



Dow Jones Reprints: This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers, use the Order Reprints tool at the bottom of any article or visit www.djreprints.com

See a sample reprint in PDF format.

Order a reprint of this article now

THE WALL STREET JOURNAL

WSJ.com

THE MIDDLE SEAT | DECEMBER 20, 2011

Where Germs Lurk on Planes

What to Do When Stuck at 30,000 Feet Next to Sneezers and Coughers



By SCOTT MCCARTNEY

It's a common complaint: Fly on a crowded plane and come home with a cold. What's in the air up there?



Airlines are deploying state-of-the-art filtration systems to contain flu and cold viruses from spreading. Scott McCartney joins Lunch Break to discuss how to avoid getting sick while flying. Photo: AP.

Air travelers suffer higher rates of disease infection, research has shown. One study pegged the increased risk for catching a cold as high as 20%. And the holidays are a particularly infectious time of year, with planes packed full of families with all their presents—and all those germs.

Air that is recirculated throughout the cabin is most often blamed. But studies have shown that high-efficiency particulate air (HEPA) filters on most jets today can capture 99.97% of bacterial and virus-carrying particles. That said, when air circulation is shut down, which sometimes happens during long waits on the ground or for short periods when passengers are boarding or exiting, infections can spread like

wildfire.



Jason Schneider

One well-known study in 1979 found that when a plane sat three hours with its engines off and no air circulating, 72% of the 54 people on board got sick within two days. The flu strain they had was traced to one passenger. For that reason, the Federal Aviation Administration issued an advisory in 2003 to airlines saying that passengers should be removed from planes within 30 minutes if there's no air circulation, but compliance isn't mandatory.

Much of the danger comes from the mouths, noses and hands of passengers sitting nearby. The hot zone for exposure is generally two seats beside, in front of and behind you,

according to a study in July in the journal *Emerging Infectious Diseases*, published by the U.S. Centers for Disease Control and Prevention.

A number of factors increase the odds of bringing home a souvenir cough and runny nose. For one, the environment at 30,000 feet enables easier spread of disease. Air in airplanes is extremely dry, and viruses tend to thrive in low-humidity conditions. When mucous membranes dry out, they are far less effective at blocking

infection. High altitudes can tire the body, and fatigue plays a role in making people more susceptible to catching colds, too.

Also, viruses and bacteria can live for hours on some surfaces—some viral particles have been found to be active up to a day in certain places. Tray tables can be contaminated, and seat-back pockets, which get stuffed with used tissues, soiled napkins and trash, can be particularly skuzzy. It's also difficult to know what germs are lurking in an airline's pillows and blankets.

Research has shown how easily disease can spread. Tracing influenza transmission on long-haul flights in 2009 with passengers infected with the H1N1 flu strain, Australian researchers found that 2% passengers had the disease during the flight and 5% came down within a week after landing. Coach-cabin passengers were at a 3.6% increased risk of contracting H1N1 if they sat within two rows of someone who had symptoms in-flight. That increased risk for post-flight disease doubled to 7.7% for passengers seated in a two-seat hot zone.

The epidemic of severe acute respiratory syndrome (SARS) in 2002-03 suggested a wider exposure zone, however. On one flight studied, one passenger spread a particular strain to someone seated seven rows away, while people seated next to the ill passenger didn't contract the disease.

That said, most people sitting near someone who is ill probably won't get sick. "When you get aboard an aircraft, most of us don't have a say on who we sit next to. But that doesn't doom you to catching the flu," said Mark Gendreau of Boston's Lahey Clinic Medical Center.

In 2005, he was part of a team that published a paper in the *Lancet* that concluded the perceived risk for travelers was higher than the actual risk, and that's still the case today, he said.

Even so, there are some basic precautions passengers can take to keep coughs away.

Hydrate. Drinking water and keeping nasal passages moist with a saline spray can reduce your risk of infection.

Clean your hands frequently with an alcohol-based hand sanitizer. We often infect ourselves, touching mouth, nose or eyes with our own hands that have picked up something.

Use a **disinfecting wipe** to clean off tray tables before using.

Avoid **seat-back pockets**.

Open your air vent, and aim it so it passes just in front of your face. Filtered airplane air can help direct airborne contagions away from you.

Change seats if you end up near a cougher, sneezer or someone who looks feverish. That may not be possible on very full flights, but worth a try. One sneeze can produce up to 30,000 droplets that can be propelled as far as six feet.

Raise concerns with the crew if **air circulation** is shut off for an extended period.

Avoid airline **pillows and blankets** (if you find them).

"If you take the proper precautions, you should do quite well," said Dr. Gendreau. "In most of us, our immune system does what it was designed to do—protect us from infectious insults."

Hidden Dangers in Security

You think the plane is bad? Security checkpoints harbor a host of hazards as well, researchers say.

People get bunched up in lines, where there is plenty of coughing and sneezing. Shoes are removed and placed with



Jason Schneider

Airport security areas can make it easy to get sick. People are crowded together, and plastic storage bins that hold personal effects are not cleaned after each screening.

passengers were at a 7.5% increased risk.

Write to Scott McCartney at Scott.McCartney@wsj.com

other belongings into plastic security bins, which typically don't get cleaned after they go through the scanner.

A National Academy of Sciences panel is six months into a two-year study that is taking samples at airport areas to try to pinpoint opportunities for infection.

With limited resources, airports and airlines have asked researchers to help figure out where best to target prevention, said Dr. Mark Gendreau of Boston's Lahey Clinic Medical Center who is on the panel.

Check-in kiosks and baggage areas are other prime suspects in addition to security lines, he said.

Corrections & Amplifications

In a 2009 study, coach-cabin passengers were at a 7.7% increased risk of contracting the H1N1 flu strain if they sat within two seats of someone who was infected. A graphic that originally appeared with this column incorrectly said such

Copyright 2011 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. Distribution and use of this material are governed by our [Subscriber Agreement](#) and by copyright law. For non-personal use or to order multiple copies, please contact Dow Jones Reprints at 1-800-843-0008 or visit www.djreprints.com