

The immune system benefits from life in the countryside

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Adults who move to farming areas where they experience a wider range of environmental exposures than in cities may reduce the symptoms of their hypersensitivities and allergies considerably. This is the result of new research from Aarhus University.

This pioneering result was recently published online in the esteemed periodical, *The Journal of Allergy and Clinical Immunology* in an article entitled "Become a farmer and avoid new allergic sensitization: Adult farming exposures protect against new-onset atopic sensitization".

The immune systems of people who work in farming are frequently exposed to a wide range of bacteria, fungi, pollen and other irritants which may trigger a response that protects them against hypersensitivity. Working in a farming environment may therefore serve to prevent or dampen hypersensitivity to the most widespread plant allergens: grass and birch pollen.

Surprisingly, the positive effect on the [immune system](#) is seen both in people who have lived in urban environments and in adults who were born and raised in farming areas. But the real surprise is that the effect is not only seen in children:

"Previously, the assumption was that only persons who had lived in farming areas while growing up would benefit from the environment's protective effect on the immune system. But now we can demonstrate that it's not too late simply because you are an adult," says postdoc

Grethe Elholm.

It is, in other words, possible to affect the immune system and thereby the hypersensitivity which may cause allergy and allergic asthma ? and what is more, this can be done at a much later point in life than previously assumed.

This knowledge is now bringing researchers closer to discovering how to prevent allergies. The assumption is that the absence of [environmental exposure](#) does not protect against [hypersensitivity](#). In fact, living in an environment with a much higher level of environmental exposure than you are used to can actually be good for your health. In general, exposure to the farming environment dampens the entire immune response to the environment because it stimulates the immune system.

"We cannot, however, simply recommend that people who suffer from allergies and hypersensitivities move to farms. Because they may also suffer from lung diseases such as asthma and would therefore become more ill due to the high concentrations of dust and particles found in stables and in agriculture in general," stresses Grethe Elholm.

Provided by Aarhus University

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