

Season of birth may be linked to risk of heart death

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The time of the year you are born may be linked to your risk of dying from heart disease in later life, suggests a large US study in the Christmas issue of *The BMJ*.

The findings show that those born in the spring and summer had a small but significant increase in death from [heart disease](#), compared with those

born in the autumn.

Reasons for these differences are not well understood, but could include seasonal fluctuations in diet, air pollution levels, and availability of sunlight before birth and in early life.

Previous studies in the northern hemisphere have consistently linked birth in the spring and summer with higher risk of death, with the reverse pattern south of the equator. But they were not able to sufficiently control for factors such as family [medical history](#) or economic and [social position](#).

To overcome these limitations, researchers used data for 116,911 US female registered nurses recruited to the Nurses' Health Study in 1976 to examine links between birth timing and overall death, and death from [cardiovascular disease](#).

Participants were aged 30 to 55 years at the start of the study and they completed a detailed health and lifestyle questionnaire every two years. Death certificates and medical records were used to identify causes of death over 38 years of follow-up (1976-2014).

More than 43,000 deaths were documented over the study period, including 8,360 cardiovascular disease deaths.

Unlike previous studies, no significant association was found between birth timing and overall death.

However, after taking account of a range of family history, economic and [social factors](#), the researchers found that women born in the spring and summer had a slight but significant increase in cardiovascular [death](#) compared with those born in the autumn.

This is an observational study, so can't establish cause, and the researchers can't rule out the possibility that some of the results may have been due to unmeasured factors.

However, strengths include the large sample size, long follow-up, and detailed information on lifestyle, family history, social and [economic factors](#).

As such, the researchers say their study "adds to the growing evidence suggesting that individuals born in the spring and summer have higher cardiovascular mortality than those born in autumn, but conflicts with previous findings on overall mortality."

It also supports the view that associations of fetal and early life factors with cardiovascular disease mortality "could relate to a small but real seasonal effect of fetal or early life factors in later life," they add.

"Further investigations are required to confirm current findings and uncover mechanisms of seasonal birth month effect in cardiovascular mortality," they conclude.

More information: Birth month, birth season, and overall and cardiovascular disease mortality in US women: prospective cohort study, *BMJ* (2019). [DOI: 10.1136/bmj.l6058](https://doi.org/10.1136/bmj.l6058)

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