Tracking Toxic Plane Pollution

Barrett and colleagues used a computer model that brought together records of flight paths, the average amount of fuel burned during flights, and their estimated emissions.

The computer model, based on experimental data, has been shown to accurately capture pollution's movement in the atmosphere as well as intercontinental transport of pollution, especially from Asia to North America, Barrett said.

By comparing this data with another atmospheric model, the team was able to track how plane pollutants are likely to move and where the pollutants are most likely to fall to the surface, where people breathe them in.

The study also looked at how human populations are spread around the planet to estimate how the patterns of airplane pollution might up the risk of death. (Test your knowledge of toxic disasters.)

Globally, the team estimated that about 8,000 deaths a year result from pollution from planes at cruising altitude—about 35,000 feet (10,668 meters)—whereas about 2,000 deaths result from pollution emitted during takeoffs and landings.

The most common causes of death due to air pollution are cardiovascular and respiratory diseases, including lung cancer, according to the UN's World Health Organization.