

Publication**Association between modelled traffic-related air pollution and asthma score in the ECRHS****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 1196738**Author(s)** Jacquemin, B.; Sunyer, J.; Forsberg, B.; Aguilera, I.; Bouso, L.; Briggs, D.; de Marco R.,; Garcia-Esteban R.,; Heinrich, J.; Jarvis, D.; Maldonado, J. A.; Payo, F.; Rage, E.; Vienneau, D.; Künzli, N.**Author(s) at UniBasel** [Künzli, Nino](#) ;**Year** 2009**Title** Association between modelled traffic-related air pollution and asthma score in the ECRHS**Journal** The European respiratory journal**Volume** 34**Number** 4**Pages / Article-Number** 834-842**Keywords** Air pollution, asthma, asthma score**Mesh terms** Adult; Air Pollutants, adverse effects; Asthma, epidemiology; Environmental Exposure, statistics & numerical data; Female; Follow-Up Studies; Health Surveys; Humans; Male; Middle Aged; Motor Vehicles; Multivariate Analysis; Nitrogen Dioxide, adverse effects; Severity of Illness Index; Vehicle Emissions, toxicity

The aim of our analysis was to study the association between air pollution and asthma among adults. For this goal, a previously developed 'asthma score' was used. Persons aged 25-44 yrs were randomly selected (1991-1993) and followed up (2000-2002) within the European Community Respiratory Health Survey (ECRHS I and II, respectively). The asthma score was defined from 0 to 5, based on the positive answers to the following symptoms reported for the last 12 months: wheeze/breathlessness, chest tightness, dyspnoea at rest, dyspnoea after exercise and woken by dyspnoea. Participants' home addresses were linked to outdoor modelled NO₂ estimates for 2001. Negative binomial regression was used to model the asthma score. The score from ECRHS II was positively associated with NO₂ (ratio of the mean asthma score (RMS) 1.23, 95% CI 1.09-1.38, for an increase of 10 microg x m⁻³). After excluding participants with asthma and symptoms at baseline, the association remained (RMS 1.25, 95% CI 1.05-1.51), and was particularly high among those reporting a high score in ECRHS II. The latter probably reflects incident cases of asthma. Our results suggest that traffic-related pollution causes asthma symptoms and possibly asthma incidence in adults. The asthma score offers an alternative with which to investigate the course and aetiology of asthma in adults

Publisher Munksgaard**ISSN/ISBN** 0903-1936**edoc-URL** <http://edoc.unibas.ch/dok/A5843149>**Full Text on edoc** No;**Digital Object Identifier DOI** 10.1183/09031936.00138208**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/19443533>**ISI-Number** WOS:000270662200009**Document type (ISI)** Article