

# Doxycycline tied to lower risk for *C. difficile* in pneumonia patients

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For patients with community-acquired pneumonia (CAP), doxycycline is associated with a reduced risk for *Clostridioides difficile* infection (CDI), according to a study published online Nov. 1 in the *American Journal of Infection Control*.

Ashley L. O'Leary, Pharm.D., from the Veterans Affairs Western New York Healthcare System in Buffalo, and colleagues conducted a [retrospective analysis](#) in hospitalized patients in Veterans Affairs Hospitals across the United States to examine whether doxycycline is associated with reduced CDI risk.

During the study timeframe, about 156,107 hospitalized patients received care at a Veterans Affairs Hospital and were diagnosed with CAP. The researchers found that compared with azithromycin, doxycycline used with ceftriaxone for the treatment of pneumonia was associated with a 17 percent [reduced risk](#) for CDI. The incidence of CDI was reduced by 45 percent for patients who had a prior history of CDI (odds ratio, 0.55).

"Our analysis found that in patients with a prior history of *C. diff*, doxycycline was the only factor associated with a reduction in the incidence of new *C. diff* infections," senior author Kari A. Mergenhagen, Pharm.D., also from the Veterans Affairs of Western New York Healthcare System, said in a statement. "These results suggest that in cases where *Legionella* pneumonia can be ruled out prior to treatment, patients at increased risk of *C. diff* may benefit from the use of doxycycline as a first-line agent."

**More information:** Ashley L. O'Leary et al, Impact of doxycycline on Clostridioides difficile infection in patients hospitalized with community-acquired pneumonia, *American Journal of Infection Control* (2023).

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