



*Common Zoonotic Diseases
affecting Pets and People*

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Zoonosis



- Definition: zoonosis or a zoonotic disease is a disease that can be passed directly or indirectly from animals, whether wild or domestic, to humans. These may be passed directly (rabies) or via vectors (plague).

Some Prominent Examples



- Rabies
- Ringworm
- Scabies
- Giardiasis
- Tuberculosis
- Salmonella
- Plague
- Lyme disease
- Malaria
- Influenza
- Rocky Mtn Spotted Fever
- E Coli gastroenteritis
- Anthrax
- Equine Viral Encephalitides

Tonight's Focus



- Hookworms (Ancylostomiasis)
- Roundworms (Ascariasis)
- Toxoplasmosis
- Leptospirosis
- Bartonellosis

Hookworms (Ancylostomiasis)

- Nationwide nearly 20% of all dogs were found to have hookworms (higher in the Southeast).
- A female hookworm can produce 20,000 eggs per day which may last in soil for several years.
- Transmitted via contaminated soil and fomites.
- May hatch in warm damp soil and can penetrate bare skin.

Hookworms

- Canine hookworms do not mature in humans.
- Larval stages wander between layers of skin causing cutaneous larval migrans.



Roundworms (Ascariasis)

- Roundworms infect over 90% of puppies under 3 months of age.
- Females can lay up to 100,000 eggs per day, which survive in soil up to 10 years.
- Transplacental transmission occurs prior to birth of puppies.
- Roundworm eggs are found in 15% of all dogs in the US.

Roundworms



- Dog and cat roundworms do not mature into adult stages in humans
- Ingested ova hatch into larvae which migrate in the body.
- May result in visceral larval migrans or ocular larval migrans



Roundworm infection is the sixth most common reportable disease in the US.

10,000+ cases per year reported to CDC in the United States

Ocular Larval migrans

- Occurs when larvae migrate to the eye
- Impairs vision and may cause blindness
- 700 cases/yr reported to CDC



Visceral Larval Migrants

- Larvae migrating through organs may be asymptomatic or subclinical
- May cause abdominal pain, leucocytosis, hepatomegaly, eosinophilia, fever



