

Zoonotic Diseases - Diseases our pets can share with us

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Zoonotic diseases are diseases shared with people and animals.

Veterinarians, pet owners and physicians should work together to reduce the risks associated with zoonotic transmission of parasitic diseases. Important preventive measures include:

1. Practicing good personal hygiene;
2. Controlling pet parasite infections through internal and external parasite treatment and control;
3. Minimizing exposure of children to potentially contaminated environments;
4. Cleaning up pet feces regularly to reduce environmental contamination with infective parasite stages; and
5. Discussing pet ownership with your family physician or pediatrician.

I. **Consideration of pet health and lifestyle factors**

Pets require care tailored to their individual needs. We consider:

Environment of the pet:

Origin of the pet; Lifestyle (climate, hunting and predation, dog parks, wild animal contact, previous infection in the household, exposure to other pets in the household or neighborhood); and Travel (vacation trips, boarding and day care facilities, dog and cat shows and field trials);

The pet's nutrition including the potential for parasite exposure through food or water; and Age (puppies, kittens and geriatric animals are at greater risk than healthy adults).

II. **Lifelong prevention of common internal and external parasites**

Ascarids, hookworms and tapeworms are a significant cause of zoonotic disease. Fleas and ticks produce disease through blood loss, and transmission of infectious agents.

Recommended protocol for common worm and flea/tick control:

The CAPC recommends year-round treatment with broad-spectrum heartworm wormers

that have activity against parasites with zoonotic potential because:

Although experts agree heartworm transmission does not occur year-round in all areas, a significant portion of the United States experiences transmission during most of the year. Presence of mosquitoes and their ability to transmit heartworm is unpredictable.

Dogs and cats may be exposed to and become infected with roundworms, hookworms, tapeworms and other parasites throughout the year through travel.

Many broad-spectrum products eliminate these potentially zoonotic parasites. Dogs and cats should be placed on year-round preventive flea and/or tick products as soon after birth as possible for the life of the pet.

A thorough physical examination and complete history are important for diagnosis, treatment and control of most parasites and should be performed at least annually by a qualified veterinarian.

Pets should be fed cooked or prepared food (they should not be fed raw meat) and provided fresh water.

Dogs should be tested for heartworm annually or biannually.

Periodic retesting for feline heartworm infection should be considered.

Appropriately conducted fecal examinations should be performed: Two to four times during the first year of life (may be associated with vaccine schedule), and one to two times per year in adult pets.

Puppies and kittens require more frequent worming than adult dogs and cats, because (1) they often are reinfected via nursing and from the environment, and (2) they often harbor parasite larvae in migration that later mature and commence egg laying. Intestinal parasite infections in puppies and kittens may cause serious illness or even death before a diagnosis is possible by fecal examination. Puppies and their mothers should be treated with appropriate anthelmintics when puppies are 2, 4, 6 and 8 weeks of age, then put on a monthly preventive. Because prenatal infection does not occur in kittens, bi-weekly treatment can begin at 3 weeks of age, and at 8 or 9 weeks of age they can be put on a monthly preventive. Nursing dogs and cats should be treated along with their offspring since they often develop patent infections along with their young.

Not using year-round heartworm preventive/intestinal parasite combination products increases the risks of parasitism in pets and zoonotic parasite transmission.

III. Environmental control of parasite transmission

Parasite transmission stages are long-lived in the environment and responsible for infection of pets as well as zoonotic transmission. Parasitized animals should be aggressively treated to prevent environmental contamination and monitored by fecal exam to confirm treatment

success.

At least weekly (preferably daily), conduct fecal cleanup/removal with proper disposal and sanitation. Feces can be bagged and put in the trash, burned or flushed down a toilet. Following treatments, any worms passed should be similarly disposed of.

Leash laws and fecal cleanup ("pooper-scooper") laws should be enforced.

Ascarid and whipworm eggs are highly resistant to environmental conditions and may persist in the soil for years. Extreme measures are needed for decontamination, including: Heat (boiling water, steam, propane gun, burning straw, etc.) to kill the eggs; Removal of contaminated substrate (e.G., 5 to 6 inches of soil properly disposed of); and/or

Entombment of eggs under concrete or asphalt.

Children's sandboxes should be covered when not in use.

To remove hookworm larvae, metal or concrete surfaces should be decontaminated with bleach or ammonia, while soil and gravel should be decontaminated with heat or a desiccant such as sodium borate or lime. Note that sodium borate will kill vegetation.

Where appropriate, EPA-approved pesticides and/or growth regulators should be applied to the premises to kill environmental stages of fleas and ticks.

For brown dog tick indoor infestations, local pest management specialists should be contacted.

IV. Owner considerations in preventing zoonotic disease

Some people are uniquely susceptible to certain vector-borne infections and parasites.

People with HIV infection;

People undergoing immunosuppressive therapy (e.g., chemotherapy patients, organ transplant patients, patients undergoing treatment for autoimmune disease); People with advanced liver disease;

Diabetics;

Pregnant women;

Infants and young children;

Elderly individuals;

Individuals who are mentally disabled; and

Individuals with occupational risk.

If you have concerns about these disorders, we can counsel you without breaching your privacy and recommend you discuss this with your physicians. For additional information, refer to the CDC at www.cdc.gov/healthypets and www.capcvet.org