

Dust storms affect subsequent emergency hospital admissions

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A new study published in the journal *Respirology* reveals that dust storms have an adverse effect on emergency hospital admission for chronic lung disease, often known as chronic obstructive pulmonary disease (COPD).

Dust storms in East Asia and [Southern China](#) are caused by wind-blown dust that travels long distances from North China. The concentrations of coarse particles—those with a diameter ranging from 2.5 to 10 micrometers—can reach very high levels.

Researchers led by Prof. TW Wong, MBBS, MSc, FFPH, of The Chinese University of Hong Kong, obtained data on daily emergency admissions to major hospitals for respiratory diseases in Hong Kong, and indices of air pollutants and meteorological variables from January 1998 to December 2002. They then identified five [dust storms](#) during the period and made comparisons using independent t-tests case-crossover analysis.

Results showed that significant increases in emergency [hospital admission](#) due to COPD were found 2 days after a dust storm episode, with a 5% increase in risk. There is a link between the raised concentrations of coarse particles encountered during dust storms and a higher risk of hospital illnesses for respiratory illness, in particular, for COPD.

"Our findings show a need for timely warning for patients with chronic lung diseases to avoid exposure to air pollution when a dust storm is

imminent," Tam notes.

An accompanying review article by Professor Frank J. Kelly of King's College London and colleagues looks at how detriments such as dust storms on air quality can be used to create advanced warnings of potentially health-damaging effects, in the form of national air quality indices and proactive alert services.

"With future developments, the ultimate aim is to empower people to modify behavior in a way that protects their health as well as the quality of the air they breathe," Kelly concludes.

More information: Wong et al. Effect of Dust Storm Events on Daily Emergency Admissions for Respiratory Diseases. *Respirology* 2011: [DOI: 10.1111/j.1440-1843.2011.02056.x](https://doi.org/10.1111/j.1440-1843.2011.02056.x)

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