Toxoplasmosis

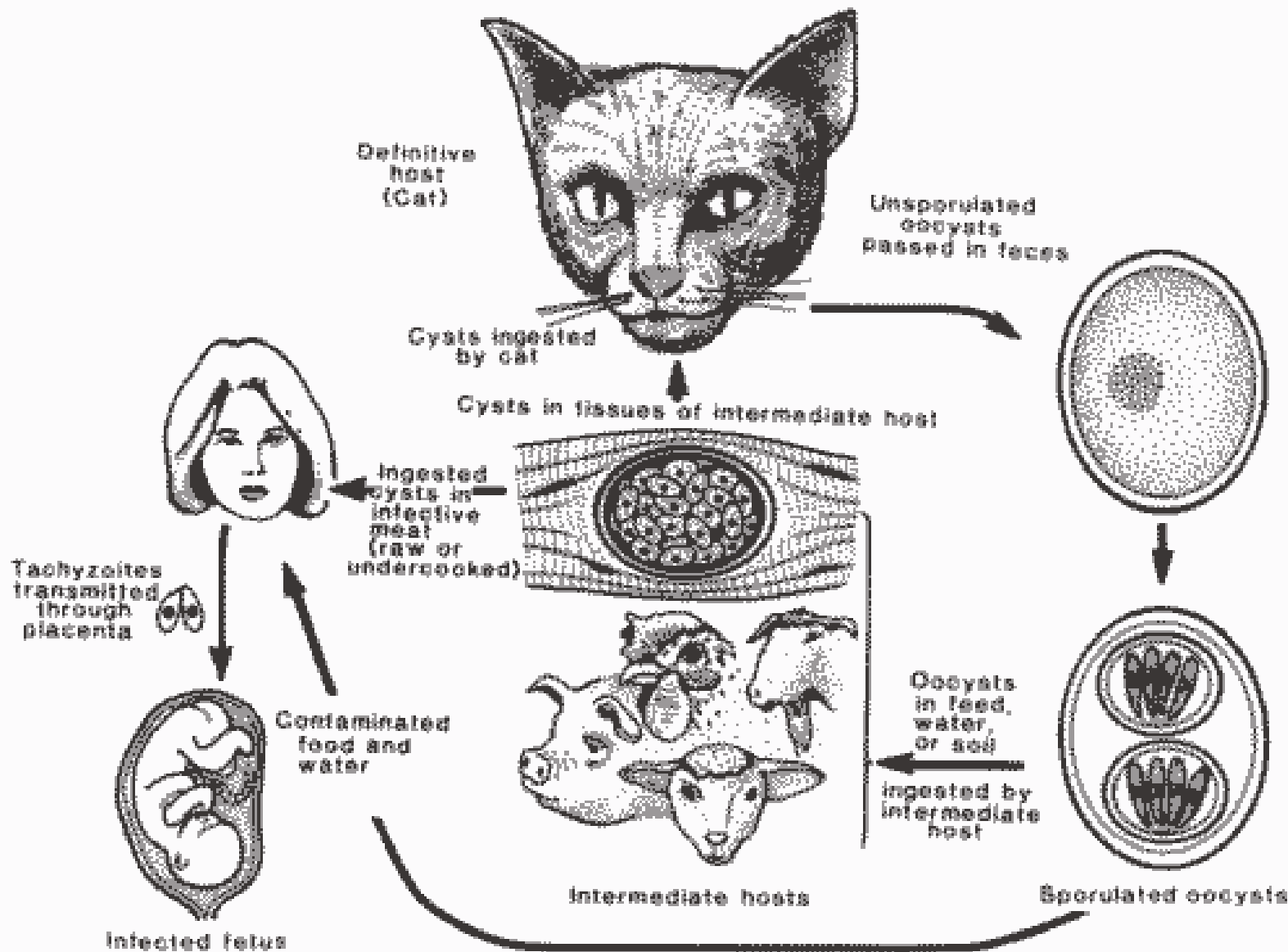


- *Toxoplasma gondii* is an obligate intracellular protozoan parasite
- Only definitive host is the cat genus *felidae*
- Spread thru ingestion of undercooked meat, fomites contaminated with infective oocysts, or transplacentally

Toxoplasmosis



- 30-40% of people in the US have antibodies to *T. gondii*
- Most human cases are subclinical
- Once humans are exposed and develop antibodies, they are immune to reinfection
- If infected during pregnancy, there is a 20-50% chance of transplacental infection of the fetus



Pregnancy and Toxoplasmosis

- Pregnant women do **NOT** need to get rid of their cats



Pregnancy and Toxoplasmosis



- Avoid eating raw or undercooked meat, and wash thoroughly hands and utensils that are used handling such meat
- Garden with gloves, and wash hands afterward
- Clean litter box daily, or have another family member do it

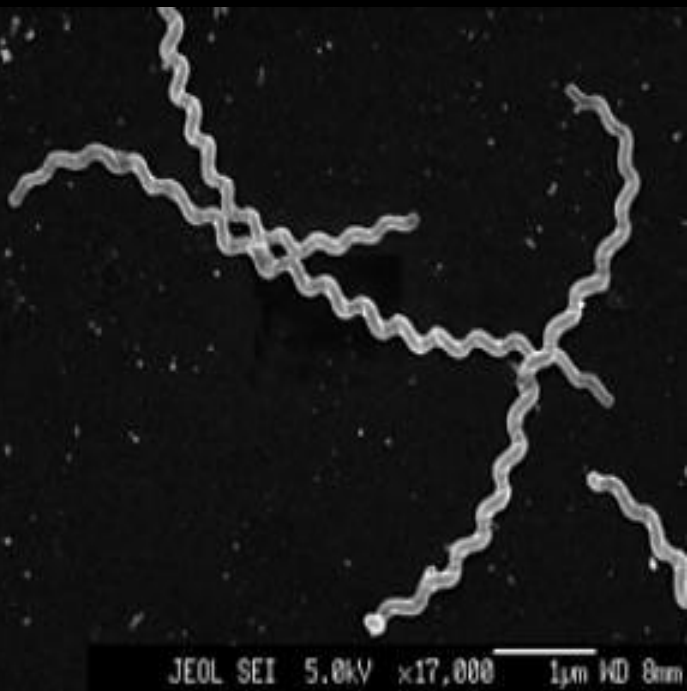


Leptospirosis



- Once excreted in urine, Leptospire can survive in moist environments for months to years
- Animals that survive acute infection can shed the organism in urine for months to years
- While 90% of human infections are the mild form, 10% are the severe form which has a mortality rate of 10-15%

Leptospirosis



- Carried by dogs, rodents, cattle, coyotes, raccoons, opossum, foxes
- Several strains
- Dogs should be vaccinated annually
- Eliminate rodents

Bartonellosis



- Gram negative intracellular bacilli
- Carried by blood sucking arthropods such as lice, flies, ticks and fleas
- Discovered in late 1980s, in 1990 were 2 species known, now there are 26.
- Vastly under-recognized and under-diagnosed disease

Cat Scratch Disease

- Now, a misnomer
- *Bartonella henselae* infects cats who may serve as a reservoir host
- High percentage of cats carriers (25-40%)
- Flea feces in cat coat is source of infection



Bartonellosis Human Syndromes

- Bacillary angiomatosis
- Bacillary peliosis hepatitis
- Relapsing fever/bacteremia
- Endocarditis
- Retinitis
- Granulomatous lymphadenitis
- Granulomatous pneumonia
- Granulomatous hepato-splenic syndrome
- Others???