Infant swimming in chlorinated pools and the risks of bronchiolitis, asthma and allergy

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Abstract

Recent studies suggest that swimming in chlorinated pools during infancy may increase the risks of lower respiratory tract infection. The aim of the present study was to assess the influence of swimming in chlorinated pools on the risks of bronchiolitis and its late consequences.

A total of 430 children (47% female; mean age 5.7 yrs) in 30 kindergartens were examined. Parents completed a questionnaire regarding the child's health history, swimming practice and potential confounders.

Attendance at indoor or outdoor chlorinated pools ever before the age of 2 yrs was associated with an increased risk of bronchiolitis (OR 1.68; 95% CI 1.08–2.68; p = 0.03), which was exposure–dependent for both types of pool (p-value for trend <0.01). Associations persisted, and were even strengthened, by the exclusion of other risk factors. Among children with no parental antecedents of atopic disease or no day-care attendance, odds ratios for bronchiolitis amounted to 4.45 (1.82–10.9; p = 0.001) and 4.44 (1.88–10.5; p = 0.007) after >20 h spent in chlorinated pools during infancy. Infant swimmers who developed bronchiolitis also showed higher risks of asthma and respiratory allergies later in childhood.

Swimming pool attendance during infancy is associated with a higher risk of bronchiolitis, with ensuing increased risks of asthma and allergic sensitisation.

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