

Pollution Impact of Oil, Gas and petrochemical Industries on Mortality Rate

Mortality	Methods	Results	References
deaths due to brain tumor (BT) among petrochemical workers	<p>a retrospective cohort mortality study was conducted among 7,595 men ever employed at a plant in Texas City, Texas, between 1941 and 1977</p> <p>Personnel records for all employees have been kept at the plant since 1941. Under NIOSH guidance</p>	<p>19 BT deaths among hourly employees were observed as against 9.6 expected (SMR = 198), and with extension of the analysis to include BT deaths occurring in 1978 and 1979, 22 deaths were observed versus 10.7 expected (SMR=206). Fifteen years or more after being hired, 19 of these workers died from BT versus 7.2 expected (SMR=263), and the standardized mortality ratios increased with duration of employment to 377 for hourly workers who had worked over 20 years. Although nonoccupational etiologies cannot be dismissed, these data suggest an occupational etiology for certain BT deaths in petrochemical workers</p>	(1)
mortality experience	<p>Mortality and illness absence data were extracted from the Shell Oil Company's health surveillance system (HSS). The standardised mortality ratio was used as a measure of mortality risk. Morbidity frequency and duration of absence were calculated by age, sex, and four health risk factors (cigarette smoking, high blood pressure, hypercholesterolaemia, and obesity).</p>	<p>Brain cancer was non-significantly increased, with six observed and five expected deaths; mortality from leukaemia was consistently lower than expected. The majority of employees had no illness absences of six days or longer during the 10 year study period. The loss of productivity (in terms of days of absence) was greater for employees with health risk factors. Ever smoking male employees had a 79% increase of heart disease and more than 50% higher rates of respiratory disease and musculoskeletal disorders compared to non-smokers non-smokers and ex-smokers, respectively.</p>	(2)

mortality and morbidity	Mortality was assessed for 5,627 men hired from 1960, year of the plant start-up, to 1993; it was followed up for vital status in the period 1960–2002. Morbidity was analysed for 5,431 workers neither dead nor lost to follow-up from 1960 to 2001 and was based on Hospital Discharge Records in the period 2001–2006	noteworthy results are shown for lung cancer [MRR: 2.11 (CI 90%; 0.96-4.63) in blue collars; 1.71 (1.09-2.69) in residents], respiratory diseases [HDOR: 2.0 (1.0-3.0) in blue collars; 1.4 (0.96-2.06) in residents] and genitourinary diseases [HDOR: 1.34 (1.06-1.68) in blue collars; 1.23 (1.04-1.45) in residents].	(3)
mortality and cancer morbidity	A total of 25 292 employees hired between 1964 and 1994 were linked to the Canadian tumour registry and national mortality database. Exposure-response trends were assessed for hydrocarbon solvents/fuels, hydrocarbon lubricants, petroleum coke/spent catalyst, and hydrogen sulphide (H ₂ S).	Gall bladder cancer mortality was increased among males based on four deaths, but cases had no common job assignments and the increase was focused in workers employed ,10 years. Mesothelioma incidence was increased	(4)

References:

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