

Leptospirosis in New York City—a risk from rats to dogs and people

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In New York City, leptospirosis, a bacterial disease that affects humans and animals, is most often spread to both people and dogs from rats, according to a study presented at the 2015 International Conference on Emerging Infectious Diseases.

"Leptospirosis is caused by bacteria that can be harbored by many different types of [animals](#)," said lead researcher Asha Abdool, epidemiologist, "Dogs, other animals, and people can become sick with fever, jaundice, and kidney and [liver problems](#) if they come into contact with an infected animal's urine or an area contaminated by an infected animal's [urine](#)."

Results of the analysis showed that most human (93%) and canine (58%) cases were infected with the type of leptospirosis commonly carried by rodents. Rats or mice were reported in the environment for 75% of these patients and dogs.

The second most common type of leptospirosis among dogs in New York City (26%) is typically carried by small mammals. According to study results, dog owners reported raccoons, skunks, or opossums in the environment for 48% of these cases.

Most individuals in this study of New York City residents infected with leptospirosis reported being exposed to rodents in their workplace or home, and most dog owners reported having seen rats at home or where their dog was walked.

"Overall, the surveillance shows that leptospirosis is most often associated with rodents," said Abdool, "Dogs did not spread the disease to people or other dogs, supporting previous literature in which dog-to-person transmission of the disease has only very rarely been reported."

The research did not reveal any geographical link between cases in people and dogs, and as such, dog infections could not be used to predict where the disease would occur in people.

"Investigating cases in dogs has improved our relationship with the veterinary community in keeping with One Health, a strategy that emphasizes interdisciplinary collaboration between human and animal health and the environment" said Abdool, "These partnerships are an important part of detecting potential outbreaks of zoonotic disease that can affect animals and people."

This study was conducted by researchers at the New York City Department of Health and Mental Hygiene, who investigated and analysed reports of leptospirosis in dogs and people between 2006 and 2014. Additional authors include Sally Slavinski. Canine leptospirosis surveillance in NYC began in 2006 as an effort to predict where human cases would arise. Each year an average of two people and fourteen dogs are reported with [leptospirosis](#) in NYC.

Provided by American Society for Microbiology

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