

Adult asthma and traffic exposure at residential address, workplace address, and self-reported daily time outdoor in traffic: A two-stage case-control study

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Creator/Principal investigator(s)

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Description

This study used GIS (Geographical Information Systems) to estimate traffic exposure, not only on residential, but also on workplace address, in addition to survey questions on time spent in traffic during commuting or other daily activities. This study was conducted in two stages: A first cross-sectional public health survey in Southern Sweden 2004 (n = 24819, 18-80 years, response rate 59%) was followed by a case-control study in 2005 to obtain more detailed exposure and confounder information (n = 2856, asthmatics and controls (1:3, frequency matched on sex), 86% response rate). In the first survey, only residential address was known. In the second survey, questions about workplace addresses and daily time spent in traffic were also included. Residential and workplace addresses were geocoded and linked with GIS to road data and dispersion modelled outdoor concentrations of NO_x (annual mean, 250 × 250 m resolution).

Purpose:

The aim was to investigate the association between traffic exposure and prevalence of asthma and asthma symptoms in adults in occupationally active age. The study investigated 1) separate associations with traffic at residence, workplace, and daily time in traffic, and 2) if combining the exposures, i.e. accounting for total exposure, would strengthen the association between traffic and asthma.

The dataset includes a subset of the respondents (asthmatics and controls) from the Scanian public-health survey 2004 (Folkhälsoenkät Skåne 2004).

Unit of analysis

[Individual](#)

Population

Participants of the Scanian public-health survey 2004 having agreed to participate in additional studies, age 18-65 years, asthmatics and controls matched on sex.

Study design

Case-control study

Sampling procedure

[Probability: Stratified](#)

Time period(s) investigated

2005 – 2005

Number of individuals/objects

2856

Response rate/participation rate

86%

Data format / data structure

[Numeric](#)

[Geospatial](#)

Data collection 1

- Mode of collection: Self-administered questionnaire: paper
- Time period(s) for data collection: 2005 – 2005
- Source of the data: Population group

Geographic spread

Geographic description: Scania (southern Sweden)

Responsible department/unit

Department of Laboratory Medicine, Lund, Division of Occupational and Environmental Medicine

Ethics Review

Lund - Ref. 387/2004

Research area

[Health sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Occupational health and environmental health](#) (Standard för svensk indelning av forskningsämnen 2011)

[Health](#) (CESSDA Topic Classification)

Keywords

[Asthma](#), [Environmental medicine](#), [Environmental health](#), [Scania](#), [Epihealth](#), [Epihealth_skåne](#), [Residential address](#), [Traffic exposure](#), [Workplace address](#), [Gis](#)

Publications

Anna Lindgren, Jonas Björk, Emilie Stroh, Kristina Jakobsson. Adult asthma and traffic exposure at residential address, workplace address, and self-reported daily time outdoor in traffic: A two-stage case-control study. BMC Public Health 2010, 10:716.

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Accessibility level

Access to data through an external actor
Access to data is restricted

Contact for questions about the data

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Related research data in SND's catalogue

[Public health in Scania 2004](#)

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