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What's a Zoonosis?

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There are a variety of subtly different definitions of the term zoonosis, but for me a zoonosis is a disease that moves between humans and animals. There are over 200 zoonotic diseases, and it may surprise you to know that just over 6 in 10 human pathogens are zoonotic. These pathogens run the gamut of infectious agents (viruses, bacteria, fungi, parasites, even the mysterious prions responsible for mad cow disease). The illnesses they cause are some of the most severe and fatal, including Rabies, Ebola, Hantavirus and West Nile fever. In fact, a large number of them are classified as biological terrorism agents, such as Anthrax, Tularemia, Brucellosis, and Q Fever.

These zoonotic illnesses are transmitted between animals and humans in several ways, including:

- Foodborne – by consumption of contaminated or infected animal products
- Direct contact – through touching an infected animal's body or being bitten or scratched
- Indirect contact – with food, water, or other aspects of your environment contaminated by an infected animal or its habitat
- Vector-borne – by being bitten by infected arthropods such as mosquitos, ticks, and fleas

Demographic and ecological changes altering human interactions with the environment; growth and expansion of human populations into closer contact with wild and domestic animals; climate and land use changes altering the balance between pathogens and their animal hosts; and ease of international travel and trade have worked together to insure that 75% of all emerging pathogens during the past decade are zoonotic (remember SARS and H1N1 Influenza).

Some of the more concerning zoonotic diseases, in my view, are:

- Salmonellosis – From contact with a multitude of types of pets (particularly reptiles and amphibians, poultry, and rodents)
- Rabies – From bites or scratches from infected mammals
- West Nile virus – From bites from mosquitos infected after biting infected animals

- Toxoplasmosis – From contact with feces of infected cats (especially dangerous to pregnant women)
- Cat Scratch Disease – Infection with Bartonella henselae from scratches by infected cats
- Lyme Disease and Rocky Mountain Spotted Fever – From the bites of ticks infected after biting infected animals
- Plague – From the bites of fleas infected after biting infected animals

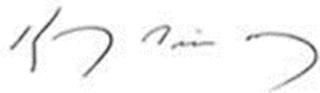
Particularly vulnerable to many of these illnesses are children under the age of 5 years, pregnant women, adults over 65 years, and those with weakened immune systems.

We interact with animals daily through our pets, raising animals for food, petting zoos, and ventures into the wilderness. All of these interactions are important to our health and well-being, but care must be taken to avoid contracting illnesses in the process.

Here are some steps you can take to protect yourself and your loved ones:

- Always wash hands after being around animals
- Always protect yourself and others from bug bites, day or night, (particularly mosquitos, ticks, and fleas)
- Avoid adopting a new cat, handling a stray cat, and cleaning litter boxes if you are pregnant
- Avoid pet rodents if you are pregnant
- Avoid keeping reptiles and turtles as pets if you have children under 5 years
- Prevent animals from using children's sandboxes as a toilet
- Supervise children at petting zoos
- Handle food safely (see my earlier TYH article on [Foodborne Illness](#))
- Do not eat or drink in areas where birds live or roam
- Do not let poultry inside the home
- Keep pets healthy with regular veterinary care and vaccinations
- Protect your dogs and cats from fleas and ticks
- Don't let pets lick people on the mouth
- Fence pets to reduce contact with stray/wild animals
- Avoid contact with unfamiliar animals and notify your health care provider if you are bitten or scratched – Wash any such wounds immediately and thoroughly

Here's to your health!



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