Asthma and allergies: is the farming environment (still) protective in Poland? : The GABRIEL Advanced Studies

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Evidence exists that a farming environment in childhood may provide protection against atopic respiratory disease. In the GABRIEL project based in Poland and Alpine regions of Germany, Austria and Switzerland, we aimed to assess whether a farming environment in childhood is protective against allergic diseases in Poland and whether specific exposures explain any protective effect.; In rural Poland, 23 331 families of schoolchildren completed a questionnaire enquiring into farming practices and allergic diseases (Phase I). A subsample (n = 2586) participated in Phase II involving a more detailed questionnaire on specific farm exposures with objective measures of atopy.; Farming differed between Poland and the Alpine centres; in the latter, cattle farming was prevalent, whereas in Poland 18% of village farms kept $\geq$1 cow and 34% kept $\geq$1 pig. Polish children in villages had lower prevalences of asthma and hay fever than children from towns, and in the Phase II population, farm children had a reduced risk of atopy measured by IgE (aOR = 0.72, 95% CI 0.57, 0.91) and skin prick test (aOR = 0.65, 95% CI 0.50, 0.86). Early-life contact with grain was inversely related to the risk of atopy measured by IgE (aOR = 0.66, 95% CI 0.47, 0.92) and appeared to explain part of the farming effect.; While farming in Poland differed from that in the Alpine areas as did the exposure-response associations, we found in communities engaged in small-scale, mixed farming, there was a protective farming effect against objective measures of atopy potentially related to contact with grain or associated farm activities.

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