

Publication

Association between air pollution and rhinitis incidence in two European cohorts

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The association between air pollution and rhinitis is not well established.; The aim of this longitudinal analysis was to study the association between modeled air pollution at the subjects' home addresses and self-reported incidence of rhinitis.; We used data from 1533 adults from two multicentre cohorts' studies (EGEA and ECRHS). Rhinitis incidence was defined as reporting rhinitis at the second follow-up (2011 to 2013) but not at the first follow-up (2000 to 2007). Annual exposure to NO₂; PM₁₀; and PM_{2.5}; at the participants' home addresses was estimated using land-use regression models developed by the ESCAPE project for the 2009-2010 period. Incidence rate ratios (IRR) were computed using Poisson regression. Pooled analysis, analyses by city and meta-regression testing for heterogeneity were carried out.; No association between long-term air pollution exposure and incidence of rhinitis was found (adjusted IRR (aIRR) for an increase of 10/ μ g/ μ m³; -3; of NO₂; 2.; 1.00 [0.91-1.09], for an increase of 5/ μ g/ μ m³; -3; of PM_{2.5}; : 0.88 [0.73-1.04]). Similar results were found in the two-pollutant model (aIRR for an increase of 10/ μ g/ μ m³; -3; of NO₂; 2.; 1.01 [0.87-1.17], for an increase of 5/ μ g/ μ m³; -3; of PM_{2.5}; : 0.87 [0.68-1.08]). Results differed depending on the city, but no regional pattern emerged for any of the pollutants.; This study did not find any consistent evidence of an association between long-term air pollution and incident rhinitis.

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