

## SELECTED VECTORBORNE DISEASES

Disease	Onset & Symptoms	Agent	Reservoir	Mode of Transmission
Arthropodborne viral encephalitis	A group of acute inflammatory diseases of short duration involving parts of the brain, spinal cord and meninges. Signs and symptoms are similar but vary in severity.	SLE <- Flavivirus WEE <- Togavirus EEE <- Togavirus WNV <- Flavivirus	Unknown, thought to be birds and possibly small rodents	Transmission is by the bite of an infected mosquito. ( <i>Culiseta</i> & <i>Aedes</i> for EEE, <i>Citarsalis</i> for WEE, and <i>Culex tarsalis</i> and <i>pipiens</i> for SLE and WNV)
Campylobacter enteritis	3-5 days. Acute enteric disease of variable severity characterized by diarrhea, abdominal pain, malaise, fever, nausea & vomiting.	Bacteria <i>Campylobacter jejuni</i>	Swine, cattle, cats, dogs and other pets, rodents, birds (including poultry)	By ingestion of the organism in food or in unpasteurized milk or water; from contact with infected pets, esp. puppies and kittens. Possibly from cross-contamination of food.
Dengue Fever	5-6 days. An acute febrile disease characterized by sudden onset, fever for about 5 days and sometimes biphasic, intense headache, retro-orbital pains, joint and muscle pains and rash.	Flaviviruses	Man, together with the mosquito, is one; monkeys	By bite of infective mosquitoes, <i>Aedes aegypti</i> , <i>Aedes albopictus</i> , etc.
Lyme Disease	3-32 days after tick exposure. A spirochetal zoonotic disease, characterized by a distinctive skin lesion, systemic symptoms, polyarthritis and neurological, cardiac involvement occurring varying combinations.	<i>Borrelia burgdorferi</i>	Certain Ixodid ticks; deer, wild rodents and other animals maintain the cycle.	Tickborne
Malaria	12-30 days. The four human malaras can be sufficiently similar in their early manifestations. The most serious, falciparum malaria, may present chills, fever, sweats and headache -> shock, coma, etc.	<i>Plasmodium vivax</i> , <i>P. malariae</i> , <i>P. falciparum</i> , <i>P. ovale</i>	Man is the only important reservoir.	By bite of an ineffective female anopheline mosquito.
Plague	2-6 days. Initial response is commonly a lymphadenitis in the nodes (bubonic). Fever is usual. May progress to septicemia; dissemination by blood to diverse body parts including lungs (pneumonic).	<i>Yersinia pestis</i>	Wild rodents, lagomorphs (rabbits and hares)	Bite of an infected flea, especially <i>Xenopsylla cheopis</i> (oriental rat flea).
Q Fever	2-3 weeks. An acute febrile rickettsial disease; onset may be sudden with chills, headache, weakness, malaise and severe sweats; much variation in severity and duration. CFR <1% even untreated.	<i>Coxiella burnetti</i>	Cattle, sheep, goats, ticks and some wild animals.	Commonly airborne dissemination of rickettsiae in dust from premises contaminated by placental tissues, etc., also contact with wool, straw, etc.; some cases due to consumption of raw milk.
Rabies	2-8 weeks. An almost invariably fatal acute viral encephalomyelitis, onset with apprehension, headache, fever, malaise and indefinite sensory changes, paralysis, muscle spasms, delirium and convulsions.	Rabies virus	Many wild and domestic <i>Canidae</i> , including dogs, foxes, coyotes, wolves, also cats, skunks, bats, raccoons and other biting animals.	Virus-laden saliva of a rabid animal is introduced by a bite (or a fresh break in the skin) or very rarely by a scratch.

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Rocky Mountain Spotted Fever	3-14 days. Characterized by sudden onset with moderate to high fever (2-4 weeks), significant malaise, deep muscle pain, severe headache, chills and conjunctival infection.	<i>Rickettsia rickettsii</i>	Maintained in nature in ticks by transovarian and transtadial passage. Can be transmitted to dogs, rodents and other animals	Ordinarily by bite of an infected tick. Contamination of skin with crushed tissues or feces of ticks may also cause infection.
Salmonellosis	12-36 hours. Sudden onset of headache, abdominal pain, diarrhea, nausea, and sometimes vomiting. Fever is nearly always present.	<i>Salmonella typhimurium</i> , other <i>Salmonella</i> species	Domestic and wild animals including poultry, swine, cattle, rodents and pets (turtles, chicks, etc.)	By ingestion of the organism in food derived from infected animals or contaminated by feces, including raw eggs and egg products, poultry, meat and meat products, raw milk etc.; also pet turtles
Shigellosis	1-3 days. An acute bacterial disease involving large and small intestines, characterized by diarrhea accompanied by fever, nausea, and sometimes toxemia, vomiting and cramps.	<i>Shigella dysenteriae</i> ; <i>S. flexneri</i> , <i>S. boydii</i> , and <i>S. sonnei</i> .	Man is the only significant reservoir	By direct or indirect fecal-oral transmission from a patient or carrier. Infection may occur after ingestion of 10-100 organisms. Water, milk, cockroach and fly-borne transmission may occur.
Streptococcal Sore Throat	1-3 days. Strep throat patients frequently exhibit fever, sore throat, exudative tonsillitis or pharyngitis and tender anterior cervical lymph nodes.	<i>Streptococcus pyogenes</i>	Man	Direct or intimate contact with patient or carrier, rarely by indirect contact through objects or hands. Explosive outbreaks may follow ingestion of contaminated food, esp. milk, milk products, egg salads.
Tularemia	An infectious zoonotic disease. Most often presents as an indolent ulcer, often on the hand, accompanied by swelling of the regional lymph nodes.	<i>Francisella tularensis</i>	Numerous wild animals, especially rabbits, hares, muskrats, beavers and some domestic animals; hard ticks	Inoculation of skin, conjunctival sac or oropharyngeal mucosa with blood or tissue while handling infected animals (e.g., skinning, dressing, etc.)
Typhus Fever (Epidemic)	1-2 weeks. Onset is variable, often sudden and marked by headache, chills, prostration, fever, and general pains. CFR increases with age and varies from 10-40%	<i>Rickettsia prowazeki</i>	Man, possibly flying squirrel	Man is infected by rubbing the feces or crushed tissue of the body louse into a bite or abrasion. Inhalation of infected louse feces as dust may account for some cases
Typhus Fever (Murine)	1-2 weeks. The course of murine typhus fever resembles that of louse-borne typhus but is milder. CFR for all ages is about 2%.	<i>Rickettsia typhi</i>	Infection is maintained in nature by a rat-flea cycle.	Infective rat fleas (usually <i>Xenopsylla cheopis</i> ) defecate rickettsiae with sucking blood and contaminate the bite site and or fresh skin wounds.
Yellow Fever	3-6 days. An acute infectious disease of short duration and varying severity. Sudden onset, fever, headache, backache, prostration, nausea and vomiting. Jaundice. CFR < 5 - 50%.	Flavivirus	In urban areas, man and the <i>Aedes aegypti</i> mosquito.	By the bite of an infective <i>Aedes aegypti</i> mosquito.