

Heat stress in older people and people with chronic diseases

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People over the age of 60 are the most vulnerable to heat waves, with 82% to 92% more deaths than average occurring in this age group. Risks for heat-related illness or injury - such as heat stroke, heat exhaustion and heat cramps - are also heightened in people with obesity, heart disease, diabetes and respiratory conditions as these decrease the body's ability to adapt to temperature changes. A review <http://www.cmaj.ca/press/cmaj081050.pdf> in CMAJ (*Canadian Medical Association Journal*) describes the effect of heat on human physiology and factors that increase the risk of heat stress.

Physicians - and their patients - must be aware of the risk factors for older people and people with chronic disease in excessive heat conditions and counsel and manage accordingly.

Laboratory-based physiologic studies show that the ability to detect heat is reduced, and the physiological response to heat with adequate blood distribution and sweating to cool the body is slower, in otherwise healthy older individuals compared to younger people. Their ability to respond to thirst is also delayed and they take longer to recover from dehydration.

People of lower socio-economic groups, lower levels of education and those who are socially isolated have a greater risk of mortality. Air conditioning is associated with a risk reduction of 80% and working fans with a 30% reduction. Housing may be a factor as lower income people often live in crowded or poor-quality housing, with inadequate ventilation and cooling systems. Homeless people are at risk because of

lack of shelter from extreme heat and often also by underlying physical or psychiatric issues.

However, there are gaps in knowledge that can serve as further areas for research.

"It will be essential to discern whether impairment in thermoregulatory capacity exists in terms of the whole-body response and not simply in terms of local heat-loss responses (sweating and/or skin blood flow)," write Dr. Glen Kenny from the Faculty of Health Sciences at the University of Ottawa and coauthors. "New research should focus not only on filling these gaps in the science-based information but also on developing clinical guidelines for health professionals to facilitate the giving of advice to patients."

Source: [Canadian Medical Association Journal](#) (news : web)

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