

Researchers develop tool to rank death rates

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Have you ever wondered what the chances are that you may die in the next year? Would it be from illness or an accident? Is it something you can control? Or is it completely out of your hands?

A new Web site, www.DeathRiskRankings.com, developed by researchers and students at Carnegie Mellon University, allows users to query publicly available data from the [United States](#) and Europe, and compare mortality risks by [gender](#), age, cause of death and geographic region. The Web site not only gives the risk of dying within the next year, but it also ranks the probable causes and allows for quick side-by-side comparison between groups.

Suppose you wanted to know who is more likely to die next year from breast cancer, a 54-year-old Pennsylvania woman or her counterpart in the United Kingdom.

"This is the only place to look," said Paul Fischbeck, site developer and professor of social and decision sciences and engineering and public policy (EPP) at Carnegie Mellon. "It turns out that the British woman has a 33 percent higher risk of [breast cancer](#) death. But for lung/[throat cancer](#), the results are almost reversed, and the Pennsylvania woman has a 29 percent higher risk."

"Most Americans don't have a particularly good understanding of their own mortality risks, let alone ranking of their relevant risks," said David Gerard, a former EPP professor at Carnegie Mellon who is now an associate professor of economics at Lawrence University in Appleton,

Wis.

The researchers found that beyond infancy, the risk of dying increases annually at an exponential rate. A 20-year-old U.S. woman has a 1 in 2,000 (or 0.05 percent) chance of dying in the next year. By age 40, the risk is three times greater; by age 60, it is 16 times greater; and by age 80, it is 100 times greater (around 1 in 20 or 5 percent). "The risks are higher, but still not that bad," Gerard said. "At 80, the average U.S. woman still has a 95 percent chance of making it to her 81st birthday."

When it comes to dying within the year, it turns out there are dramatic differences between comparative groups:

- For every age group, men have a much higher annual death risk than women. For 20 year olds, the risk is 2.5 to three times greater. Men are much more prone to accidents, homicides and suicides, and the risk of dying from heart disease is always higher for men than women, peaking in the 50s when men are 2.5 times at greater risk of dying. However, women's cancer risks are actually higher than men's in their 30s and 40s.
- For heart disease and cancer, U.S. blacks have a much higher death risk than U.S. whites. Overall, blacks in their 30s and 40s are twice as likely to die within the year as their white counterparts. Only for suicides, do whites consistently exceed blacks, where whites typically have two to three times greater chances of dying.
- For 20-year-old males, 80 percent of their death risks are from accidents, homicides and suicides. By [age](#) 50, however, these causes make up less than 10 percent and heart disease is No. 1, accounting for more than 30 percent of all deaths.

- People living in Western Europe have a greater risk of dying from breast and prostate cancer than people living in the United States, but people in the United States have a greater chance of dying from lung cancer than people living in Western Europe.
- Obesity-related death risks are much higher in the United States than in Europe. For example, the annual diabetes death risk in the United States is three times that found in northern Europe for 60 year olds.

Fischbeck and Gerard hope the new Web site will help bring focus to some of the discussion now raging over health care policy in the United States.

"It's much easier to make a persuasive argument when you have the facts to back it up, and this site provides all sides with the facts," Fischbeck said. "We believe that this tool, which allows anyone to assess their own risk of dying and to compare their risks with counterparts in the United States and Europe, could help inform the public and constructively engage them in the debate."

Source: Carnegie Mellon University ([news](#) : [web](#))

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