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Air Canada CleanCare+: HEPA filters a key part of keeping passengers safe onboard



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As part of the [Air Canada CleanCare+ program](#)[External site which may not meet accessibility guidelines](#), every aircraft is [disinfected using hospital-grade products](#)[External site which may not meet accessibility guidelines](#) before every flight to ensure passenger safety. But out of sight is another key part of cabin cleanliness: High Efficiency Particulate Air, or HEPA, filters that purify the air.

These filters, also used in hospital operating theatres, are very effective at trapping microscopic particles as small as viruses and bacteria, as well as dust, pollen and moisture.

And did you know that the air in an aircraft cabin passes through the HEPA filter and is refreshed about 20-30 times per hour?

Learn more about the HEPA filters on our fleet in this video:

Top Airbus Engineer Says Cabin Air Refreshes Every 2-3 minutes

In a Twitter Live video, Airbus' Executive Vice President, Engineering, Jean-Brice Dumont explained in detail how its aircraft cabin air system works.

"An aircraft flies in a very hostile environment. It flies at high altitude and that means very cold air, minus 50 degrees Celsius, and low oxygen," Dumont said. "We must assure that the air has the right pressure, temperature, humidity and is clean enough to protect the passengers' health and safety, and to ensure comfort."

The cabin air is made of two parts. Half is fresh air from outside and the other half is recycled using efficient hospital-grade High Efficiency Particulate Air (HEPA) filters.

"HEPA filters are very efficient and block virus particles, such as for COVID or more generally, cleaning the air to at least 99.9 per cent. The cabins are designed with health in mind and we have been using this technology for decades to protect against many viruses."

The air is renewed about 20-30 times per hour. What you don't see is that there are tubes around the whole aircraft that flow air vertically downward instead of horizontally. The ventilation system circulates air about one metre per second. It's also circulated at the ground level toward vents that feed the air to the filter or outside.

The technology discussed in Airbus' Twitter Live presentation is featured on board all of Air Canada's Airbus fleet, including the A220, A319, A320, A321, and A330, and the Boeing 777 and 787 fleet that Air Canada operates also features HEPA filters. All HEPA specialized systems capture 99.9% of airborne particles, and continually refreshes cabin air multiple times each hour.

The International Air Transport Association also recently commented on virus transmission.

"The safety of passengers and crew is paramount. The aviation industry is working with governments to re-start flying when this can be done safely. Evidence suggests that the risk of transmission on board aircraft is low. And we will take measures—such as the wearing of face coverings by passengers and masks by crew—to add extra layers of protection. We must arrive at a solution that gives passengers the confidence to fly and keeps the cost of flying affordable. One without the other will have no lasting benefit," said Alexandre de Juniac, IATA's Director General and CEO.

"The cabin environment naturally makes transmission of viruses difficult for a variety of reasons. That helps explain why we have seen little evidence of onboard transmission. In the immediate term, our aim is to make the cabin environment even safer with effective measures so that passengers and crew can return to travel with confidence," said de Juniac.

Clean air and personal safety are important elements of [Air Canada CleanCare+ program](#), the company's industry leading, comprehensive health and safety program committed to providing peace of mind during all stages of travel.





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