

PUBLISHED STUDIES ON THE RELATIONSHIP BETWEEN LONG-TERM PM2.5 EXPOSURES AND MORTALITY

Below is a listing of major cohort studies that address long-term exposures to fine particulate matter and premature death. They are among the studies and publications that U.S. EPA's panel of experts considered in their review of the relationship for the elicitation process.

<i>Study</i>	<i>Publication</i>
Harvard Six Cities, original	Dockery et al 1993
Harvard Six Cities, HEI reanalysis	Krewski et al 2000
Harvard Six Cities, extended analysis	Laden et al 2006
American Cancer Society (ACS), original	Pope et al 1995
ACS, HEI reanalysis	Krewski et al 2000
ACS, extended analysis	Pope et al 2002, 2004
ACS intrametro Los Angeles	Jerrett et al 2005
Postneonatal infant mortality, US	Woodruff et al 1997
Postneonatal infant mortality, CA	Woodruff et al 2006
Adventist Health Study of Smog (AHSMOG)	Abbey et al 1999
AHSMOG, males only	McDonnell et al 2000
AHSMOG, females only	Chen et al 2005
Women's Health Initiative	Miller et al 2004
Veterans Administration (VA), preliminary	Lipfert et al 2000, 2003
VA, extended	Lipfert et al 2006
11 California counties, elderly	Enstrom 2005
Netherlands	Hoek et al 2002
Hamilton, Ontario, Canada	Finkelstein et al 2004
French Air Pollution and Chronic Respiratory Diseases (PAARC) Survey	Filleul et al 2005
Cystic Fibrosis Foundation	Goss et al 2004

References

Abbey et al. 1999

Abbey, D.E.; Nishino, N.; McDonnell, W.F.; Burchette, R.J.; Knusten, S.F.; Beeson, W.L.; Yang, J.X. Long-Term Inhalable Particles and Other Air Pollutants Related to Mortality in Nonsmokers; *Am. J. Respir. Crit. Care Med.* **1999**, *159*, 373-382.

Chen et al. 2005

Chen, L.H.; Knutsen, S.F.; Shavlik, D.; Beeson, W.L.; Petersen, Ghamsary, M.; Abbey, D. The Association between Fatal Coronary Heart Disease and Ambient Particulate Air Pollution: Are Females Greater Risk?; *Environ. Health Perspect.* **2005**, *113*, 1723-1729.

Dockery et al. 1993

Dockery, D.W.; Pope, C.A., III; Xu, X.; Spengler, J.D.; Ware, J.H.; Fay, M.E.; Ferris, B.G.; Speizer, F.A. An Association between Air Pollution and Mortality in Six U.S. Cities; *N. Engl. J. Med.* **1993**, *329*, 1753-1759.

Enstrom 2005

Enstrom, J.E. Fine Particulate Air Pollution and Total Mortality Among Elderly Californians, 1973–2002; *Inhal. Toxicol.* **2005**, *17*, 803-816.

Filleul et al. 2005

Filleul, L.; Rondeau, V.; Vandentorren, S.; Le Moual, N.; Cantagrel, A.; Annesi-Maesano, I.; Charpin, D.; Declercq, C.; Neukirch, F.; Paris, C.; Vervloet, D.; Brochard, P.; Tessier, J.F.; Kauffmann, F.; Baldi, I. Twenty-Five Year Mortality and Air Pollution: Results from the French PAARC Survey; *Occup. Environ. Med.* **2005**, *62*, 453-460.

Finkelstein et al. 2004

Finkelstein, M.M.; Jerrett, M.; Sears, M.R. Traffic Air Pollution and Mortality Rate Advancements Periods; *Am. J. Epidemiol.* **2004**, *160*, 173-177.

Goss et al. 2004

Goss, C.H.; Newsom, S.A.; Schildcrout, J.S.; Sheppard, L.; Kaufman, J.D. Effect of Ambient Air Pollution on Pulmonary Exacerbations and Lung Function in Cystic Fibrosis; *Am. J. Respir. Crit. Care Med.* **2004**, *169*, 816-821.

Hoek et al. 2002

Hoek, G.; Brunekreef, B.; Goldhohm, S.; Fischer, P.; van den Brandt, P.A. Association between Mortality and Indicators of Traffic-Related Air Pollution in the Netherlands: A Cohort Study; *Lancet* **2002**, *360*, 1203-1209.

