
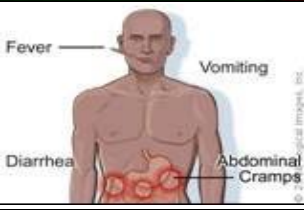
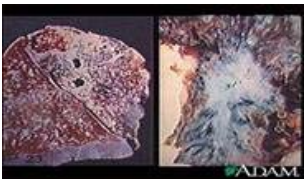


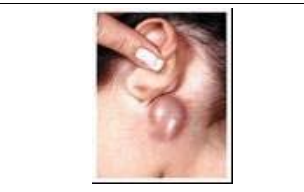





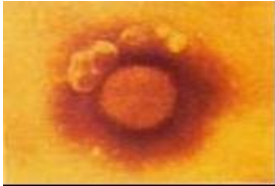
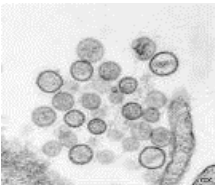



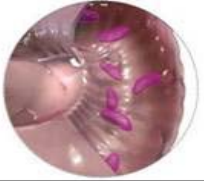



Zoonotic Diseases

Disease	Pathogen	Natural Host	Transmission	Symptoms	Incubation	Fact	Photo
Brucellosis	Bacteria	Infected animals (swine, cattle, goats, sheep, dogs)	Skin or mucous membrane contact with infected animals, their blood, tissue, and other body fluids	High and protracted (extended) fever. Infection affects bone, heart, gallbladder, kidney, spleen, and causes highly disseminated lesions and abscess	1-15 Weeks	Humans can contract Brucellosis from consuming unpasteurized milk, cheese, or ice cream	
Salmonellosis	Bacteria	Domestic (dogs, cats, monkeys, rodents, laboratory rodents, reptiles [especially turtles], chickens and fish) and herd animals (cattle, chickens, pigs)	Direct contact as well as indirect consumption (eggs, food vehicles using eggs, etc.). Human to human transmission also possible	Mild gastroenteritiis (diarrhea) to high fever, severe headache, and spleen enlargement. May lead to focal infection in any organ or tissue of the body	6 hours to 3 days	Fatality rate of 5-10%	
Tuberculosis	Bacteria	Primarily cattle, deer, and non-human primates	Inhalation of aerosol droplets, contaminated equipment, bites	Ranges from fever and fatigue to chronic pulmonary disease (fatal). Lungs, kidney, vasculature (affects all parts of body)	2-5 weeks	Multidrug-resistant TB (MDR TB) is an infection resistant to at least two first-line anti-TB drugs, isoniazid and rifampicin	
Leptospirosis	Bacteria	Dogs, rodents, swine, cattle	Direct contact with urine of infected dogs, mice or rats. Indirect contact with urine contaminated materials. Droplet transmission via aerosols of urine	Phase 1: headache, muscle ache, eye pain with bright lights, chills and fever. Phase 2: fever with stiffness of the neck and inflammation of the nerves to the eyes, brain, spinal column	7-12 days	Leptospirosis associated with human liver and kidney disease is called Weil's syndrome, characterized by jaundice	
Tularemia	Bacteria	Rodents, hares, rabbits, beavers, and muskrats	Arthropods, direct or indirect contact, ingestion of contaminated meats, inhalation of dust, materials contaminated with urine, feces or tissues, bites and scratches	High fever, chills, headache, focal ulcers, swollen lymph nodes, joint and muscle pain	1-10 days	There are less than 200 cases in the US per year	
Cat scratch disease	Bacteria	Cats	Scratch, lick, or bite	A blister or a small bump develops, Swelling of the lymph nodes, malaise, fever	1-2 weeks	Cat scratch disease occurs more often in the fall and winter	
Q-Fever	Bacteria	Cattle, sheep, and goats	Infection of humans usually occurs by inhalation of these organisms from air that contains airborne dust contaminated by dried placental material, birth fluids, and excreta of infected herd animals	high fevers (up to 104-105° F), severe headache, general malaise, myalgia, confusion, sore throat, chills, sweats, non-productive cough, nausea, vomiting, diarrhea, abdominal pain, and chest pain. Later pneumonia	2-3 weeks	Coxiella burnetii is a highly infectious agent that is rather resistant to heat and drying	

