



# Birth timing and heart disease

Association between birth month and season with risk of developing cardiovascular disease

Consistent patterns have been observed linking birth in the spring and summer with higher risk of cardiovascular disease in the northern hemisphere, with the reverse pattern south of the equator. Authors Zhang and colleagues observed this pattern in the Nurses' Health Study longitudinal cohort, a group of 121 700 female registered nurses recruited in the United States in 1976.

The diagram below shows the results of the authors' fully adjusted Cox model, providing monthly and seasonal hazard ratios for cardiovascular disease death. They did not observe a similar pattern for overall mortality. Full results can be seen on [bmj.com](http://bmj.com) at the link below.

## Potential mechanisms

The reasons for variations in risk of cardiovascular disease with different birth timings are not well understood, but could include prenatal and early postnatal exposures such as:

- seasonal fluctuations in nutrition availability
- infections and inflammatory causes
- climatic temperature
- air pollution levels
- amount of sunlight available