Jerrett et al. 2005

Jerrett, M.; Burnett, R.T.; Ma, R.; Pope, C.A., III; Krewski, D.; Newbold, K.B.; Thurston, G.; Shi, Y.; Finkelstein, N.; Calle, E.E.; Thun, M.J. Spatial Analysis of Air Pollution and Mortality in Los Angeles; *Epidemiol.* **2005**, *16*, 727-736.

Krewski et al. 2000

Krewski, D.; Burnett, R.T.; Goldberg, M.S.; Hoover, K.; Siemiatycki, J.; Jarret, M.; Abrahamowicz, M.; White, W.H. *Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality. Special Report*; Health Effects Institute: Cambridge MA, 2000.

Laden et al. 2006

Laden, F.; Schwartz, J.; Speizer, F.E.; Dockery, D.W. Reduction in Fine Particulate Air Pollution and Mortality: Extended Follow-Up of the Harvard Six Cities Study. *Am. J. Respir. Crit. Care Med.* **2006**, *173*, 667-672.

Lipfert et al. 2000, 2003

Lipfert, F.W.; Perry, H.M., Jr.; Miller, J.P.; Baty, J.D.; Wyzga, R.E.; Carmody, S.E. The Washington University-EPRI Veterans' Cohort Mortality Study: Preliminary Results; *Inhal. Toxicol.* **2000**, *12*, 41-73.

Lipfert, F.W.; Perry, H.M., Jr.; Miller, J.P.; Baty, J.D.; Wyzga, R.E.; Carmody, S.E. Air Pollution, Blood Pressure, and Their Long-Term Associations with Mortality; *Inhal. Toxicol.* **2003**, *15*, 493-512.

Lipfert et al. 2006

Lipfert, F.W.; Wyzga, R.E.; Baty, J.D.; Miller, J.P. Traffic Density as a Surrogate Measure of Environmental Exposures in Studies of Air Pollution Health Effects: Long-Term Mortality in a Cohort of US Veterans; *Atmos. Environ.* **2006**, *40*, 154-169.

McDonnell et al. 2000

McDonnell, W.F.; Nishino-Ishikawa, N.; Petersen, F.F.; Chen, L.H.; Abbey, D.E. Relationships of Mortality with the Fine and Coarse Fraction of Long-Term Ambient PM10 Concentrations in Nonsmokers; *J. Expo. Anal. Environ. Epidemiol.* **2000**, *10*, 427-436.

Miller et al. 2004

Miller, K.A.; Siscovick, D.S.; Sheppard, L.; Shepherd, K.; Anderson, G.; Kaufman, J.D. Air Pollution and Cardiovascular Disease Events in the Women's Health Initiative Observational (WHI-OS) Study. *Circulation* **2004**, *109*, e71. (Abstract from the American Heart Association Conference on Cardiovascular Disease Epidemiology and Prevention. Full report currently in review).

Pope et al. 1995

Pope, C.A., III; Thun, M.J.; Namboodiri, M.M.; Dockery, D.W.; Evans, J.S.; Speizer, F.E.; Heath, J.C.W. Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults; *Am. J. Respir. Crit. Care Med.* **1995**, *151*, 669-674.

Pope et al. 2002, 2004

Pope, C.A.; III; Burnett, R.T.; Thun, M.J.; Calle, E.E.; Krewski, D.; Ito, K.; Thurston, G.D. Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution; *J. Am. Med. Assoc.* **2002**, *287*, 1132-1141.

Pope, C.A.; III; Burnett, R.T.; Thurston, G.D.; Thun, M.J.; Calle, E.E.; Krewski, D.; Godleski, J.J. Cardiovascular Mortality and Long-Term Exposure to Particulate Air Pollution: Epidemiological Evidence of General Pathophysiological Pathways of Disease; *Circulation* **2004**, *109*, 71-77.

Woodruff et al. 1997

Woodruff, T.J.; Grillo, J.; Schoendorf, K.C. The Relationship between Selected Causes of Postneonatal Infant Mortality and Particulate Air Pollution in the United States; *Environ. Health Perspect.* **1997**, *105*, 608-612.

Woodruff et al. 2006

Woodruff, T.J.; Parker, J.D.; Schoendorf, K.C. Fine Particulate Matter (PM_{2.5}) Air Pollution and Selected Causes of Postneonatal Infant Mortality in California. *Environ. Health Perspect.* **2006**, *114*, 786-790.