National Institute of Environmental Health Sciences

Heat-related side-effects of neurological and non-neurological medication may increase heatwave fatalities

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Abstract:

BACKGROUND: During the 2003 French heatwave 15,000 excess deaths were registered. One fifths died from the combination of dehydration, heatstroke, and hyperthermia and one tenth from dehydration, despite abundant water. METHODS and RESULTS: We hypothesized that physiologic adaptation to heat was not effective in the victims attributable to side-effects of drugs (impaired thermoregulation, suppressed thirst) many of these patients were taking. This could explain why many victims died of dehydration despite availability of water. As a consequence of the global climate change heatwaves may occur more frequently and may be more intense, with a strong impact on the future selection of drugs in elderly patients. CONCLUSION: Insufficient water intake, impaired thermoregulation, and resulting death may be directly linked to the use of certain drugs, implying an immediate need for public awareness during heatwaves and for long-term strategies to mitigate the expected increase in future heatwave-related fatalities.

Source: http://dx.doi.org/10.1111/j.1468-1331.2009.02581.x

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : France

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Elderly

Other Vulnerable Population: people taking medications with heat-related side-effects

Resource Type: ☒

format or standard characteristic of resource

Policy/Opinion, Review

Resilience: ☒

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: ☒

time period studied

Time Scale Unspecified