

## Growing up on livestock farm linked to increased risk of blood cancers

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Growing up on a livestock farm seems to be linked to an increased risk of developing blood cancers as an adult, indicates research published online in *Occupational and Environmental Medicine*.

The [risk](#) of developing a blood cancer was three times as high for those who had grown up on a poultry farm, the study shows.

Previous research has suggested that farmers are at increased risk of blood cancers, the possible explanations for which have focused on exposure to [pesticides](#) or infections as a result of contact with [farm animals](#). But most of this research has focused on adults, say the authors, with little information on potential early life factors.

The authors base their findings on an analysis of more than 114,000 death certification records from 1998 to 2003 for those aged between 35 and 85 and resident in New Zealand.

Information regarding the deceased's usual job and that of at least one of the parents was extracted for 82% (94,054) of the records.

During the study period, just over 3,000 deaths were attributed to blood cancers, and growing up on a livestock farm was associated with a higher risk of developing such a cancer.

This association was not apparent for those who had grown up on arable/crop farms, although working on one of these farms as an adult

was associated with a higher risk.

The analysis showed that the overall risk of developing a blood cancer, such as leukaemia, [multiple myeloma](#), and non-Hodgkin's [lymphoma](#), was 22% higher for those growing up on livestock farm compared with those who had not grown up in this environment.

[Poultry farms](#) conferred the greatest risk, with those who had grown up in this environment three times as likely to develop a blood cancer as those who had not.

Growing up on an arable/crop farm conferred an almost 20% lower risk of developing a blood cancer, but crop farming as an adult was associated with an almost 50% [increased risk](#).

Working on a livestock farm as an adult also seemed to lessen the risk by 20%— with the exception of beef cattle farming, where the risk was three times as high.

These findings held true, even after taking account of factors likely to influence the results and after comparison with different causes of death.

The authors caution that further studies will be needed before a definitive cause and effect can be established, but they say that their study "suggests that farming exposures in adulthood and childhood play independent roles in the development of haematological cancers."

They go on to say that exposure to particular types of virus in childhood may alter the immune system response, so increasing the risk of [blood cancer](#) in later life.

Provided by British Medical Journal

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