Zoonotic Diseases of Puppies and Kittens
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Often dogs and cats are not just pets, but members of the family. When adding new puppies or kittens to the family, owners need to make sure their new family member is loved and receives regular veterinarian care. Also, one should know that while your puppy is licking and cuddling with you and other members of your family, the spread of zoonotic diseases could be occurring. Zoonotic diseases are diseases that can be transmitted directly or indirectly from animals to humans. Parasites, bacteria, and fungi can cause zoonotic diseases.

PARASITES
One of the most common intestinal parasites associated with zoonotic infection in puppies and kittens is roundworms. The roundworm of a dog is *Toxocara canis* and of a cat is *Toxocara cati*. Puppies can become infected in utero (before delivery), transmammary (from mother’s milk), or through ingestion of contaminated soil. Kittens are not infected in utero, but can be infected transmammary and through ingestion of contaminated soil. Young children may be at higher risk for becoming infected because they play near pets and in contaminated soil, such as playgrounds and sandboxes (that could be previously defecated on), and then put their hands in their mouths. In most circumstances, human infection is asymptomatic. There are rare circumstances where the roundworm migrates to the eyes (ocular larva migrans) causing blindness or damage to the lung or liver (visceral larva migrans). Roundworm eggs are very resilient, and can remain in the environment for years. It usually takes being in the environment 2-4 weeks before the roundworm eggs become infectious.

Another common cause of zoonotic infection from puppies and kittens is the hookworm (*Ancylostoma* spp). Infected animals pass hookworm eggs in their stool, which later hatch into larva. Unlike roundworms, hookworm eggs can become infectious in the environment in just a few days. Hookworms can infect puppies and kittens through ingestion of larvae contaminated soil, transmammary, or larvae actively penetrating their skin/paws. Humans can get hookworms from ingesting contaminated soil, such as sandboxes, gardens, etc. Also, people can become infected by larvae penetrating and burrowing into their skin while simply walking barefoot at parks, beaches, or sandboxes. In a person there will be reddening and severe itching at the site of penetration into the skin.

BACTERIA
Cat Scratch Fever can be transmitted from the bacteria of an infected cat or kitten to a human through a scratch, lick, or bite. The bacterium is *Bartonella henselae*, which lives in infected cat saliva and is found on nails or claws. The first clinical signs usually occur several days after a scratch, appears as a blister or small bumps and swollen lymph nodes. For a healthy individual, Cat Scratch Fever is mild and will resolve on its own, but for an immune compromised person it could be fatal.
FUNGUS
A fungal infection that can be transmitted through direct skin-to-skin contact from puppies and kittens to people is ringworm. Also, ringworm can be spread from people to puppies and kittens. Additionally, ringworm can be spread through indirect contact such as stuffed toys, bed linens, and towels. For any objects that come in contact with an infected pet or person, the objects should be washed with hot water and bleach. Any object that is unable to be cleaned should be discarded.

An important part of getting a new puppy or kitten is to know that zoonotic diseases exist. One should know about the diseases such as roundworm, hookworm, cat scratch fever, and ringworm; and how their pet could be exposed to them. Another key element is how to prevent zoonotic disease. One can reduce the infection with regular visits to the veterinarian for an exam and deworming. Puppies and kittens should routinely go to the veterinarian every 3-4 weeks to receive vaccinations and should also be dewormed at that time. When on walks, pick up feces in public areas or dog parks with a plastic bag. Small trash bags that attach to leashes are easily accessible at any pet store. At home one can cover the children’s sandboxes when not in use. In your own yard or litter boxes, be sure to regularly dispose of pet’s feces at least once a week, if not more often. Most importantly practice good personal hygiene, especially with children who are easily tempted to place their hands in their mouths. With these steps, one can greatly reduce the risk of a zoonotic infection from their pets.

REFERENCES


Pets, Parasites, and People. Pets & Parasites. 2016
http://www.petsandparasites.org/resources/pets-parasites-and-people

