

nursing home A, they conducted a case-control study. Patients were defined as residents of the nursing home from whom fluoroquinolone-resistant *Salmonella enterica* serotype Schwarzengrund was isolated between February 1996 and December 1998. Control patients were residents with similar medical conditions whose cultures did not yield salmonella. Isolates were compared using pulsed-field gel electrophoresis and sequence analysis. Pharmacy records were compared on the use of fluoroquinolone among several nursing homes.

Eleven patients with fluoroquinolone-resistant salmonellosis were identified at two nursing homes. The index patient had been hospitalized in the Philippines and had probably acquired the infection there. Transmission was probably direct (from patient to patient) or through contact with contaminated surfaces. Treatment with fluoroquinolones during the 6 months before a culture was obtained was associated with a significant risk of salmonella infection (4 of 5 patients had taken fluoroquinolones, as compared with 2 of 13 control patients). The patients were not significantly more likely than the control patients to have taken other antibiotics. More fluoroquinolones were used at nursing home A than at similar nursing homes in Oregon. The isolates from the outbreak had similar patterns on pulsed-field gel electrophoresis and the same *gyrA* mutations. The isolates from the outbreak were also similar to the only previous isolate of fluoroquinolone-resistant salmonella in the United States, which came from a patient in New York who had been transferred from a hospital in the Philippines.

This was a prolonged nosocomial outbreak of infection with fluoroquinolone-resistant *S. enterica* serotype Schwarzengrund. More outbreaks such as this are likely in institutional settings, particularly those in which there is heavy use of antimicrobial agents.

FROM: Olsen SJ, DeBess EE, McGivern TE, et al. A nosocomial outbreak of fluoroquinolone-resistant salmonella infection. *N Engl J Med* 2001;344:1572-1579.

Airplane Cabin Air Recirculation and Risk of Upper Respiratory Tract Infection

In recent years, new commercial aircraft have been designed to recirculate approximately 50% of the cabin air to increase fuel efficiency. Some older aircraft use only fresh air. Whether air recirculation increases the transmission of infectious disease is unknown; some studies have demonstrated higher rates of the common cold among individuals working in buildings that recirculate air.

Zitter and colleagues recently evaluated the role of air recirculation as a predictor of postflight upper respiratory tract infections (URIs). They conducted a natural experiment among 1,100 passengers departing the San Francisco Bay area in California and traveling to Denver, Colorado, during January through early April 1999, and who completed a questionnaire in the boarding area and a follow-up telephone interview 5 to 7 days later. Forty-seven percent traveled aboard airplanes using 100% fresh air for ventilation, and 53% traveled aboard aircraft that recirculated cabin air. The main outcome measure was the incidence of reporting new URI symptoms within 1 week of the flight.

Passengers on airplanes that did and did not recirculate air had similar rates of postflight respiratory symptoms. The rates of reporting a cold were 19% versus 21% ($P = .34$); a runny nose and a cold, 10% versus 11% ($P = .70$); and an aggregation of 8 URI symptoms, 3% in both groups ($P > .99$). Results were similar after statistical adjustment for potential confounders.

The authors found no evidence that aircraft cabin air recirculation increases the risk for URI symptoms in passengers traveling aboard commercial jets.

FROM: Zitter JN, Mazonson PD, Miller DP, Hulley SB, Balmes JR. Aircraft cabin air recirculation and symptoms of the common cold. *JAMA* 2002;288:483-486.