

# The prevalence of allergic diseases in primary school children in Edirne, Turkey

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## Summary

**Background** Allergic diseases present a major health burden for children as shown by the rising morbidity and increased mortality from asthma. Information on the prevalences of allergic disorders and contributing factors as well will help to establish feasible measures to change this trend, and more efficient assignment of the limited health resources.

**Objective** To assess the prevalences of asthma and other allergic diseases and the contribution of various risk factors in primary school children in Edirne, Turkey.

**Methods** Children aged 7 to 12 in primary schools in the municipality and 24 villages of Edirne were surveyed via a questionnaire completed by the parents. The cumulative (lifetime) and current (last 12 months) prevalences of allergic diseases and the presence of passive smoking, atopic family history, animal contact and breast-feeding in infancy were determined.

**Results** A total of 5412 children (70.1% from the metropolitan and 29.9% from the rural area) were enrolled. The cumulative and current prevalences of all allergic diseases were 24.6% and 9.9% respectively. The cumulative (lifetime) prevalences of bronchial asthma, wheezing, allergic rhinitis and atopic dermatitis were 16.4%, 18.9%, 12.3% and 2.2%, and the current (last 12 months) prevalences were 5.6%, 5.8%, 4.5% and 0.9% respectively. Three-fourths of the children were exposed to tobacco smoke at home. Atopic heredity appeared the most prominent risk factor for any allergic disorder. Neither age, breast-feeding nor place of habitation affected the occurrence of allergic disorders. Animal contact was a significant risk factor for asthma and wheezing (adjusted odd ratios (OR) and 95% confidence intervals (CI) for current prevalences are 1.38 (CI = 1.04–1.83) and 1.35 (CI = 1.02–1.78) respectively), exposure to indoor tobacco smoke for wheezing (OR = 1.52, CI = 1.10–2.09), and male gender for asthma (OR = 1.50, CI = 1.16–1.93). Current prevalences for all allergic diseases were significantly lower than those previously reported in Ankara, Turkey.

**Conclusions** Allergic diseases are a major health burden for primary school children in Edirne, Turkey. Although atopic heredity appears to be the foremost important risk factor, reduction of exposure to indoor tobacco smoke and animal contact, especially for those with atopic family history, are important preventive measures. The impact of environmental exposures on distinguishing prevalences of allergic diseases in Ankara and Edirne should be further investigated.

**Keywords:** prevalence, allergy, paediatric asthma

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## Introduction

Allergic diseases are among the most frequent and demanding health disorders of childhood [1,2]. The lifetime

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prevalences of allergic disorders have been reported to range from 15.1% to 41% in Western countries [3–8]. Several studies have shown that morbidity from bronchial asthma and other allergic diseases as well as mortality from asthma are increasing worldwide, and various investigations have been undertaken to recognize the factors responsible

primary school children in Ankara compared with Edirne should be promptly investigated and feasible measures taken for environmental control.

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#### Appendix 1: Questionnaire

Name: \_\_\_\_\_

Sex: \_\_\_\_\_

Age: \_\_\_\_\_

School and Grade: \_\_\_\_\_

Has your child ever had

Bronchial asthma diagnosed by a physician? \_\_\_\_\_

Eczema diagnosed by a physician? \_\_\_\_\_

Wheezing (observed by parents)? \_\_\_\_\_

Perennial or seasonal rhinoconjunctivitis? \_\_\_\_\_

If your answer is yes to any of above questions:

Age of onset \_\_\_\_\_

Age of last symptoms \_\_\_\_\_

Has your child had symptoms in the last 12 months? \_\_\_\_\_

Do you have pets at home \_\_\_\_\_

Does your child breed animals? \_\_\_\_\_

If yes, which animals? \_\_\_\_\_

Did your child breast-feed after delivery \_\_\_\_\_

If yes, what was the duration of breast-feeding? \_\_\_\_\_

Are there any smokers at home? \_\_\_\_\_

If yes, how many persons smoke at home? \_\_\_\_\_

Has any other family member ever had any allergic diseases

(asthma, wheezy bronchitis, eczema, allergic rhinoconjunctivitis)

If yes, please indicate the type(s) of the disease: \_\_\_\_\_

Mother \_\_\_\_\_

Father \_\_\_\_\_

Sibling \_\_\_\_\_

Date: \_\_\_\_\_

Signature of parent \_\_\_\_\_

Yes

No

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