

Analyzing the Likelihood of a Risk

EXAMPLE 3 Analyzing the Likelihood of a Risk

Evaluate the following statement.

“The annual risk of being killed in a plane crash for the average American is about 1 in 11 million.” “How Risky Is Flying?,” David Ropeik

SOLUTION

Here is David Ropeik’s own evaluation of the statement.

“On that basis, the risk looks pretty small. Compare that, for example, to the annual risk of being killed in a motor vehicle crash for the average American, which is about 1 in 5,000. But if you think about those numbers, problems crop up right away. First of all, you are not the average American. Nobody is. Some people fly more and some fly less and some don’t fly at all. So if you take the total number of people killed in commercial plane crashes and divide that into the total population, the result, the risk for the average American, may be a good general guide to whether the risk is big or small, but it’s not specific to your personal risk.”

In his article, Ropeik goes on to say the following.

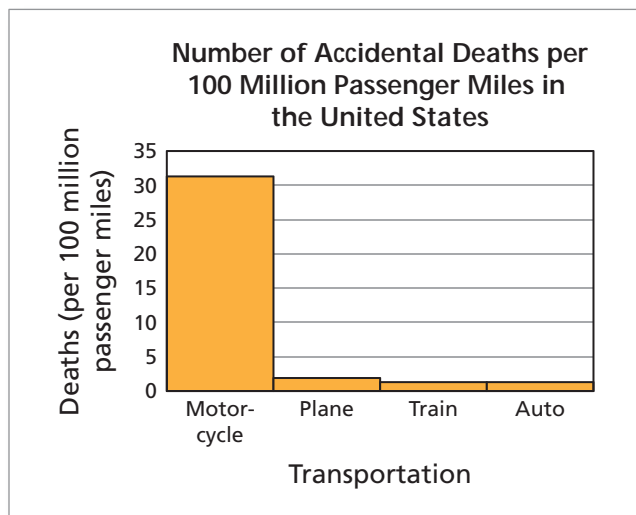
“. . . numbers are a great way to put risk in general perspective, and there is no question that by most metrics, flying is a less risky way to travel than most others. But wait: Just when you thought it was safe to use numbers to put risk in perspective . . . Numbers are not the only way—not even the most important way—we judge what to be afraid of. Risk perception is not just a matter of the facts. It’s also a matter of the other things we know (e.g., airline companies are in financial trouble) and our experiences (maybe you took a really scary, turbulent flight once) and our life circumstances (my wife was more afraid of flying when our kids were little). And on top of all that, several general characteristics make some risks feel scarier than others.”



David Ropeik taught risk communication at the Harvard School of Public Health. He is a coauthor of *Risk: A Practical Guide for Deciding What’s Really Safe and What’s Really Dangerous in the World Around You*.

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Use the bar graph to compare the risk of using the different means of transportation.

There are about 2 accidental deaths for every 100 million airplane miles flown. What does this say about the risk of taking a 2000-mile plane flight? Is it true that the more you fly, the more you increase the likelihood of an accident?