

عنوان مقاله:

Quantification of Health Impacts Related to PM10 and O3 Pollutants in Karaj City

محل انتشار:

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خلاصه مقاله:

Although the numbers of death related to air pollution appear to be low, the incidence of related disease to air pollution would be too high that is because of exposure of the large population to air pollutants and also the existence of certain sensitive groups. The aim of this study was to quantification health impacts of two pollutants PM10 and O3 in Karaj city during 2012- 2013. In this study, the air quality data were obtained from Karaj Department of Environment Protection. Quantification the health impacts of air pollutants were assessed using AirQ2.2.3 model which is a proposed method for assessing the health impact of air pollutants by World Health Organization. The annual, warm, and cold average concentrations of PM10 were 77.48, 87.86, and 62mg/m³, respectively. O3 average concentration in the warm semester was 63.5mg/m³ and it is more than a cold season which was 60mg/m³. Total mortality rate related to PM10 and O3 were assessed 282 and 164, respectively, which are 3.9 and 1.53 percent of all deaths, respectively. The Average cases of obstructive lung disease related to O3 were 58 people and average cases of hospitalization due to cardiovascular diseases related to PM10 were 492 people. This study was the first attempt to reveal the health outcome of air pollutants on a human in Karaj as one of the crowded city of Iran. Totally we found that the average concentration of 8-hours O3 and 24-hours PM10 were higher than the national standard of Iran and .WHO guideline

کلمات کلیدی:

Air Pollution, Cardiovascular Diseases, Hospitalization, Karaj City, Related Death

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