

Arbovirus, Arenavirus, and Filovirus Diseases

Distinguishing Symptoms	Viral Agent or Disease	Family	Vector	Major Distribution*
Fever, malaise, headaches, myalgias				
Additional features: none	Colorado tick fever	<i>Reoviridae</i> (<i>Coltivirus</i>)	Ticks <i>Dermacentor</i> sp	Western US, western Canada
	Phlebotomus fever	<i>Bunyaviridae</i> (<i>Phlebovirus</i>)	Sand flies <i>Phlebotomus</i> sp	Mediterranean basin, Balkans, Middle East, Pakistan, India, China, eastern Africa, Panama, Brazil
	Venezuelan equine encephalitis	<i>Togaviridae</i> (<i>Alphavirus</i>)	Mosquitoes <i>Culex</i> sp	Argentina, Brazil, northern South America, Panama, Mexico, Florida
	Rift Valley fever [†]	<i>Bunyaviridae</i> (<i>Phlebovirus</i>)	Mosquitoes Several species	South Africa, eastern Africa, Egypt
Lymphadenopathy, rash	Dengue fever	<i>Flaviviridae</i>	Mosquitoes <i>Aedes</i> sp	Southeast Asia, West Africa, Oceania, Australia, South America, Mexico, Caribbean, US
	West Nile fever	<i>Flaviviridae</i>	Mosquitoes <i>Culex</i> sp	Africa, Middle East, southern France, Russia, India, Indonesia, US
	Chikungunya disease	<i>Togaviridae</i> (Mosquitoes	Africa, India, Guam, Southeast Asia, New

Arthralgia, rash		<i>Alphavirus</i>)	<i>Aedes</i> sp	Guinea, limited areas of Europe
	Mayaro virus	<i>Togaviridae</i> (<i>Alphavirus</i>)	Mosquitoes <i>Haemogus</i> sp	Brazil, Bolivia, Trinidad
	Ross River virus	<i>Togaviridae</i> (<i>Alphavirus</i>)	Mosquitoes <i>Aedes</i> sp	Australia, New Guinea, Solomon Islands, Samoa, Cook Islands
	Barmah Forest virus	<i>Togaviridae</i> (<i>Alphavirus</i>)	Mosquitoes <i>Aedes</i> sp	Australia
	Sindbis virus disease (Ockelbo disease, Karelian fever)	<i>Togaviridae</i> (<i>Alphavirus</i>)	Mosquitoes <i>Culex</i> sp	Africa, Australia, former Soviet Union, Finland, Sweden
	Yellow fever	<i>Flaviviridae</i>	Mosquitoes <i>Aedes</i> spp	Central and South America, Africa
	Dengue hemorrhagic fever	<i>Flaviviridae</i>	Mosquitoes <i>Aedes</i> sp	Southeast Asia, West Africa, Oceania, Caribbean
	Kyasanur Forest disease	<i>Flaviviridae</i>	Ticks <i>Haemaphysalis</i> sp	India
	Omsk hemorrhagic fever	<i>Flaviviridae</i>	Ticks <i>Dermacentor</i> spp	Russia
	Crimean-Congo hemorrhagic fever	<i>Bunyaviridae</i> (<i>Nairovirus</i>)	Ticks <i>Hyalomma</i> sp	Africa, southern and eastern Europe, India, China, Middle East, former Soviet Union
	Hantaan virus	<i>Bunyaviridae</i> (<i>Hantavirus</i>)	Rodent	Korea, Japan, China, Southeast

Hemorrhagic signs ‡				Asia, Europe
	Seoul virus	<i>Bunyaviridae</i> (<i>Hantavirus</i>)	Rodent	Korea, Japan, Europe
	Puumala virus (nephropathia epidemica)	<i>Bunyaviridae</i> (<i>Hantavirus</i>)	Rodent	Scandinavia, former Soviet Union
	Machupo virus	<i>Arenaviridae</i>	Rodent	Bolivia
	Junin virus	<i>Arenaviridae</i>	Rodent	Argentina
	Guanarito virus	<i>Arenaviridae</i>	Rodent	Venezuela
	Lassa fever virus	<i>Arenaviridae</i>	Rodent <i>Mastomys</i> sp	West Africa
	Lujo virus	<i>Arenaviridae</i>	Unknown	Zambia
	Marburg virus	<i>Filoviridae</i>	Human to human Monkey Bat	Zimbabwe, Kenya, Uganda, Democratic Republic of Congo, South Africa
	Ebola virus	<i>Filoviridae</i>	Human to human Monkey Bat	Zaire, Sudan Guinea, Liberia, Sierra Leone, Democratic Republic of Congo, Gabon, Côte d'Ivoire, Uganda
Noncardiogenic pulmonary edema	<i>Hantavirus</i> : Sin Nombre, Black Creek Canal, Bayou, New York-1, Rio Mamore	<i>Bunyaviridae</i> (<i>Hantavirus</i>)	Rodent	US (west of Mississippi River), Canada, Brazil, Bolivia, Paraguay, Argentina
Severe fever with thrombocytopenia syndrome (SFTS)	SFTS virus	<i>Bunyaviridae</i>	Ticks	China, Korea, Japan
Fever and CNS involvement				
				Atlantic and Gulf

Eastern equine encephalitis	<i>Togaviridae (Alphavirus)</i>	Mosquitoes <i>Culex</i> sp	coasts of US, Caribbean, upper New York, western Michigan
Western equine encephalitis	<i>Togaviridae (Alphavirus)</i>	Mosquito	US, Canada, Central and South America
West Nile virus	<i>Flaviviridae</i>	Mosquitoes <i>Culex</i> sp	Africa, Middle East, southern France, former Soviet Union, India, Indonesia, US
St. Louis encephalitis	<i>Flaviviridae</i>	Mosquitoes <i>Culex</i> sp	US, Caribbean
Venezuelan equine encephalitis	<i>Togaviridae (Alphavirus)</i>	Mosquitoes <i>Culex</i> sp	Argentina, Brazil, northern South America, Panama, Mexico, Florida
La Crosse encephalitis	<i>Bunyaviridae</i>	Mosquitoes <i>Aedes</i> spp.	North Central States, New York
Japanese encephalitis	<i>Flaviviridae</i>	Mosquitoes <i>Culex</i> sp	Japan, Korea, China, India, Philippines, Southeast Asia, Russia
Powassan virus	<i>Flaviviridae</i>	Tick	Eastern Canada, New York
Murray Valley encephalitis	<i>Flaviviridae</i>	Mosquitoes <i>Culex</i> sp	Australia, New Guinea
Kyasanur Forest disease	<i>Flaviviridae</i>	Ticks	India
Tick-borne encephalitis	<i>Flaviviridae</i>	Ticks <i>Haemaphysalis</i>	Europe, Balkans, Russia

			sp	
	Lymphocytic choriomeningitis	<i>Arenaviridae</i>	Rodents Organ transplantation	US, Argentina, Germany, Balkans

*Changes in climatic conditions can affect the geographic range of arboviruses by extending or contracting the habitats of their vectors.

† Rift Valley fever also causes hemorrhage, meningoencephalitis, and ocular disorders.

‡ The Seoul, Puumala, Dobrava, and Hantaan hantaviruses cause hemorrhagic fever with renal syndrome.

