

Farm kids have lower risk of asthma, study shows

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Farm children appear to have a lower risk of asthma than their urban counterparts or even those living in a non-agricultural rural environment, according to a University of Alberta study.

Analysis of two surveys involving 13,524 asthma-free children aged less than 12 years in the ongoing Canadian National Longitudinal Survey of Children and Youth (NLSCY) showed that children living in a farming environment had a lower risk of developing asthma than their counterparts who resided in either non-farming rural environments, such as residential acreages and rural towns, or an urban environment.

The two-year cumulative incidence of asthma was only 2.3 per cent in farm children, compared to 5.3 per cent for other rural and 5.7 per cent for urban children.

The study was published recently in the journal *Respirology*.

“Farm children of ages one to five years also showed a stronger protective effect against asthma than those aged six to 11 years, possibly due to earlier exposure to the farm environment,” said William Midodzi, lead author on the study and a PhD candidate in the Department of Public Health Sciences in the University of Alberta School of Public Health in Edmonton, Canada.

As well, youngsters with parental history of asthma living in farming environments had a reduced risk of asthma compared to children living

in rural non-farm environments, whereas children with parental history of asthma living in urban areas had a higher risk when compared with children living in rural non-farm environments.

Midodzi speculates that exposure to compounds called “endotoxins” from animal viruses and manure and avoidance of urban environment early in life might have reduced the risk for development of asthma.

This study shows that living in a farming environment reduces the risk of developing asthma, in contrast to previous studies reporting that existing asthma was related to exposure to farming environments. The researchers believe that exposure to endotoxins stimulates the body’s immune system and keeps it busy fighting bacteria thus reducing the risk of the body turning its immune attention to lung inflammation that causes asthma.

Clinicians who treat patients with asthma can use these findings to identify high-risk children and also educate parents, said study co-authors Carina Majaesic and Brian Rowe, University of Alberta clinician-scientists and physicians with the Capital Health region.

“This research suggests that we should discourage childhood exposure to tobacco smoke, encourage breast feeding, and not worry about keeping children’s environment too sterile,” said Majaesic.

Source: University of Alberta

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