

## Frequent Flyer Special Report: Air Quality in Airplane Cabins

A 2001 Congressional report by the National Academies' National Research Council found that poor air quality in airplane cabins could cause a wide range of health problems, including **skin irritation and respiratory problems among travelers and crew.**

Ozone pollution often becomes a problem at high altitudes. If you're a regular reader of *Allergy Consumer Report*, then you already know that ozone is a powerful lung irritant that can cause chest pain, coughing, shortness of breath, and throat irritation. Ozone can also increase susceptibility to infection and aggravate respiratory conditions like asthma. Reduced in-flight oxygen levels could also cause problems for people with heart or lung conditions.



Low humidity and dry air is another common problem in pressurized airplane cabins and may dry out the eyes, nasal membranes, and skin. To cope with the dry air, you may want to carry on saline eyedrops, [saline nasal sprays or gels](#), and [skin lotion](#). Drink plenty of water to help combat dehydration.

Pesticides are routinely sprayed on international flights, and other toxic substances like engine oils, hydraulic fluids, and de-icing solutions may contaminate the air in the cabin. The spread of infectious agents between passengers on a crowded airplane is another air quality concern. In 1995, the Centers for Disease Control and Prevention issued a warning that air travelers are at risk for catching tuberculosis if an infectious passenger is on board.



Many people carry a [mask](#) with them whenever they fly, not only in case of toxic chemical fumes, but also in case they're on a flight with someone who is ill. You can also prevent the spread of germs by avoiding touching your face and by washing your hands frequently with soap and hot water. If you are seated next to someone who is sick, you can request a seat change. If you begin to feel clammy or have blurry vision or cloudy thoughts, you may be feeling the effects of the low oxygen. In this situation, your flight attendant should be able to provide you with a portable oxygen bottle free of charge.

While air filters are standard for airplane ventilation systems, they do not capture all contaminants and germs in the recirculated cabin air.

In the past, airplane passengers breathed fresh air for the most part, but in the 1980s, airlines began to mix fresh air with recirculated air to save money and improve energy efficiency. A Boeing 737, for example, recirculates about 40% of its air, while a 757 recirculates about 50%. The air recirculation systems in today's planes circulate only about half as much air as required in an office building, and there is no minimum ventilation standard for aircraft.

"We've had thousands of reports over the years," says Judith Murawski of the Association of Flight Attendants (AFA). "We've had reports of headaches, nausea, fatigue, and dizziness. We've had reports of heart failure in flight, fainting, and breathing problems."

In 2003, the AFA submitted a special report to Congress on behalf of its 50,000 members. The report was titled "Aircraft Air Quality: What's Wrong with It and What Needs to Be Done." The report highlighted the following air quality problems:

- Inadequate Ventilation
- Polluted Air Supply on Ground
- Exposure to Heated Oils and Hydraulic Fluids
- Reduced Oxygen During Flight
- Inadequate Attention to Temperature Range
- Exposure to Potentially High Concentrations of Pesticides



Diana Fairechild

Diana Fairechild, a former flight attendant and expert on airline health and safety says, "I lost my health because of the airline practice of spraying pesticides inside airplane cabins - the toxic mist raining down on my skin. I know without doubt that spraying pesticide in occupied aircraft cabins is a violation of the human rights of everyone who flies."

"This injury ended my flying career," continues Fairechild, who now publishes [Air Travel Health News](#). "The toxicity in airplane air is a combination of jet fuel, hydraulic fluid leaks, engine lubricant oil, cleaning compounds, and pesticides that are sprayed on passengers and crew as a landing requirement in many countries."

Here at achool! ALLERGY, many customers have asked about personal air purifiers for air travel. Over the past couple of years, we've tested out several personal air purifiers intended for use on airplanes, but we were not impressed because they were all small ionic air cleaners that emitted ozone.



We finally found a personal air purifier for air travel that we're proud to offer: the [Plane Clean Air Filter](#).

Endorsed by Fairechild and featured by Kurt the Cyberguy on KTLA in Hollywood, the [Plane Clean Air Filter](#) attaches to the on-board air nozzle and removes 99.5% of all allergens, viruses, and bacteria from the air stream

that's blowing down on your face.

Fairechild says, "I'm excited and delighted about the Plane Clean Air Filter because it enables passengers to purify the air that comes directly to them from the air blower above their seat. I am a retired flight attendant after 21 years of flying. I wish this air filter had been available during that period because the more passengers that use it, the better the air is for everybody,



including the crew. Now that the [Plane Clean Air Filter](#) has come on the market, it's a permanent part of my flight kit."

Originally published in the [April 2007](#) issue of [Allergy Consumer Report](#).