

Multicentre time-series studies of short-term effects of air pollution on respiratory health in Europe (APHEA-2).

Air pollutant	Reference	Number of cities	Population	Mean daily pollutant concentration range ( $\mu\text{g}/\text{m}^3$ ) <sup>o</sup>	EU limit values ( $\mu\text{g}/\text{m}^3$ ) <sup>o</sup>	Health indicator	% change per 10 $\mu\text{g}/\text{m}^3$ (95% CI)	Lag
PM10	Analitis 2006 [33]	21	All ages	14-69	50	Respiratory deaths	0.6% (0.2 to 0.95%)	Lag 0-1
	Zanobetti 2003 [35]	10	All ages	15.5-76.2		Respiratory deaths	4.2% (1.1 to 7.4%)	Lag 0-40
	Atkinson 2001, 2004 [38, 39]	8	0-14 yr		Asthma admissions	1.5% (0.1 to 2.8%)	Lag 0-1	
			15-64 yr		Asthma admissions	1.0% (0.3 to 1.8%)		
65+ yr				COPD plus asthma admissions	1.0% (0.6 to 1.4%)			
		65+ yr		Respiratory admissions	1.0% (0.7 to 1.3%)			
Black smoke	Analitis 2006 [33]	15	All ages	14-166	80	Respiratory deaths	0.8% (0.1 to 1.6%)	Lag 0-1
O <sub>3</sub> *	Gryparis 2004 [34]	23	All ages	30-99	120	Respiratory deaths	1.1% (0.7 to 1.5%)	Lag 0-1
	Samoli 2009 [36]	21	All ages	39.2-123.2			0.4% (0.1 to 0.7%)	Lag 0-1
							3.4% (1.9 to 4.8%)	Lag 0-20
SO <sub>2</sub>	Sunyer 2003 [37]	7	0-14 yr	6.8-32.5	125	Asthma admissions	1.3% (0.4 to 2.2%)	Lag 0-1
			15-64 yr		Asthma admissions	0.0% (-0.9 to 1.0%)		
			65+ yr		COPD plus asthma admissions	0.6% (0.0 to 1.2%)		
			65+ yr		Respiratory admissions	0.5% (0.1 to 0.9%)		
NO <sub>2</sub>	Samoli 2006 [32]	30	All ages	46.2-154.8	200	Respiratory deaths	0.4% (0.3 to 0.6%)	Lag 0-1

<sup>o</sup>PM10, SO<sub>2</sub>: 24-hour mean, O<sub>3</sub>: maximum daily 8-h mean, NO<sub>2</sub>: 1-hour mean, (Source: <http://ec.europa.eu/environment/air/quality/standards.htm>) Black smoke: annual (median of daily mean values) (Source: EU Council Directive 80/779/EEC)

\*during the warm season

n.a.: not available