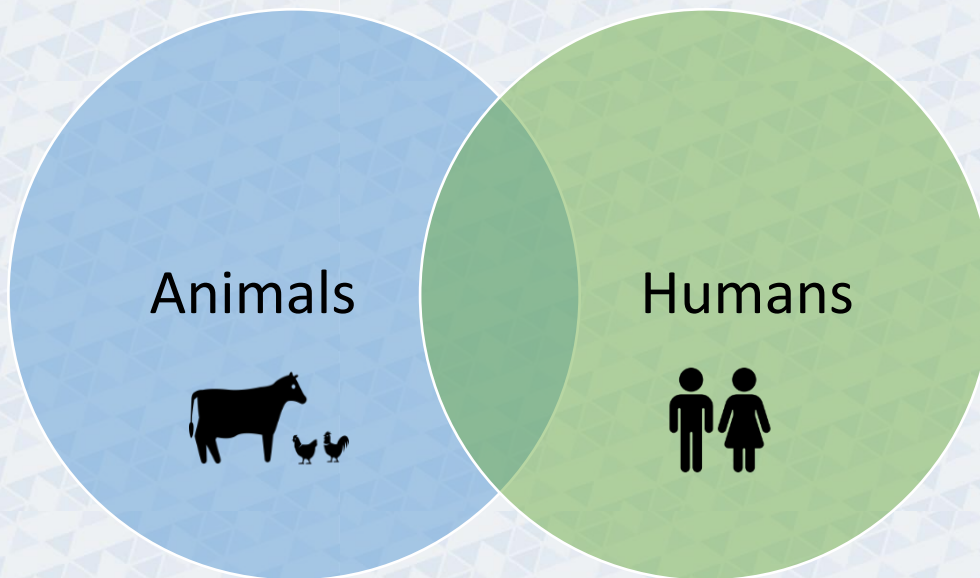


One Health: Common Zoonotic Infections



- **Zoonotic infections** are those that can be transmitted between animals and humans
- **One Health** is a collaborative approach between sectors and disciplines with the goal to achieve optimal health outcomes while recognizing the interconnection between people, animals, plants, and their shared environment



- **Salmonella bacteria** can cause infectious diarrhea, with onset ranging from six hours to six days following exposure
- **Antibiotics are not recommended for most patients**
- *Salmonella* infections have been linked to foodborne outbreaks and are associated with poultry, eggs, unpasteurized dairy products, fruits, and vegetables
- Symptoms typically last 4-7 days
- A diagnosis can be made with a stool culture or nucleic acid amplification tests
- Adequate hydration is the most important treatment
- For those with immunocompromise and certain other conditions, consider treatment with ceftriaxone or ciprofloxacin as first-line therapies (click [here](#) for more information)

- **Rabies virus** is most common in raccoons, skunks, bats, and foxes in the United States
- If infected with rabies, symptoms may not initially occur. If symptoms occur, they can be similar to influenza but can progress to confusion, seizures, and death
- A two-dose rabies vaccination series (Imovax or RabAvert) is available for prevention in those at high risk
- If exposed to rabies, **post-exposure prophylaxis with rabies immune globulin (Imogam Rabies-HT, HyperRAB, or Kedrab) and vaccine (Imovax or RabAvert) should be given as soon as possible** after the exposure with additional doses of the vaccine on days 3, 7, and 14



- **Lyme disease** is most commonly caused by the bacteria *Borrelia burgdorferi*, which can be transmitted by the blacklegged tick if it is attached to a human for at least 24 hours
- The highest incidence of Lyme disease is in the Northern and Eastern United States
- A single dose of doxycycline can be considered for post-exposure prophylaxis after a high-risk tick bite, but is most effective within 72 hours after tick removal
- Symptoms include fever, headache, fatigue, and a characteristic 'bullseye' rash – examples of the cutaneous presentations can be found [here](#)
- **Doxycycline is the recommended antibiotic** for the treatment of Lyme disease, including for children of all ages, with amoxicillin and cefuroxime as alternatives



- **West Nile virus** is the leading cause of mosquito-borne disease in the United States
- The states with the highest incidence as of 2012 include Arizona, New Mexico, Nebraska, North Dakota, South Dakota, and Colorado
- The best way to prevent contracting West Nile virus is to minimize exposure to mosquitos and use repellants
- Most people with West Nile virus don't have symptoms, but those who do experience general symptoms such as fever, body aches, and vomiting
- Although rare, West Nile virus can cause central nervous system infections
- There are **no vaccines to prevent or medications to treat** West Nile virus



References:

<https://www.cdc.gov/salmonella/general/technical.html>

https://www.cdc.gov/lyme/resources/NCEZID_rash_poster3r1-508.pdf

Last reviewed: October 2023