| Typhus, Endemic | Rickettsia typhi | Xenopsylla cheopis (Rat Flea) |
| Typhus, Epidemic | Rickettsia prowazekii | Pediculus humanus corporis (body louse) RESEVOIR: Glaucomys volans (Flying Squirrel) |
| Q Fever | Coxiella burnetii | Inhalation of tick feces |
| Weil's Disease | Leptospira interrogans icterohaemorrhagiae | Rat urine |
| West Nile Fever | Arbovirus (RNA-virus) | Culex (mosquito) |