

Infectious Diseases of Rabbits (Four Ways to Kill the Easter Bunny)

| Disease | Rabbit Hemorrhagic Disease Virus (RHDV) | Myxomatosis | Tularemia | Rabies |
|------------------------|--|--|--|--|
| Etiologic Agent | Highly contagious calicivirus Nonenveloped RNA virus | Myxoma Virus *Bush rabbit is the natural host | <i>Francisella tularensis</i> Gram negative | Rabies virus (Lyssavirus) |
| Transmission | Contact between rabbits Contaminated material (plants, shoes, etc.) Hunting equipment/activities Contact with infected rabbit meat, fur, blood, or urine | Biting arthropod vector (infected) bites a house rabbit Can be direct from an infected wild rabbit if there is close contact | Blood Urine Feces Respiratory Secretions Ticks are a vector as well as other biting arthropods | Raccoons and other infected animals |
| Pathophysiology | Target organ = Liver Secondary DIC and clinical hemorrhage | MYXV travels through the lymph nodes | Rapid multiplication of pathogen and septicemic disease | Virus enters saliva from a bite and spreads via retrograde transport |
| Clinical Signs | Icteric MM Bleeding | Skin nodules in wild rabbits Facial swelling, fever, LYMPHADENOPATHY and death in house rabbits May also have a secondary bacterial infection | Death Fever Lymphadenopathy | Paralytic/dumb form Sudden Death Neurologic signs |
| Diagnostics | Thrombocytopenia, leukopenia Increased Liver Enzymes Increased Bilirubin/Bile Acids Increased PT,PTT, D-Dimers Confirmatory tests NOT available to practitioners | Non-specific inflammation Non specific findings on Chem FNA: Reactive lymphoid tissue #notlymphoma Histology: Myxomatous cells in the dermis | Culture | Post-mortem brain histology analysis |
| Prognosis | >80% mortality Rate | 100% mortality rates for California myxomatosis | Very high mortality rate If caught early, treat with antimicrobials and aggressive therapy | 100% mortality rate |
| Prevention | Vaccination and Biosecurity Measures | Vaccine but not available in the USA because of the localized region where we see Myxomatosis | Keep rabbits indoors and practice good biosecurity and pest control | Keep rabbits indoors Vaccinate |
| Additional Info | Notifiable disease by the USDA | Notifiable disease by the USDA | Reportable at the state level Potential for zoonosis | Potential for zoonosis |