

Will climate change mean worse flu seasons?

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New study suggests that unseasonably warm outbreak the next.

(HealthDay)—Mild winters where few people catch the flu tend to be followed by serious flu outbreaks the next year, a new study finds, suggesting that global warming could mean harsher flu seasons ahead.

That, at least, is the theory. The study, which appeared Jan. 28 in the journal *PLoS Currents: Influenza*, shows a correlation between warm U.S. winters and more flu misery the following winter.

"But correlation doesn't mean causation," said lead researcher Sherry Towers, a research professor at Arizona State University, in Tempe.

"The dynamics that cause a severe flu season are so multifactorial," Towers said. One example is whether the flu shot for a particular season is a good match for the [flu strains](#) that are actually circulating. (To formulate the [flu vaccine](#) every year, scientists have to predict which strains will predominate in the upcoming season.)

Still, Towers said her findings offer "compelling evidence" of a link between [mild winters](#) and extra flu misery the next time around.

For the study, she and her colleagues looked at U.S. [government data](#) for each flu season since 1997. They found an interesting pattern, Towers said: When a winter had above-[average temperatures](#), the flu season the following fall and winter was more severe than normal 72 percent of the time.

Normally, flu season in the United States peaks in late January or early February. But Towers's team found that the flu season following a mild winter was 80 percent more likely than normal to peak before Jan. 1.

This year's rough flu season is a case in point, Towers said.

The nation saw an early start to this flu season, with cases taking off in November. Last week, the U.S. [Centers for Disease Control and Prevention](#) reported that flu activity across the country was still higher than average, although it was leveling off in some areas.

Since the start of the season, 37 children had died of the flu, the agency said—with eight deaths during the week ending Jan. 19. Nearly 6,200 people had been hospitalized with definite cases of the flu confirmed by lab tests.

In contrast, the 2011-2012 flu season was light, with cases gradually rising after Jan. 1. "And that winter was the fourth warmest on record," Towers said.

So why might a warm winter foretell a nasty flu season next time around? For one, Towers said, research suggests that the flu virus is tougher to transmit during mild weather, because the virus dies faster in warmer, more humid air.

Then, if fewer people get the flu, more people will be vulnerable to catching it the next season, another expert explained.

Dr. Stephen Baum, a professor of microbiology and immunology at Albert Einstein College of Medicine in New York City, said the flu virus "changes its coat" each season, so the strains are not identical year to year. Usually, however, the change is slight. So if you had the flu last season, Baum said, you're somewhat protected this year, and may either not get sick or catch a fairly mild case—what you might brush off as a "bad cold."

Baum agreed that the new findings do not prove that a mild winter directly causes a more miserable flu season the next time. "They're just saying that's a possibility," he said.

But Baum and Towers both stressed the importance of getting your yearly [flu shot](#), which experts recommend for everyone older than 6 months of age.

And if last winter was warm, Towers said, it might be wise to get that shot sooner rather than later. Baum noted, however, that even if you battled and beat a bad case of the flu this year, you still need to get vaccinated next year. That infection may give you some protection next [flu season](#), but the vaccine gives you more.

An estimated 36,000 Americans die from the flu and its complications, such as pneumonia, in a typical season, according to the CDC. From 1976 to 2006, estimates of flu-related deaths ranged from a low of about 3,000 to a high of about 49,000 people.

Adults older than 65, young children, pregnant women and people with chronic heart and lung disease are at increased risk of flu complications.

More information: Learn more about the flu from the [U.S. Centers for Disease Control and Prevention](#).

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