

Study finds early farm exposure mitigates respiratory illnesses, allergies and skin rashes

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Credit: Bobby Mikul/public domain

Exposure to dairy farms early in life may dramatically reduce the frequency and severity of respiratory illnesses, allergies and chronic skin rashes among young children according to a collaborative study that

includes two researchers from the University of Wisconsin School of Medicine and Public Health. Drs. Christine Seroogy, associate professor of pediatrics, and James Gern, professor of pediatrics, worked with researchers at the Marshfield Clinic on the study.

"Seeing decreased allergies in [farm](#)-exposed [children](#) from the Marshfield area is in agreement with similar findings in Western Europe that found farm [exposure](#) is linked to allergic disease and wheezing illnesses," said Seroogy. "But this is the first study to show an association between farm exposure and reduced medically-attended [respiratory illnesses](#)."

The study, published online by the *Journal of Allergy and Clinical Immunology*, was conducted in the Marshfield Epidemiologic Study Area. It compared 268 children ages five to 17 who lived on a dairy farm from birth to five years to 247 children who live in a rural area but never lived on a farm. The study included the use of questionnaires and review of [electronic medical records](#).

Conditions that were significantly less common in farm-exposed children were allergic rhinitis or hay fever (17 percent compared to 28 percent) and eczema (7 percent versus 19 percent). The study found children born onto [dairy farms](#) had much less severe respiratory illnesses during the first two years of life (16 percent in farm infants compared to 31 percent in non-farm infants.)

"These findings suggest that environmental exposures or other elements of the farming lifestyle help kids to be resistant to both allergies and viral respiratory illnesses," said Gern.

Seroogy and Gern said they are working on an additional study in Marshfield to identify which farm exposures may be beneficial and to determine whether they stimulate development of the immune system

during infancy. This prospective birth cohort study, known as the Wisconsin Infant Study Cohort, will help to determine how farm exposure reduces childhood respiratory illnesses.

"Ultimately, the goal of our ongoing study is to determine the beneficial exposures of the farming lifestyle and establish a safe manner to bring this to children at risk for asthma and allergic diseases," said Seroogy.

More information: Farm Exposure in Early Childhood is Associated with a Lower Risk of Severe Respiratory Illnesses. *Journal of Allergy and Clinical Immunology*. DOI: [dx.doi.org/10.1016/j.jaci.2017.07.032](https://doi.org/10.1016/j.jaci.2017.07.032)

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