The ADONIX study

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Associated documentation

Adonix enkät 1.pdf (158.18 KB)

Creator/Principal investigator(s)

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Description

"ADONIX" is an acronyme for "Adult-onset asthma and nitric oxide" and is the collective name for the population study conducted by the Department of Occupational and Environmental Medicine, University of Gothenburg. 6685 randomly selected persons aged 25-75 years, have participated. The ADONIX study collaborates with the INTERGENE study and the PURE study, both at the University of Gothenburg.

The study examines the prevalence of airway inflammation using exhaled nitric oxide (NO) by putting this in relation to the concentration of small particulates in the air on the particular day the measurement was made and the days before. Air pollution data are imported from Gothenburg Environmental Administration and other municipalities in Västra Götaland. Measurement of nitric oxide in exhaled air may eventually become a good test to diagnose asthma or other lung disease. The subjects also do a lung function test (spirometry), and answer questions concerning background factors such as recent job, allergies, asthma and heredity, and the current exposure of different kinds of air pollution both indoors and outdoors.

In addition, anthropometric measurements, measurement of body composition, ECG, blood tests and questionnaires on lifestyle factors (in collaboration with INTERGENE and PURE). Follow up with a new survey is planned to start 2013.

Purpose:

The original primary aim was investigating whether increased fraction of exhaled nitric oxide (FENO) is associated with an increased risk for new-onset asthma. This has been extended to an overall aim to increase the understanding of the interactions between different risk factors and genetic susceptibility in the mechanisms and prognosis for asthma and chronic obstructive pulmonary disease (COPD), coronary heart diseases and stroke.

2490 of the participants are also part of the INTERGENE study

Data contains personal data

No

Unit of analysis

Individual

Population

Women and men in the age 25-75 years

Time Method

Cross-section

Sampling procedure

Probability: Simple random

Time period(s) investigated

2001 - 2008

Variables

319

Number of individuals/objects

6685

Response rate/participation rate

44%

Data format / data structure

Numeric

Data collection 1

- Mode of collection: Self-administered questionnaire: paper
- Time period(s) for data collection: 2001 2008
- Source of the data: Population group, Biological samples

Data collection 2

- Mode of collection: Physical measurements and tests
- Time period(s) for data collection: 2001 2008
- Source of the data: Population group, Biological samples

Geographic spread

Geographic location: Sweden

Geographic description: Västra Götaland

Responsible department/unit

Department of Public Health and Community Medicine

Research area

<u>Respiratory medicine and allergy</u> (Standard för svensk indelning av forskningsämnen 2011) <u>Health</u> (CESSDA Topic Classification)

Keywords

Diagnosis, Anthropometry, Blood specimen collection, Body composition, Respiratory tract diseases, Dyspnea, Life style, Electrocardiography, Socioeconomic factors, Asthma, Noise, Cough, Nitric oxide, Air pollution, Respiratory tract infections, Drug utilization, Rhinitis, allergic, seasonal, Smoking, Disease, Sick leave, Particulate matter, Spirometry, Pets, Occupational exposure, Heredity, Hypersensitivity

Publications

Hagg D, Sjoberg S, Hulten LM, Fagerberg B, Wiklund O, Rosengren A, Carlsson LM, Boren J, Svensson PA, Krettek A. Augmented levels of CD44 in macrophages from atherosclerotic subjects: a possible IL-6-CD44 feedback loop? Atherosclerosis. 2007 Feb;190(2):291-7.

Berg CM, Lappas G, Strandhagen E, Wolk A, Torén K, Rosengren A, Aires N, Thelle DS, Lissner L. Food patterns and cardiovascular disease risk factors: The Swedish INTERGENE research program. Am J Clin Nutr 2008; 88: 289-297.

