

Background. Bakery and hairdressing rank high among occupations at risk of asthma. We explored the early incidence of occupational asthma (OA) along the first years of activity among young workers.

Methods. Subjects who graduated between 2001 and 2006 underwent telephone interviews on the occurrence of respiratory symptoms. Workers in occupations not exposed to known airways irritants or allergens were also included. Subjects who had asthma when starting apprenticeship were excluded. Those who declared work-related respiratory or ENT symptoms and a sample of asymptomatic subjects were proposed a medical visit (spirometry tests, exhaled NO measurements, daily surveillance of peak flow values, blood sample for assessment of common allergens and work-specific IgE). Diagnosis of OA was established by expert judgment and the sensitivity and specificity of symptoms declared during the telephone interviews were assessed.

Results. 866 subjects were interviewed (mean age: 25.3 years), among which 282 underwent a medical visit. The cumulative incidence of 'probable' OA among bakers was high in the first quartile of exposure duration (median value=3.0 years; risk = 15.8 % [95%CI=9.9–21.7]); several had to quit this activity because of this condition. It was reduced to 13.1 % [7.2–19.0] in the second exposure duration quartile (5.3 years) and increased regularly across the third (7.4) and fourth (9.5) quartiles, with 14.7 % [7.8–21.7] and 17.2 % [8.7–25.6]), respectively. The corresponding figures among hairdressers are 8.3 % [0.6–16.0]), 6.1 % [0.7–11.5], 4.3 % [0.1–8.6] and 6.4 % [1.5–11.3]. Atopy is highly associated with incidence of OA among bakers (RR= 7.4), and, to a lesser extent, among hairdresser (RR= 3.6). No new case of OA occurred in the reference group.

Conclusion. Incidence of OA starts soon after engaging in bakery and hairdressing, activities that entail exposure to low or high molecular weight agents.