

DOSE RESPONSE RELATIONSHIP BETWEEN OCCUPATIONAL PAH EXPOSURE AND LUNG CANCER - AN OVERVIEW

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SUMMARY

Epidemiologic cohort and case-referent studies have shown an increased risk of lung cancer among various PAH-exposed occupations, such as coke, coal gas and aluminium production workers, road pavers, roofers and chimney sweeps. In different cohort studies, a positive dose response relationship between PAH exposure time and lung cancer have been described. On some workers, a relationship was found between coal tar pitch volatiles (CTPV) and the risk of lung cancer.

A doubling dose for lung cancer of > 20 [(mg CTPV/m³) years] or > 100 [μ g BaP/m³) years] has been found among coke and aluminium production workers. Acknowledgement of lung cancer as an occupational disease is proposed after a cumulative dose of > 20 [(mg CTPV/m³) years] or > 100 [μ g BaP/m³) years].

Key words: polycyclic aromatic hydrocarbons, lung cancer, occupational exposure

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