

Health: A Case-Control Study of Lung Cancer Nested in a Cohort of European Asphalt Workers

The latest results of ongoing epidemiological studies by the International Agency for Research on Cancer (IARC), published in July 2009, confirm that no evidence was found of an association between lung cancer and exposure to bitumen fumes.

The project was launched in the late 1990s on a cohort of workers exposed to bitumen fumes, and reported in 2001 a slight incidence of lung cancer among these workers, but did not identify a causal link with exposure to bitumen fumes, and also did not eliminate other causal factors.

As part of the long-standing international industry commitment to occupational health and safety, the study was sponsored by the associations representing bitumen producers, Eurobitume, CONCAWE, and users EAPA in Europe, and NAPA, ARMA and NRCA in the USA.

The latest study, initiated in 2004, was a highly focused follow-on nested case control study using the same European asphalt workers who were cohort members of the previous research. The purpose was to disentangle the contributions of various agents to the incidence of lung cancer, including bitumen fumes, other agents occurring in the asphalt industry, other occupational exposures, and tobacco smoking. The extensive study analyses 433 lung cancer cases and 1253 controls from Denmark, Finland, France, Germany, Netherlands, Norway and Israel.

Results included:

- No evidence found of an association between lung cancer and exposure to bitumen fumes;
- Factors identified as the likely contributors to the slightly elevated incidence of cancer mortalities were tobacco smoking and previous exposure to coal tar;
- Other occupational exposures do not seem to play a part;
- The study further acknowledged the importance the continuing trend towards minimising inhalation and dermal exposures.

The latest study has not yet been peer reviewed, but the study team intends publishing articles in peer reviewed journals. At least two of these are currently in an advanced stage of completion and should be published before the end of 2009. However, the report is available on request from IARC.

The link is: <http://ehp03.niehs.nih.gov/article/info:doi/10.1289/ehp.0901800>

The results of this study will be taken into account in the assessment done for the REACH registration.

Eurobitume, 12 May 2010