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Herpes B virus	Virus	Non-human primates	Bites, scratches, aerosols, needlesticks, splashes	Sinusitis, neck stiffness, headache, nausea, vomiting, respiratory failure, death	3-5 days	Herpes simiae is usually fatal if untreated.	
Monkeypox	Virus	Squirrels, non-human Primates (Cynomolgous monkeys), prairie dogs, gambian rats	Contact with blood and body fluids of infected animals	Fever, malaise, headache, severe backache, prostration, abdominal pain	10-14 days	There are no reported casses of transmission from captive, non-human primates to humans.	
Rabies Virus	Virus	Natural reservoir: bats. All mammals: wild animals (raccoons, rodents, foxes, etc.)and domestic animals (dogs, cats)	Animal bite, contact with infected saliva or tissue	Headache, fever, malaise, nervousness, dilation of pupils, salivation, excessive perspiration,insomnia, paralysis of throat muscles, inability to swallow, convulsions, seizures, generalized paralysis and death	3-8 weeks	Worldwide: 40,000-60,000 human deaths per year. US: usually less than 3 cases per year	
Arboviral infections	Virus	Ticks, insects, infected animals (deer, birds, rodents, etc.)	Ticks, insects, blood transfusion	Various: viremia, lymphadenapothy leading to systemic infection. Can involve CNS (encephalitis), skin/bone marrow/blood vessels (hemorrhagic fevers)	Multiple Ranges; 14-25 days (Avg. 18 days) post infection	Causes: Rift Valley fever, Denque fever, Yellow fever; Sandfly (Hantavirus) fever; Omsk hemorrhagic fever, and West Nile virus infections	
Lymphocytic Choriomeningitis (LCM)	Virus	Rodents (hamsters, mice, guinea pigs), and monkeys	infected mice excrete virus in saliva, urine and feces; man infected through inhalation of aerosolized particles of (urine, feces or saliva) contaminated with virus	Biphasic febrile illness, mild influenza like illness or occasionally meningeal or meningoencephalomyelitic symptoms, transverse myelitis	15-21 days	46 documented laboratory-acquired cases with 5 deaths; cases also reported arising from contaminated cell lines	
Hantavirus	Virus	Rodents	contact with infected rodents or their urine and feces	Fever, Chills, headache, muscle pain in shoulders, lower back, and thighs, nausea, vomiting, diarrhea, dizziness, and respiratory disease	1-6 weeks	Deer mice, and cotton rats are the main carriers of hantavirus in the United States. Hantavirus is rare but serious. 50% mortality rate despite medicine care.	
ORF	Virus	Sheep, Goats	Contact with infected animal or fomites	Skin lesions on hands, sore mouth red to blue papules	3-7 days	Scabs of infected animals contain virus which can fall off & remain in the environment	

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Toxoplasmosis	Parasite (protozoa)	Amazing lack of host specificity. Primates, carnivores (felines), rodents, birds, undulates	Inhalation of oocysts;-contact with soil containing contaminated cat feces	Localized lymphadenopathy accompanied with fever, sore throat, rash, pneumonitis, myocarditis, and encephalitis	10-23 days following ingestion of contaminated meats, or inhalation of aerosols	Affects one third of the human race. Especially infective to immunosupressed individuals. Can also be contacted by consuming under-cooked infected meats; ingestion of oocysts in milk, food or water;	
Toxocariasis	Nematode	Pigs; dogs and cats are the definitive host	Ingestion of embryonated eggs	Systemic are mostly asymptomatic, can cause coughing, fever abdominal pain, headache, visceral larval migrans, and ocular larval migrans	4 to 8 weeks	Eggs take 10-14 days to become infective and can survive from months to years depending on weather conditions.	
Strongyloidiasis Thread Worm	Nematode	Dogs, cats, monkeys	Careless handling of contaminated fecal materials	Abdominal pain, diarrhea, and rash. Less commonly, nausea, vomiting, weight loss and cough. Severe infection can cause severe tissue damage of various tissues in the body and potential death.	Skin 7 hours Lung 1 week Intestines 2 weeks Average 4-21 days	The parasite penetrates the skin and migrates to the lungs. Then it travels up to the mouth and intestinal track	
Ringworm	Fungus	Dogs, cats, sheep, cattle	skin-to-skin contact	ring-shaped rash, itchy red rash, bald patches in scalp or beard	4-14 days	The most common zoonotic disease transferred from animals to humans.	
<p>In a research setting, animals that are not normally a natural host may be intentionally infected with an organism to cause disease in the animal. While not a true zoonotic disease by definition, the disease may still be transmitted from animals to humans. (i.e. Rodents infected with M.tuberculosis).</p>							