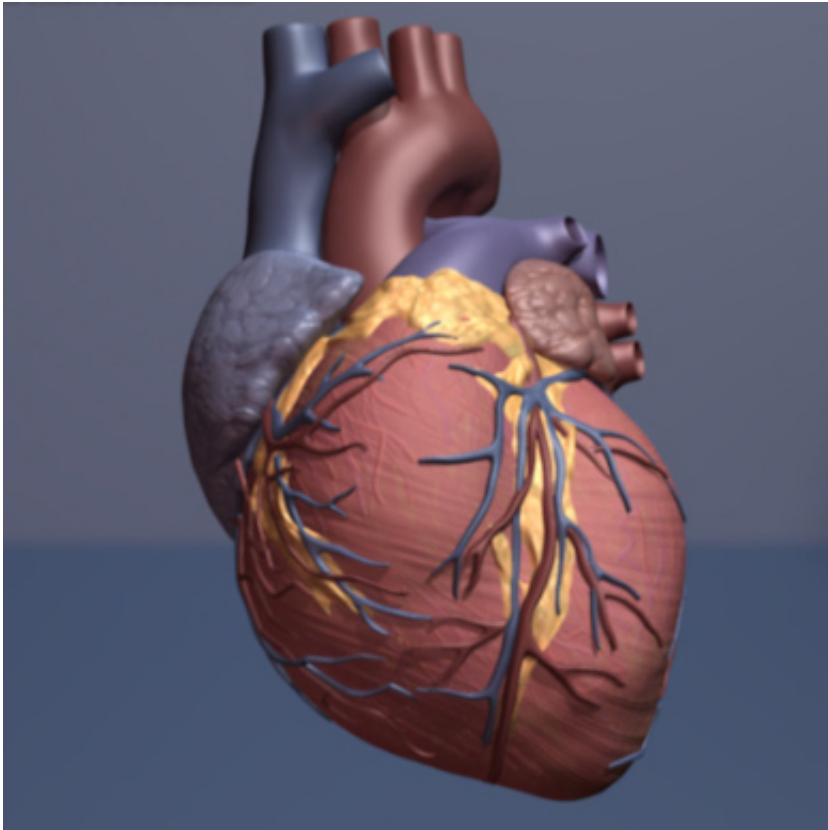


Heart-related deaths spike at Christmas

December 22 2016



Human heart. Credit: copyright American Heart Association

Heart-related deaths spike during Christmas, but the effect may have nothing to do with the cold winter season, according to new research in *Journal of the American Heart Association*, the Open Access Journal of the American Heart Association/American Stroke Association.

"Spikes in deaths from natural causes during Christmas and New Year's

Day has been previously established in the United States. However, the Christmas holiday period (December 25th to January 7th) in the U.S. falls within the coldest period of the year when death rates are already seasonally high due to low temperatures and influenza," said Josh Knight, B.Sc., study author and research fellow at the University of Melbourne in Australia.

In this study, researchers analyzed trends in deaths in New Zealand, where Christmas occurs during the summer season when death rates are usually at a seasonal low - allowing researchers to separate any winter effect from a holiday effect.

During a 25-year period (1988-2013), there were a total of 738,409 deaths (197,109 were noted as [cardiac deaths](#)).

Researchers found:

A 4.2 percent increase in heart-related deaths occurring away from a hospital from December 25 - January 7.

The average age of cardiac death was 76.2 years during the Christmas period, compared with 77.1 years during other times of the year.

There are a range of theories that may explain the spike in deaths during the holiday season, including the emotional stress associated with the holidays, changes in diet and alcohol consumption, less staff at medical facilities, and changes in the physical environment (for example visiting relatives). However, there have been few attempts to replicate prior studies.

Although more research is needed to explain the spike in deaths, researchers suggest one possibility may be that patients hold back in seeking medical care during the [holiday season](#).

"The Christmas holiday period is a common time for travel within New Zealand, with people frequently holidaying away from their main medical facilities. This could contribute to delays in both seeking treatment, due to a lack of familiarity with nearby [medical facilities](#), and due to geographic isolation from appropriate medical care in emergency situations," Knight said

Another explanation may have to do with a terminally ill patients' will to live and hold off death for a day that is important to them.

"The ability of individuals to modify their date of [death](#) based on dates of significance has been both confirmed and refuted in other studies, however it remains a possible explanation for this [holiday](#) effect," Knight said.

However, researchers note that the study did not track daily temperatures and New Zealand has an island climate, which almost eliminates the extremes of temperature that have been associated with heart-related [death rates](#) in previous studies.

More information: Josh Knight et al, Revisiting the "Christmas Holiday Effect" in the Southern Hemisphere, *Journal of the American Heart Association* (2016). DOI: 10.1161/JAHA.116.005098

Provided by American Heart Association

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