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Do frequent flyers catch more colds?

by Forrest M. Mims III

Is it true that you're more likely to catch a cold if you take a flight on a commercial airplane?

The short answer is yes. People who fly catch more colds than those who stay at home.

This question concerns everyone who flies, especially frequent flyers ands those who fly during winter when fellow passengers are more likely to be infected with colds and even influenza.

Martin Hocking and Harold Foster of Canada's University of Victoria have studied the problem of increased colds among airline passengers. In an article for the *Journal of Environmental Health Research* ("Common cold transmission in commercial aircraft: Industry and passenger implications," 2004) , they reported that 20 percent of passengers who flew on a 2.5 hour flight developed colds within a week.

Figure 1. An aircraft waits for passengers on a snowy day at Cedar Rapids, Iowa. Photograph by Forrest M. Mims III.

Depending on three different flight scenarios, Hocking and Foster found that airline passengers in three different scenarios were 5, 23, or 113 times more likely to catch a cold than if they had not flown at all!

The scientists also found that the threat of catching tuberculosis is substantially higher if an infected passenger is aboard a flight.

The most logical reason for infections would seem to be the limited amount of cabin air shared by the passengers. But Hocking, Foster and other scientists have found this is only one factor. The very low humidity in an airplane seems to be much more important.

Commercial jet airplanes fly typically fly at altitudes ranging from 27,000 to 39,000 feet. The air is extremely dry at these high altitudes. Therefore, when fresh air is brought into the plane to supply the passengers ands crew, it is very dry air.

Very dry air dries up the mucous system that captures and expels bacteria and viruses from our noses. This may be a key reason why airplane passengers catch more colds.

Experiments to add humidity to airplane air have not been very successful, at least so far. The passengers themselves add some humidity simply by breathing. But it's common for the relative humidity on an airplane to be ten percent or less.

Some passengers have devised clever ways to keep their personal air humidified. A few wear face masks, which adds humidity to the air being inhaled. But face masks can disturb fellow passengers. (This bias will change if a flu pandemic occurs.)

Others use various nasal sprays and ointments to keep their mucous membranes moist. If you are planning a trip, you might want to ask your physician for advice. You can also find travel advice and information from various web site.

Forrest M. Mims III and his science are featured online at www.forrestmims.org.

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