



Evaluation of eczema, asthma, allergic rhinitis and allergies among the Grade-1 children of Iqaluit.

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Abstract: Little is known about the prevalence of asthma, allergic rhinitis, eczema and allergies among Canadian Inuit children, especially those living in the arctic and subarctic areas.

A cross-sectional study among Grade 1 students attending schools in Iqaluit, the capital of Nunavut, was conducted during the 2015/2016 school year. We used the International Study of Allergy and Asthma in Children questionnaire with added questions relevant to the population. In addition, skin prick tests were conducted to test for sensitization to common food and environmental allergens.

The prevalence of current asthma was 15.9% (> 2:1 males) with the highest prevalence among those with any non-Inuit heritage at 38.5%. The prevalence of current and past allergic rhinitis was 6.8%, also predominant among males, with the lowest prevalence among the mixed ethnicity. Home crowdedness was inversely related to past asthma. Being ever outside Nunavut was associated with higher prevalence of current and past asthma. No statistically significant relationship was found with passive smoking or exclusive breast feeding during the first 4 months of life. The current eczema prevalence was 20.5%, with the highest prevalence recorded among the Inuit at 25% compared to 15.4% among the mixed ethnicity and 14.3% among the non-Inuit. We noted a high rate of sensitization to cat at 26.7% while absent sensitization to other common inhalant allergens.

Variations in the prevalence and risk factors of asthma, allergic rhinitis and eczema among different ethnicities living at the same subarctic environment may be related to genetic, gene-environment interaction and/or lifestyle factors that require further investigation.

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