Health effects of people living close to a petrochemical industrial estate in Thailand.

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Objective: An acute health effect of people living near the petrochemical industrial estate in Thailand was assessed using a panel study design.

Material and Method: The populations in communities near the petrochemical industrial estates were recruited. The daily air pollutant concentrations, daily percentage of respiratory and other health symptoms reported were collected for 63 days. The effect of air pollutants to reported symptoms of people were estimated by adjusted odds ratios and 95% confidence interval using binary logistic regression.

Results: The significant associations were found with the adjusted odds ratios of 38.01 for wheezing, 18.63 for shortness of breath, 4.30 for eye irritation and 3.58 for dizziness for total volatile organic compounds (Total VOCs). The adjusted odds ratio for carbon monoxide (CO2) was 7.71 for cough, 4.55 for eye irritation and 3.53 for weakness and the adjusted odds ratio for ozone (O3) was 1.02 for nose congestion, sore throat and 1.05 for phlegm.

Conclusion: The results showed that the people living near petrochemical industrial estate had acute adverse health effects, shortness of breath, eye irritation, dizziness, cough, nose congestion, sore throat, phlegm and weakness from exposure to industrial air pollutants.

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