Pollution Impact of Oil, Gas and petrochemical Industries on Respiratory System

System	Diseases	Methods	Results	References
Respiratory system	• Sinusitis • Wheezing or asthma • Allergic rhinitis • Bronchitis • pneumonia	A Cross-sectional Among 5072 primary school students two urban communities exposed to pollution caused by traffic and three petrochemical communities These communities were compared to a rural community parent- completed questionnaire Air monitoring	Children living in the urban area had consistently higher rates of respiratory symptoms and diseases than did those living in the rural community. However, nasal symptoms were more prevalent in children living in the petrochemical communities than in the rural community.	(1)
Respiratory system	• Asthma • Rhinitis • Chronic bronchitis	Children aged 6 to 12 Questionnaires Lung function testing (means of standard spirometry) Air sampling and chemical analysis	Children living near the petrochemical plant had more asthma (24.8% vs 10.1% to 11.5%), more asthma exacerbations (6.7 vs 2.9-3.6 per year), more respiratory symptoms (current wheeze, dyspnea, nocturnal cough, and rhinitis), and lower lung function (>13% decrease in FEV1 percent predicted) than those living in other regions.	(2)
Respiratory system	• Chronic respiratory Symptoms • Chronic bronchitis	A cross-sectional survey residents 30–64 years A modified version of the American Thoracic Society Questionnaire (adult version) Air Pollution Measurement	The subjects living in exposed area had higher rates of selected respiratory symptoms (cough, phlegm, wheezing, and chronic bronchitis) but had a lower rate of dyspnea	(3)

Respiratory system	• Respiratory symptoms	11872 male workers Questionnaire		(4)
Respiratory system	• Bronchitis • Upper respiratory symptoms • Asthma	cross-sectional survey parent-completed questionnaire Air Pollution Measurement	The school children in the petrochemical area had significantly more upper respiratory symptoms and asthma compared with the children living in the control area.	(5)
Respiratory system	• Chronic rhinosinusitis • migraine headache • fatigue	cross-sectional survey questionnaire	(24%) had current CRS symptoms, (23%) had migraine headache, and (25%) had higher levels of fatigue.	(6)
Multiple body systems	• rheumatic diseases • lupus • neurological symptoms • respiratory symptoms • several cardiovascular problems including stroke and angina	a community comparison study Questionnaire General health screening panel (A complete blood count, chemistry panel and a urinalysis were performed using standard laboratory techniques) Air monitoring	The prevalence of rheumatic diseases (OR = 10.78; CI = 4.14, 28.12) and lupus (OR = 19.33; CI = 1.96, 190.72) was greater in the exposed population compared to the unexposed. A higher prevalence of neurological symptoms, respiratory symptoms and several cardiovascular problems including stroke (OR = 15.41; CI = 0.78, 304.68) and angina (OR = 5.72; CI = 1.68, 19.43) was seen.	(7)

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