

## SWIMMING POOL ATTENDANCE AND RESPIRATORY SYMPTOMS AT 1 YEAR: RESULTS FROM THE INMA BIRTH COHORT IN SPAIN

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**Background and Aims:** Infant swimming pool attendance has been associated with increased respiratory diseases, but results are inconsistent. The aim was to assess the relationship between swimming pool attendance and several respiratory, atopic symptoms and infections during the first year of life.

**Methods:** Four birth cohorts from different regions in Spain taking part of the INMA project were used. Data was collected by standard questionnaire at 12-14 months of age on frequency of swimming (indoor and outdoor swimming pools in winter and summer) and having had the following symptoms: bronchiolitis, bronchitis, low respiratory track infection (LRTI), cough, wheezing, atopic eczema, otitis. Birth season, small for gestational age, breastfeeding, day care attendance, maternal age, education, social class and atopy were considered as potential confounders. Odds ratios and 95% confidence interval (OR 95%CI) were calculated by logistic regression.

**Results:** 2,644 children were included (855 from Valencia, 494 from Asturias, 638 from Guipuzcoa and 657 from Sabadell). Swimming pool attendance during the 1st year of age occurred among 42% of children, with a median cumulated duration of 720 minutes (Interquartile range = 210-1800). Swimming was more common among children in higher social classes with mid-aged mothers, day care attendants and those who breastfed or were born in autumn and winter. Prevalences of symptoms were 16% bronchiolitis, 14% bronchitis, 12% cough, 19% eczema, 33% LRTI, 32% wheezing and 31% otitis. Preliminary results showed no association between swimming pool attendance and symptoms. Compared to non-swimming pool attendants, children who attended swimming pools had the following adjusted OR (95%CI): bronchiolitis=1.04 (0.81-1.34), bronchitis=1.17 (0.91-1.51), wheezing=1.04 (0.86-1.25), respiratory infection=1.09 (0.91-1.32), cough=1.01 (0.78-1.31), eczema=1.03 (0.82-1.28), otitis=1.00 (0.83-1.21).

**Conclusions:** Results showed lack of association between swimming pool attendance and respiratory symptoms during the first year of life in Spain. Further analyses considering the type of swimming pool are planned.