

# Diphtheria-like germ can be passed between people and pets

June 13 2024, by Ernie Mundell

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The first two cases of a diphtheria-like illness being transmitted in the United States between people and their pets have been reported in Utah and Colorado.

The [respiratory illnesses](#) occurred in 2022 and 2023 and involved the *Corynebacterium ulceran* bacterium, which is closely related to the germ

that causes diphtheria. One recent [Japanese study](#) noted that *C. ulceran* "is widely distributed in the environment and is considered one of the most harmful pathogens to livestock and wildlife."

Passage between pets and humans is much rarer, however.

The first such case documented in the United States occurred in 2022 in a person in Utah who lived with a spouse, another housemate, three cats, and one dog. The patient had diabetes and developed a leg wound that would not heal. Lab testing showed that the wound was colonized by *C. ulceran*, and further tests revealed that the person's spouse and two of the homes' three cats also carried the bacterium.

Everyone in the household—pets and humans alike—received antibiotic therapy and the infections gradually cleared.

The second case, which occurred last year, involved "a Colorado resident experiencing non-resolving upper respiratory symptoms," according to the research team, which was led by Amanda Metz of the Colorado Department of Public Health and Environment.

The patient lived with a spouse and two dogs, and also had a visitor for two nights who brought their dog. Everyone was asymptomatic for illness except the patient, but testing revealed *C. ulceran* infection in the patient and the visitor's dog. Everyone in the household was treated with the antibiotic erythromycin and the patient recovered.

Metz' team believes that doctors now have to be on the lookout for *C. ulceran*, which has symptoms very similar to diphtheria. It's possible that the diphtheria vaccine might fight *C. ulceran*, so "routine vaccination with diphtheria toxoid-containing vaccines are important to protect persons," the researchers wrote.

Metz and her colleagues stressed that it's still not known whether the humans in these cases contracted *C. ulceran* from their pet, or whether the pet got *C. ulceran* from close contact with their human.

*C. ulceran* does not spread person-to-person, however: "Human-to-human transmission has not been documented," the researchers said.

"Evidence from this investigation suggests that transmission of toxigenic *C. ulcerans* between humans and household pets occurred, although the direction of transmission could not be determined," Metz' team concluded.

The findings were published June 13 in [Morbidity and Mortality Weekly Report](#), a journal of the U.S. Centers for Disease Control and Prevention.

**More information:** Find out more about diphtheria at the [Oregon Health Authority](#).

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