

# Global warming and health

Science-based analyses of America's key environmental issues

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**Claim:** *Global warming will expand the reach of vector-borne diseases.*

In the current debate over climate change, one of the issues most infected with alarmist claims **unsupported by fundamental science** is that of mosquito-borne diseases. Simplistic popular writings and models assume that mosquito-borne diseases like malaria are uniquely tropical, and warmer temperatures alone determine their incidence and distribution in northern latitudes. Thus, the **false**, incessant claim that reputed global warming, natural or man-made, would establish malaria in Europe and North America.

Dr. Paul Reiter, formerly with the Centers for Disease Control and Prevention, refutes these claims in the journal, *Emerging Infectious Diseases* ("From Shakespeare to Defoe: Malaria in England in the Little Ice Age," vol.6, No. 1, Jan-Feb 2000). Dr. Reiter points out that "until the second half of the 20<sup>th</sup> century, malaria was **endemic and widespread** in many temperate regions, with major epidemics as far north as the Arctic Circle. From 1564 to the 1730s, the coldest period of the Little Ice Age, malaria was an important cause of illness and death in several parts of England. Transmission began to decline only in the 19<sup>th</sup> century, when the present warming trend was well under way. The history of the disease in England underscores the role of **factors other than temperature** in malaria transmission."

According to Dr. Reiter and many other specialists, these "other factors" also apply to diseases such as yellow fever and dengue ("Climate Change and Mosquito-borne Disease," *Environmental Health Perspectives*, Vol. 109, supplement 1, March 2001).

These excellent and readable papers are available at:  
<http://ff.org/centers/csspp/pdf/reiter-climate-change-mbd.pdf>  
<http://ff.org/centers/csspp/pdf/shakespeare.pdf>

**Update:** Reiter et al. (2004) caution that the link between global warming and malaria spread is not straightforward, citing numerous examples. They conclude, "We understand public anxiety about climate change, but are concerned that many of these much publicized predictions are ill informed and misleading. We urge those involved to pay closer attention to the complexities of this challenging subject."

**Heat Wave Deaths.** In Davis et al. the authors analyzed heat-related deaths across the major cities in the United States and found that despite evidence of increasing heat and humidity, adaptations (such as increased access to air-conditioning, improved medical care, and better community awareness programs) have significantly reduced death rates. "This result has profound implications on the accuracy of projections of future increases in heat-related mortality generated from global warming scenarios," Davis and his coauthors conclude. "Until more accurate weather-mortality models are developed, it is necessary to adjust these mortality projections downward in light of the observed decline in the sensitivity of the mortality of the U.S. population to high apparent temperatures." (This work was awarded "Paper of the Year 2004" for climate science by the Association of American Geographers.)

**Respiratory diseases.** [Nafstad et al. \(2001\)](#) showed that the average daily number of respiratory-related deaths was higher in winter (October-March) than in summer (April-September). Indeed, winter deaths associated with respiratory diseases were 47% more numerous than summer deaths. As a result, the authors conclude that "a milder climate would lead to a substantial reduction in average daily number of deaths," once again in contradiction of climate-alarmist claims. A host of additional studies have found similar results.

**Stroke.** Chang et al. report that "among young women from 17 countries, the rate of hospitalized AMI, and to a lesser extent stroke, was higher with lower mean environmental air temperature." More specifically, they say that "on average, a 5°C reduction in mean air temperature was associated with a 7 and 12% increase in the expected hospitalization rates of stroke and AMI, respectively." They also note that "the findings of an inverse association between mean air temperature and hospitalization

rate of AMI in this study are in agreement with several other studies," citing those of Douglas et al. (1990), Douglas et al. (1991), Mackenbach et al. (1992), Douglas et al. (1995), Seto et al. (1998), Danet et al. (1999) and Crawford et al. (2003).

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