



## Prevalence of allergic diseases in individuals with headache - preliminary data from a Brazilian cohort

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### Introduction

The first description of the relationship between headaches and allergies dates back to 1927 when Vaughn reported that 36% of patients with migraines had allergic triggers. Another study showed that 58% of individuals with migraines had a history of allergies, and more than 50% of them had a family history of allergic diseases. Since then, contradictory data has been published.

### Objective

To analyze the prevalence of allergic diseases in individuals with headaches. Verify whether these diseases are associated with headaches, and whether there is an association between these diseases and episodic/chronic headaches.

### Methods

An analytical and descriptive study from a cohort of live births (1978/79) in Ribeirao Preto/SP. The questions of interest were: 1. The presence and frequency of headache in the last 3 months; 2. The history of medical diagnosis of asthma/bronchitis, allergic rhinitis, skin allergy/eczema, and allergic conjunctivitis.

### Results

1775 individuals attended this interview, with an average age of  $38.13 \pm 0.579$ , 52.3% of whom were female. Sixty-three percent ( $n=1113$ ) reported having had a headache in the last three months, with 16.3% of these having chronic headaches. Among patients with headaches, the diagnosis of asthma/bronchitis was reported by 17.80%, allergic rhinitis by 39.35%, skin allergy by 13.32%, and allergic conjunctivitis by 13.84%. There was an association between headache and allergic rhinitis [ $X^2(2)= 27.262$ ,  $p < 0.001$ ] and headache and allergic conjunctivitis [ $X^2(2)= 7.859$ ,  $p = 0.017$ ]. No association was observed between headache and asthma/bronchitis [ $2(1)= 1.008$ ,  $p = 0.327$ ] or skin allergy [ $X^2(2)= 1.243$ ,  $p = 0.514$ ]. An association between the presence of episodic headache and a diagnosis of asthma/bronchitis [ $X^2(1)= 4.411$ ,  $p = 0.043$ ] and a diagnosis of allergic rhinitis [ $X^2(2)= 6.110$ ,  $p = 0.047$ ] was observed. There was no association between episodic/chronic headache and skin allergy [ $X^2(2)= 0.636$ ,  $p = 0.728$ ] or conjunctivitis [ $X^2(2)= 8.828$ ,  $p = 0.661$ ].

### Conclusion

In patients with headaches in the last 3 months, the prevalence of asthma/bronchitis was 17.80%, allergic rhinitis 39.35%, skin allergy 13.32%, and allergic conjunctivitis 13.84%. Patients with headaches had more diagnoses of allergic rhinitis and allergic conjunctivitis. Those with episodic headaches had more diagnoses of asthma/bronchitis and allergic rhinitis when compared to those with chronic headaches.