

Toxoplasmosis - The Risk in Your Kitchen

by Sheila Massey

When most people hear the word “toxoplasmosis”, they think “cat” when they should be thinking “kitchen”. This misunderstanding underlies a serious public health problem.

The Center for Disease Control (CDC) identifies toxoplasmosis as a “leading cause of death attributed to food-borne illness in the United States” and deems it a “neglected parasite infection” requiring public health action (<https://www.cdc.gov/parasites/toxoplasmosis/index.html>).

How can a leading cause of death be both misunderstood and neglected? What causes this disconnect?

Media coverage, which emphasizes sensationalism over science, is one reason. Scary stories about cats and pregnant women attract more eyes than the CDC’s website, but they do not advance public health. Rather, they drown out the facts and lead most people to believe they are risk-free if they just avoid cats.

Even doctors sometimes misinform pregnant patients, advising them to avoid cats without informing them of the greater risks they face daily in their own kitchens. Unwashed fruits and vegetables, undercooked meat, and raw seafood can all carry the parasite if food is not properly prepared.

Here are some facts in perspective:

The CDC estimates that 30 to 60 million people in the United States already carry the parasite. Of those, few become ill because their immune systems protect them. However, for those who do become ill, there can be serious health consequences, such as damage to the central nervous system, the eyes, the heart, and other organs.

Cats are the assumed carriers, because they are intermediate "hosts" of the toxoplasma parasite, spreading it via their feces. When a cat eats raw

meat, such as a mouse infected with the parasite, the cat's feces contains the active parasite for approximately two weeks.

If a person ingests the cat's feces during this critical two-week period (by swallowing, inhaling dried particles, touching their mucus membranes after touching the feces), that person will likely ingest the active parasite.

However, this transmission can only occur *once in a cat's lifetime*, namely in the approximate two week period following the *first* time the cat ate infected raw meat. Even if a cat continues to eat raw meat infected with the parasite, it will never again shed toxoplasma in its feces.

Consequently, it is more difficult than commonly believed to get toxoplasmosis from cat's feces. It requires good timing and raw meat.

This fact can be used to advantage by cat owners and caretakers. By feeding only commercial cat food, which is cooked, and by keeping their cat indoors, cat owners can control the risk and eliminate the possibility that their cat will eat raw, infected prey.

Conversely, house cats, which are fed raw meat, raw fish, unpasteurized milk, or allowed to hunt outdoors, can be exposed. But the risk is limited to the "first-time-two-week" timeframe, which generally occurs early in an outdoor cat's life. Also, common sense calls for basic hygiene (wearing gloves, washing hands) in handling cat litter boxes.

In fact, the CDC now definitively states it is *not* necessary for immune-deficient people and pregnant women to avoid cats, because toxoplasmosis is a "food-borne" illness (See links below). So, if cats are "hosts" of the parasite, why is food now the culprit?

Parasite eggs (oocysts) passed with the cat feces can remain actively infectious for many months, even in extreme temperatures. The eggs can be carried and deposited elsewhere by birds and insects. This process poses the greatest risk in agricultural areas.

Plants, soil, and water can become contaminated in open areas, such as farms, where cats may roam (and defecate) freely. Farm fruits, grains, and

vegetables are destined for human consumption or used as feed for livestock destined for market. Contaminated water can wash into fisheries. If infected fruits and vegetables are not thoroughly washed, or meat is undercooked, or contaminated seafood is eaten raw, the parasite will survive, infecting the person consuming the food.

Once infected, humans are *end-stage carriers*, not hosts. The parasite resides in them and cannot be spread to others via feces or other means. (Note: Exceptions are an infected mother, who can transmit it to her fetus, and, rarely, through blood transfusions and organ transplants). While most healthy people will not become ill, as mentioned, susceptible populations may, leading to potentially serious, even fatal, consequences.

This is not a risk worth taking, and the CDC is initiating strong action to address real dangers and dispel myths.

When reporting public health issues, media (all forms) need to forego sensationalism and report the science accurately, giving proper weight to all risk factors. Calling toxoplasmosis the “disease of the cat” and stressing that cats are “hosts” omits crucial information about simple ways to avoid infection and means of transmission, which is more likely to be a tomato than a litter box.