

Living close to a livestock farm linked to lowered allergy risk among adults

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Living close to a livestock farm may help curb the risk of common allergies among adults who aren't farmers or agricultural workers, suggests research published online in *Occupational & Environmental*

Medicine.

In particular, the closer the proximity to pigs and cattle, the lower the risk of allergic sensitisation (atopy) seemed to be, the findings indicate.

Previous research suggests that growing up, or working, on a farm may lessen the risk of developing allergies. But whether this protection might extend to those who don't work in the sector, but who nevertheless live nearby, isn't clear.

In a bid to explore this further, the Dutch researchers drew on the survey responses and [blood sample](#) results of nearly 2500 adults aged between 20 and 72.

All the participants, who lived in a rural area in the south of the Netherlands, characterised by high farm density, were part of the VGO (Dutch Farming and Neighbouring Residents' Health) Study.

Blood sample analysis revealed that nearly a third (just under 30%) of the total sample were atopic—allergic—and specifically to grass (just under 12%); house dust mite (just under 12%); cats (just over 5%); dogs (just under 4%); and/or had a high level of immunoglobulin E antibodies, which are indicative of [allergy](#) (just over 20%).

Distance of the home from a [livestock](#) farm and the total number of livestock farms within a radius of 500 and 1000 metres were taken as proxies of exposure to farm animals.

Those living 330 metres from any type of livestock farm were 27 percent less likely to be atopic than those living further away.

But those living within 500 metres of a pig, or 400 metres of a cattle, farm were, respectively, 37 and 32 percent less likely to be atopic than

those living more than 800 or 600 metres away.

A high density of farms within 500 metres was also associated with a lower allergy risk—4 percent lower per farm and 14 percent lower for every pig farm.

One in three participants (33.5%) had lived on a farm during their childhood, and these people were less likely to be atopic than those who had not grown up on a farm: 21.6% vs 34%.

And those who lived within a 500 metre radius, and who had lived in an area of high farm density as a child had significantly lower allergy risks than those who hadn't, suggesting that long term exposure may be particularly effective at curbing the risk of atopy, say the researchers.

Several studies have shown that exposure to a wider variety of microbes may curb the risk of developing allergies, say the researchers, who point to the role of the body's microbiome in the development and maintenance of the immune system.

"Despite concerns about the influence of air pollution from livestock farms on public health, our study found results that are indicative of potentially beneficial health effects of living in close proximity to farms," they write.

But this is an observational study which can't establish causation, and the researchers caution: "Although a [farm](#) environment may be beneficial for allergy prevention, one should be aware that the agents that may be responsible for the observed association have not been identified, and, therefore, causal inferences cannot be made yet."

More information: Residential proximity to livestock farms is associated with a lower prevalence of atopy, *Occupational &*

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