Transcript:

“Identifying Zoonotic Diseases”

by Dr. Karen Becker

http://www.youtube.com/watch?v=K4TkyMzVYYE

Hi, this is Dr. Karen Becker, and today we’re going to talk about zoonotic diseases. These are diseases that can be passed from animals to people, or from people to animals. There are five of them I’d like to talk about with you today.

The first disease that can be transmitted from people to animals, or from animals to people – primarily, the five we’re going to talk about today are transmitted from animals to people -- are in essence diseases you can catch from your dogs, cats, puppies, and kittens, and you need to be aware of them.

**Hookworms**
The first one is hookworm infestation. Unfortunately, it can be transmitted in two ways, one of which is fecal-oral. People, obviously, aren’t coprophagic; we don’t consume feces.

However, we walk barefoot in soils, and we have soil exposure. And because wild animals or dogs or cats affected by this zoonotic disease pass eggs or larvae into the soil, the eggs of these microscopic parasites can be mixed in the soil. You don’t see them, but you’re still exposed.

It’s important to recognize that with all five of these zoonotic diseases, when we talk about fecal-oral contamination, it is really soil contamination.

Now: cats and dogs consume poop. With hookworm infestation, it’s important to pick feces up to prevent your dogs from eating the infective feces of other animals that have shed hookworms in their stools. Puppies and kittens are also open to acquiring hookworm infection, and they can actually get it from consuming milk from their mother. If mom has hookworms, she will be able to transmit it to her babies through her milk.

Hookworm, most commonly for dogs, cats, puppies and kittens, is a fecal-oral contamination. It means they eat feces or dirt, or run through the dirt, lick their paws, and acquire hookworm eggs.

People most commonly acquire hookworm infection through their skin. Hookworm larva has the strange ability to penetrate people’s skin. It typically forms a rash wherever the hookworm larva penetrates. Most commonly, people end up with rashes on their feet because they walk
barefoot in the sand or dirt, or do gardening barefoot and they can end up with a rash on their feet. Sometimes it affects the hands when people garden without gloves. You can also get hookworm skin infection, a traveling rash your doctor will be able to identify.

For puppies and kittens, hookworm infection can be fatal, because it can cause anemia, lethargy, weakness, and malnutrition. Adult dogs and cats oftentimes end up being thin. They have poor appetites, and they can have weight loss with hookworm infection.

**Roundworms**
The second type of zoonotic disease I want you to be aware of are roundworms. Roundworms are large, spaghetti-looking worms. It’s important to know that just because you don’t see spaghetti-looking worms in your dogs’ and cats’ feces, it doesn’t mean that they’re not positive.

By the time your dog or cat throws up roundworm (or is passing whole roundworms out of his stool), he’s chock-full with thousands of worms. So don’t bank on waiting to see any of these parasites. The only way that you can check for some of these roundworms or hookworm infection is to simply drop a stool sample off at your veterinarian.

Roundworm infections are transmitted through your pets consuming infected feces. It can also be transmitted transplacentally, which means developing dogs and cats – puppies or kittens in their mom’s uterus – can acquire roundworm infection while the mom is pregnant and gives birth to already-positive puppies and kittens.

Roundworm infections in people are most commonly acquired through consumption of contaminated soil. So if you’re gardening and forget to wash off those vegetables, you can ingest dirt contaminated with roundworm eggs and end up acquiring infection.

Unfortunately, those roundworms know that people are not the specific direct host that they are interested in. so they end up wandering through the human body, causing all sorts of trouble. People can have organ inflammation. In small children, roundworms can end up migrating through the eyes, and roundworm larva can be found by ophthalmologists at the back of many children’s eyes.

It is important for prevention that puppies are dewormed if they are roundworm-positive. In puppies and cats, in my opinion, you have to check the fecal specimens through your veterinarian at 6, 8, 10 and 12 weeks. You have to make sure that your puppies and kittens are not roundworm-positive, because there is a lot of exposure for your children at home through fecal contamination of a new puppy or kitten that comes into your life.
Toxoplasmosis
The third type of zoonotic disease is toxoplasmosis, and any warm-blooded vertebrate can acquire it. However, toxoplasmosis infections primarily infect cats and people. The people that are most at risk of acquiring it are pregnant women or people that are immunosuppressed. AIDS positive patients do run much more of a risk of acquiring toxoplasmosis infection than healthy, immunologically strong people.

Likewise, children can have problems. Oftentimes, cats do not have symptoms of toxoplasmosis, but it can be acquired if they hunt. So if you have outdoor cats eating small prey, rabbits or rodents, or are ingesting raw meat from animals that are toxoplasmosis-positive, they can acquire the infection.

That’s why many doctors recommend pregnant women to not scoop litter boxes, because if you have a toxoplasmosis-positive kitty, she can be shedding toxoplasmosis in the stool. So if you have a cat and you’re pregnant, it’s important for you to wear gloves when you scoop the litter box. You also shouldn’t handle raw meat, which is another source of toxoplasmosis exposure. If you feed your dogs a raw-food diet, I recommend you freeze the meat for three days. This will eliminate all the toxoplasmosis in the tissues, making the meat safe and healthy for your pets to eat.

Cryptosporidiosis
The fourth infection that your pets can pass on to you is cryptosporidiosis, which is a protozoan and a microscopic parasite. Most people just call it “crypto” because it’s too hard to pronounce.

Cryptosporidiosis loves water. And although it’s a fecal-oral contamination, many children can become crypto-positive by swimming in infected swimming pools. Animals can transmit cryptosporidiosis by defecating in ponds and lakes, and people can pick it up that way.

Dogs and cats – and puppies and kittens – can acquire crypto by drinking contaminated water or eating feces or animals that are positive.

Lyme disease
The fifth and final zoonotic disease I want to talk about is Lyme disease. It is a vector-borne disease, which means there’s a vehicle for transmission that has to take place. The vehicle is Xodes tick, also known as deer tick or black-legged tick. The deer tick can transmit the Lyme disease organism, which is a spirochete, from tick to dog, or from tick to person, but dogs and people can both become infected with Lyme disease.
Lyme disease in an acute phase can cause fever and lethargy. People can acquire rashes, and dogs tend to become lame and run a fever. In the chronic phase, it affects dogs and cats similarly with polyarthritis, an immune-mediated degenerative disease. So you can end up with kidney disease because of autoimmune disease secondary to chronic Lyme infection in dogs, cats (less likely than dogs), and people.

So how do you keep yourself and your pets safe from these disease-carrying parasites?

I recommend that you wash all your vegetables very well before you feed them to yourself or your dogs. If you garden, make sure you wear gardening gloves. It’s important that you prevent your pets from pooping in sand boxes that your children play in; in fact, all wild animals will poop in sand so it’s important to keep playground sand and sand boxes covered. Wash your hands after you garden or after you’ve been walking through soil. And it’s important that you practice good tick protection, so do tick checks on your kids, yourselves, your dogs and cats. If necessary, use safe tick repellants for your family and furry friends to prevent tick attachment.