Hägg DA, Olson FJ, Kjelldahl J, Jernås M, Thelle DS, Carlsson LMS, Fagerberg B, Svensson PA. Expression of chemokine (C-C motif) ligand 18 in human macrophages and atherosclerotic plaques. Atherosclerosis 2009 Jun;204(2):e15-20.

Aminoff AK, Ledmyr H

, Thulin P, Lundell K, Nunez L, Strandhagen E, Murphy C, Lidberg U, Westerbacka J, Franco-Cereceda A, Liska J, Nielsen LB, Gåfvels M, Nastase Mannila M, Hamsten A, Yki-Järvinen H, Thelle D, Eriksson P, Borén J, Ehrenborg E. Allele-specific regulation of MTTP expression influences th

Hagg D, Englund MC, Jernas M, Schmidt C, Wiklund O, Hulten LM, Ohlsson BG, Carlsson LM, Carlsson B, Svensson PA. Oxidized LDL induces a coordinated up-regulation of the glutathione and thioredoxin systems in human macrophages.

Atherosclerosis. 2006 Apr;185(2):282-9.

Berg J, Björck L, Dudas K, Lappas G, Rosengren A. Symptoms of a first acute myocardial infarction in women and men. Gend Med. 2009 Sep;6(3):454-62.

Janson-Fagring A, Kjellgren K, Rosengren A, Lissner L, Manhem K, Welin C. Depression, anxiety, stress, social interaction and health-related quality of life in men and women with unexplained chest pain. BMC Public Health. 2008 May 19;8(1):165. [Epub ahead of print]

The expression of NAD(P)H:Quinone Oxidoreductase 1 is high in human adipose tissue, reduced by weight loss, and correlates with adiposity, insulin sensitivity, and markers of liver dysfunction. J Clin Endocrinol Metab 2007; 92: 2346-2352

Jerlock M, Kjellgren KI, Gaston-Johansson F, Lissner L, Manhem K, Rosengren A, Welin C. Psychosocial profile in men and women with unexplained chest pain. A case-control study. J Intern Med 2008 Apr 4. [Epub ahead of print]

Berg C, Lappas G, Wolk A, Strandhagen E, Torén K, Rosengren A, Thelle D, Lissner L. Eating patterns and portion size associated with obesity in a Swedish population. Appetite 2008;52:21-6.

Olin AC, Bake B, Torén K. Fraction of exhaled nitric oxide at 50 mL/s: reference values for adult lifelong never-smokers. Chest 2008; 133: 831-832

Berggren U, Fahlke C, Aronsson E, Karanti A, Eriksson M, Blennow K, Thelle D, Zetterberg H, Balldin J. The taql DRD2 A1 allele is associated with alcohol-dependence although its effect size is small. Alcohol Alcohol 2006 Sep-Oct;41(5):479-85. Epub 2006 Jun 2

Olin AC, Rosengren A, Thelle DS, Lissner L, Bake B, Toren K. Height, age, and atopy are associated with fraction of exhaled nitric oxide in a large adult general population sample. Chest 2006 Nov;130(5):1319-25.

Wallentin Guron C, Hartford M, Rosengren A, Thelle D, Wallentin I, Caidahl K. Usefulness of atrial size inequality as an indicator of abnormal left ventricular filling. Am J Cardiol. 2005 Jun 15;95(12):1448-52.

Wallentin Guron C, Bech-Hanssen O, Wikh R, Rosengren A, Hartford M, Caidahl K. The E/e filling index and right ventricular pressure in relation to applied international Doppler recommendations of left ventricular filling assessment. Eur J Echocardiogr. 2005 Dec;6(6):419-28.

Hägg DA, Jernås M, Wiklund O, Thelle DS, Fagerberg B, Eriksson P, Hamsten A, Olsson B, Carlsson B, Carlsson LM, Svensson PA. Expression profiling of macrophages from subjects with atherosclerosis to identify novel susceptibility genes. Int J Mol Med. 2008 Jun;21(6):697-704.

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

Intergene - Living habits and health

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