



Long term health effects of air pollution in Europe

Author: Bert Brunekreef, PhD. Institute for Risk Assessment Sciences, Utrecht University,
The Netherlands

Until recently, few studies had looked at long term health effects of air pollution in Europe, and almost none were multi-centre studies covering a range of conditions within Europe. The European Study of Cohorts for Air Pollution Effects (ESCAPE) was funded by the European Union to fill this gap in knowledge on long term effects of air pollution in Europe. The study utilized data from more than 30 existing cohorts covering a wide range of health endpoints including mortality, lung cancer incidence, cardiovascular and respiratory disease in adults, low birth weight, and allergy and asthma outcomes in children. The core of the study consisted of a detailed monitoring program for particulate matter and nitrogen oxides in all study areas, followed by land use regression modelling and exposure assignment at the home addresses of some one million cohort participants. Results so far show significant associations between particulate matter air pollution and natural cause mortality, lung cancer incidence, childhood infections and lung function, to name a few. Associations with allergic sensitization and asthma were null or non-significant. The findings will be discussed in the context of potential consequences for air pollution standard setting and health risk assessment.