

ZOOBOTIC AGENTS OF CONCERN IN NONHUMAN (NH) PRIMATES

| Zoonotic Disease and Agent | Host | Transmission | Incubation Period (Time from exposure to onset of symptoms). | Signs/Symptoms |
|--|--|---|--|---|
| B Virus Cercopithecine herpesvirus 1 | Monkeys | Exposure to contaminated saliva (bites) or other infectious materials, scratches, percutaneous exposures. Aerosol transmission is not believed to occur. | 2 days – 1 month | After exposure, a vesicle forms at the site of inoculation. Generalized weakness, fever, headache and fatigue are followed by progressive neurological problems with numbness, difficulty walking and swallowing and confusion. |
| Balantidiasis <i>Balantidium coli</i> | NH primates can harbor the agent enterically | Fecal–oral route. | Unknown, probably 3 – 4 days | Most humans have a high natural resistance to this agent. Diarrhea, abdominal pain, straining to defecate, nausea and vomiting can occur in severe cases. |
| Campylobacteriosis (Vibriosis) <i>Campylobacter jejuni</i> <i>Campylobacter fetus</i> | Many animal species | Fecal–oral route. | <i>C. jejuni</i> 1 – 10 days <i>C. fetus</i> unknown | <i>C. jejuni</i> – Watery diarrhea, sometimes with mucus and blood, abdominal pain, fever and nausea and vomiting), usually brief and self-limiting. <i>C. fetus</i> – Chills, sweats, fever, cough, headache, weight loss, and abortion in the latter half of pregnancy. |
| Cat Scratch Fever <i>Bartonella henselae</i> | Monkeys have been implicated | Usually associated with a bite or scratch from a young animal. Fleas can serve as a vector. | 3 – 14 days | Several days following exposure, a small, reddened, raised area appears at the site of inoculation. This is followed by vesicle and scab formation. Within a few days to a week, the lesion resolves. Weeks later, regional lymph nodes can enlarge and stay enlarged for months. Fever, anorexia, and headaches can be present. Severe disease can occur in immunocompromised hosts. |
| Cryptosporidiosis <i>Cryptosporidium</i> spp. | Many animal species | Fecal – oral route. May involve contaminated air. | 3 – 7 days | Characterized by cramping, abdominal pain, profuse watery diarrhea, anorexia and weight loss. Immunosuppressed people may develop severe disease. |
| Dermatomycosis Ringworm <i>Microsporum canis</i> , <i>Trichophyton</i> spp. | Many animal species | Direct skin–to–skin contact with infected animals or indirect contact with contaminated equipment or materials. | 4 – 14 days | Dermatophytes grow in keratinized tissue (skin, hair, nails, horns and feathers), characterized by focal, flat, spreading circular lesions that are clear in the center and crusted, scaly and reddened at the periphery. Invasive, systemic infections have been reported in immunocompromised people. |
| Giardiasis <i>Giardia</i> spp. | Many animal species | Fecal – oral route. | 1 – 4 weeks | Anorexia, nausea, abdominal cramps, bloating and chronic, intermittent diarrhea are often seen. |
| Hepatitis Hepatitis A, B, C, D, and E Viruses | NH primates | HAV: fecal – oral route. Only 1 case of natural infection in NH primates has been reported for the other hepatitis viruses, which are transmitted by infected blood or blood product contact with non-intact skin or mucous membranes. | HAV – 1 month | HAV – Abrupt onset of fever, generalized weakness, anorexia, nausea and abdominal discomfort, followed in a few days by jaundice. |
| Leptospirosis <i>Leptospira interrogans</i> | Many animal species | Through non-intact skin and mucous membranes. Often related to direct contact with urine or tissues of infected animals. Inhalation and ingestion may also be routes. | 2 – 30 days, usually 7 – 12 days | Fever with sudden onset, headache, chills, generalized weakness, and may result in conjunctival suffusion (reddened, watery eyes). |
| Listeriosis <i>Listeria monocytogenes</i> | Many animal species | Through the placenta or milk (ingestion). Also by direct contact. Shed in feces and milk of carriers. | Uncertain, probably a few days to 3 weeks. | Infection is usually not obvious except in neonates. Fever with neurologic or respiratory tract disease. May see abortion, reddened eyes and pustular skin lesions. |
| Lymphocytic Choriomeningitis Virus (LCMV), Arenaviridae family | NH primates | Parenteral inoculation, inhalation and contamination of mucous membranes or broken skin. Transmission can occur <i>in utero</i> and potentially by infected ectoparasites. | 1 – 3 weeks. | Influenza – like illness characterized by fever, generalized weakness, and headache. In severe cases, a discolored skin rash and enlarged lymph nodes can develop. |

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| Measles Rubeola | NH primates | Highly communicable, transmitted via infectious aerosols, contact with nasal or throat secretions or contact with fomites freshly contaminated with infectious secretions. | 10 days | Fever develops followed by reddened eyes, nasal discharge, cough and spots inside the mouth. Later, a characteristic red rash develops, beginning on the face and becoming generalized and sometimes ends in flaky desquamation. |
| Pastuerellosis <i>Pasteurella</i> spp. | Many animal species | Animal bite or scratch, inhalation, non-intact skin contamination from infected tissue and ingestion. | For a wound infection –more than 24 hours. Unknown for other routes. | Wound infection – local redness, swelling, severe pain, occasionally mild fever and regional lymph node swelling. Upper and lower respiratory tract infections, and abdominal/pelvic infection are possible with signs related to the area that is affected. Septicemia – infrequent form of infection, fever, generalized signs. |
| Poxviruses Orthopox family | NH primates | Direct contact with infected animals or contaminated fomites. | Monkeypox: 7 – 21 days Tanapox: unknown | Monkeypox – fever, generalized weakness and muscle aches, headache, severe backache, absolute exhaustion, generalized rash and occasional abdominal pain. Tanapox – fever of 3 – 4 days duration, possibly with headache, backache and extreme exhaustion, followed by eruption of one or two lesions on the face, arms neck or trunk. |
| Rabies | <i>Please refer to the Rabies Facts Sheet</i> | | | |
| Salmonellosis <i>Salmonella</i> spp. | Many animal species | Fecal – oral route (ingestion of contaminated food or water or by direct contact with infected animals). | 6 – 72 hours, usually 12 – 36 hours | Focal infections can be localized in any tissue of the body with signs related to the area of infection. Infection causes an sudden onset of headache; abdominal pain, diarrhea and sometimes vomiting. Immunosuppressed people are at extra risk.. |
| Shigellosis <i>Shigella</i> spp. | NH primates | Fecal – oral route. | 1 – 4 days | Acute onset of diarrhea with fever, nausea and sometimes vomiting, tenesmus, and cramps. Diarrhea is often watery, with blood, mucus and pus. Infection can be severe in the immunosuppressed. |
| Simian Immunodeficiency Virus Lentivirus family | Rhesus monkeys and other Macaques | Direct contact of non-intact skin or mucous membranes with infectious material. | Unknown | No clinical signs have been recorded. |
| Tetanus | <i>Please refer to the Tetanus Facts Sheet</i> | | | |
| Tuberculosis <i>Mycobacterium</i> spp. | Many animal species | Aerosols from infected animals or tissues, ingestion or wound contamination. | 4 – 12 weeks. | Most common form reflects involvement of the pulmonary system and is characterized by cough, sputum production and eventually coughing up blood. Extrapulmonary forms of the disease can involve any tissue or organ system. General symptoms as the disease progresses include weight loss, fatigue, fever, chills and wasting. |

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