Letter to the Editor

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Evidence Supporting No Dose Response of Mortality to Air Quality

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Enstrom[1] does a reanalysis of a large national cohort study and, unlike the original authors, finds no effect of small particulate matter, PM2.5, on total mortality. This result, if true, calls into question the current U.S. Environmental Protection Agency, EPA, paradigm that PM2.5 is causal of increased mortality. Logically it takes only one valid negative study to invalidate all association studies. In a response to a request from the EPA to suggest regulations in need of examination,[2] Young[3] points to 21 studies, including Enstrom,[1] that find no evidence of an association PM2.5 with mortality. Two of these studies are essentially experiments that directly negate causality.[4-5] Also, Young[6] analyzed a very large time series data set from California, years 2000 to 2012, 8 air basins, over 37 000 days of exposure, and found no effect of PM2.5 on mortality. Young[6] provides their analysis code and their analysis data set. Anyone asserting a causal relationship should make their data sets public. Logically, the game is over. Enstrom drives an important stake into the heart of EPA asserted causality.

References

1. Enstrom JE. Fine Particulate Matter and Total Mortality in Cancer Prevention Study Cohort Reanalysis. *Dose Response*. 2017:1-12.
2. Federal Register. EPA–HQ–OA–2017–0190; FRL–9961–60– OP: Evaluation of Existing Regulations. 2017. Accessed February 2017. The EPA has removed pointers to this area.
3. Young SS. EPA-HQ-OA-2017-0190-36647. Tracking Number: 36647. 2017. https://www.regulations.gov/docket?D=EPA-HQ-OA-2017-0190. View all documents and comments in this Docket, Search for 36647. Accessed February 2017. The EPA has removed pointers to this area. Contact author for comments.
4. Chay K, Dobkin C, Greenstone M. The Clean Air Act of 1970 and Adult Mortality. *Journal of Risk and Uncertainity*. 2003;27(3):279-300.
5. Zu K, Tao G, Long C, Goodman J, Valberg P. Long-range fine particulate matter from the 2002 Quebec forest fires and daily mortality in Greater Boston and New York city. *Air Quality, Atmosphere & Health*. 2016;9(3):213-21.
6. Young SS, Smith RL, Lopiano KK. Air quality and acute deaths in California, 2000-2012. *Regulatory Toxicology and Pharmacology*. 88(2017):173-184.

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