

Christer Johansson (SU) and Magnuz Engart (SLB/EHA Stockholm City)

URBAN AIR QUALITY HEALTH RISK INDEX NOW AND COMING 4 DAYS (STOCKHOLM)



SMURBS Technical project meeting, 9-10 October, 2018, Athens Urban Air Quality Health Risk Index now and coming 4 days



SMURBS Technical project meeting, 9-10 October, 2018, Athens

SMURBS ERA-PLANET

Health risk index, self diagostics and validation **EPIDEMIOLOGICAL DATA**

Increase in acute asthma hospital visits

Pollen:	0.26 % per 10 m ⁻³
PM ₁₀ :	2.5 % per 10 μg m ⁻³
0 ₃ :	0.3 % per 10 μg m ⁻³
NO _x :	0.5 % per 10 μg m ⁻³

A multi-pollutant air quality health index (AQHI) based on short-term respiratory effects in Stockholm

Henrik Olstrup 1,* Christer Johansson 12, Bertil Forsberg 3, Agneta Ekebom 4, Kadri Meister 3 1 Atmospheric Science Unit, Department of Environmental Science and Analytical Chemistry Stockholm University, 11418 Stockholm, Sweden: christer.johansson@aces.su.se

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Abstract: In this study, an Air Quality Health index (AQHI) for Stockholm is introduced as a tool to capture the combined effects associated with multi-pollutant exposure. Public information regarding the expected health risks associated with current or forecasted concentrations of pollutants and pollen can be very useful for sensitive persons when planning their outdoor

activities. For interventions, it can also be important to know the contribution from pollen and the specific air pollutants, judged to cause the risk. The AQHI is based on an epidemiological analysis of asthma emergency department visits (AEDV) and urban background concentrations of NOv, Os, PM_{10} and birch pollen in Stockholm during 5 years. This analysis showed per 10 μg m 3 increase in

the mean of same day and yesterday an increase in AEDV of 0.5% (95% CI: -1.2-2.2), 0.3% (95% CI: -1.4-2.0) and 2.5% (95% CI: 0.3-4.8) for NOr, Os and PM10, respectively. For birch pollen, the AEDV increased with 0.26% (95% CI: 0.18-0.34) per 10 pollen m³. In comparison with the coefficients in a the mean values of the coefficients obtained in Stockholm are smalle

Environment and Health Administration, SLB, Box 8136, 104 20 Stockholm, Swede

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AQHI = $100\left(e^{\beta iXi}-1\right)$ i = 1...p





Heath validation study using a group of asthmatics



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Article



MDPI



Co-operation

- Stockholm University
- Umeå University
- City of Stockholm (SLB analys)
- Palynological Laboratory in Stockholm
- Asthma and Allergy Association

