



ZOONOSES

What Are Zoonoses?

A. Diseases that are transmitted between humans and animals

120 known Zoonoses

Risk of contracting disease varies depending on the disease and situation

B. Focus on farming

Working on farms increase risks — why?

- Shared space and shared air with many animals
- Increased contact with animals
 - ✓ Domestic
 - ✓ Wild

Animals may appear to be healthy but carry infectious diseases

- What kinds of animals transmit zoonoses?
 - ✓ Cattle
 - ✓ Swine
 - ✓ Goats
 - ✓ Cats
 - ✓ Dogs
 - ✓ Ticks
 - ✓ Squirrels
 - ✓ Raccoons
 - ✓ Other wild animals
- How are diseases transmitted?
 - ✓ Every day contact
 - ✓ Transporting carcasses
 - ✓ By-products (feces/urine)
 - ✓ Scratches or bites
 - ✓ From milk and from milking
 - ✓ Contaminated soil
 - ✓ Contaminated meats

More Common Zoonotic Diseases

A. Campylobacter

Common carriers

- Cattle
- Sheep
- Pigs
- Dogs
- Rodents



- Poultry

Transmission

- Direct contact with contaminated food
- Contaminated animals

Clinical presentation

- Stomach ache
- Nausea
- Headache
- Diarrhea

B. Cat-scratch Disease

Common sources

- Cats
- Dogs

Transmission

- Scratches and puncture wounds from infected animals

Clinical presentation

- Fever
- Skin papule
- Swollen lymph nodes

C. Salmonellosis

Common carriers

- Cattle
- Cats
- Dogs
- Horses
- Poultry

Transmission

- Direct contact with animal or feces
- Food contamination from infected animals

Clinical presentation

- Chills
- Fever
- Headache
- Diarrhea
- Vomiting

D. Encephalitis

Common carriers

- Horses
- Rodents

Transmission

- Mosquito bite
- Tick bites

Clinical presentation

- Lethargy



- Fever
- Headache
- Disorientation

E. Rabies

Common sources

- Cats
- Dogs
- Raccoons
- Skunks
- Bats
- Foxes

Transmission

- Animal bites
- Contact with infected tissue, fluids or feces

Clinical presentation

- Fever
- Headache
- Agitation
- Confusion
- Seizures
- Excessive salivation
- Death

F. Psittacosis

Common carriers

- Pigeons
- Parrots
- Turkeys
- Parakeets

Transmission

- Inhalation from infected birds
- Carcasses
- Secretions
- Contaminated facilities

Clinical presentation

- Fever
- Headache
- Pneumonia

G. Ringworm

Common carriers

- Cattle
- Cats

Transmission

- Direct contact



Clinical presentation

- Skin lesions

H. Toxoplasmosis

Common carriers

- Cats
- Sheep
- Undercooked meat

Transmission

- Ingestion of infected meats
- Fecal contaminated soil

Clinical Presentation

- Fever
- Swollen lymph nodes
- Abortion
- Still-birth
- Mental retardation

I. Scabies

Common carriers

- Dogs
- Raccoons

Transmission

- Direct contact with infected animals

Clinical Presentation

- Itching skin lesions

J. Milker's Nodules (*usually go away on their own without treatment*)

Common carrier

- Cow (teats)

Transmission

- Milking or touching the teat of infected cow
- Contact with a mouth ulcer in a calve

Clinical presentation

- 5-14 day incubation period
- Usually 2-5 small, red, raised flat-topped spots
- Nodules usually appear on fingers or hands, occasionally on face

Prevention and Control

A. Use an uncontaminated water supply. Many diseases are carried in animal wastes that leak into water supplies.

Make sure wells are properly constructed to avoid contamination from livestock, animal and human wastes

Add chlorination to water

Connect to rural water supply if possible

Follow instructions for appropriate disposal of wastes



B. Prevent food contamination

Avoid unpasteurized milk

Do not allow juices from eggs, meat and milk to drip on other foods

Wash your hands and clean and disinfect kitchen surfaces before, during and after handling food

Wash raw fruits and vegetables

Don't defrost meats on the counter. Defrost in a refrigerator or microwave

Cook food immediately after defrosting

Use different utensils for raw than cooked foods

Cooking guidelines

- Cook eggs until they are firm (don't eat runny eggs)
- Avoid eating foods that contain raw or partially cooked eggs
- Cooked meat should be white and have clear juices
 - ✓ Cook all poultry to an internal temperature of 180 degrees
 - ✓ Cook ground beef to an internal temperature of 160 degrees
 - ✓ Hamburger meat should be brown inside
- Cook fish until it is white and flaky

Storing leftovers

- Store food in appropriate containers
- Set refrigerator temperature to 40 degrees and freezer to at least 0
- Refrigerate leftovers immediately
- Never leave food out for more than 2 hours

Pasteurize milk. (Kills bacteria that can cause tuberculosis, brucellosis, listeriosis, salmonellosis etc.)

C. Avoid contact with diseased animals and prevent pets from contact with rodents and wild animals. (e.g. Ticks carried by pets can cause Lyme disease or Rocky Mountain Spotted Fever. Raccoons, foxes and other mammals can transmit rabies.)

Dispose of carcasses properly

- Wear appropriate clothing/gloves
- Spray dead animals before moving them
- Dispose of animals according to law
- Wash hands afterwards

Discourage animals from nesting in your house.

- Keep your home clean
- Seal small openings inside and outside the home (*one pair of mice can produce 15,000 babies a year*)
- Keep traps out of the reach of children and pets
- Store food in tight containers

Protect pets from getting and transmitting disease

- Vaccinate cats and dogs against rabies
- Do not keep wild animals as pets (*Note: If you keep a wild animal as a pet, know diseases it can carry and have them checked out by a veterinarian immediately.*)
- Do not allow pets to drink out of the toilet



- Clean your pet's living areas at least once a week
- Litter boxes should be cleaned daily and placed in a plastic bag. (*Note: pregnant women should not clean litter boxes*)

Additional Safety precautions

- Treat livestock that salivate as if they have rabies
- Cover your child's sandbox when not in use.
- Wash your hands after handling animals or cleaning up after animals

D. Prevent Tick Bites

Wear repellent

Wear appropriate clothing

- Long-sleeved shirt
- Tuck pants legs into socks.

Always check yourself and pets after being in a tick-infested area

E. Treat animal scratches and bites seriously

Wash the area with soap and water

Apply anti-bacterial medication

Bandage the wound

Consider getting medical attention

Bites can be more serious than you think

- Bites from cats and small dogs (*sharper teeth*) can penetrate into the bone or joint causing infection
- Some require surgery

Many zoonoses are preventable if cautionary measures are taken!