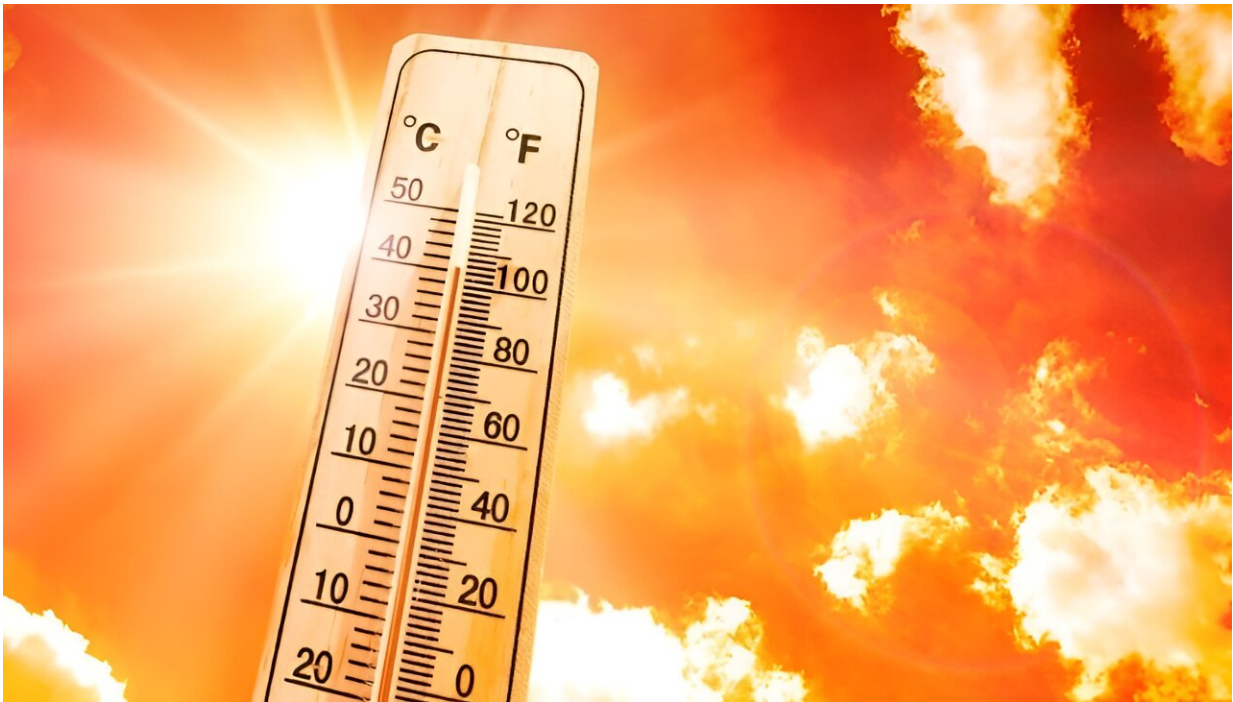


Hourly heat exposure linked to increased risk for acute ischemic stroke

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Hourly heat exposure is associated with an increased risk for acute ischemic stroke (AIS) onset, according to a study published online Feb. 28 in *JAMA Network Open*.

Xinlei Zhu, from Fudan University in Shanghai, and colleagues

examined the association between hourly high ambient temperature and onset of AIS in a time-stratified case-crossover study conducted using a nationwide registry with data from more than 200 stroke centers in China. The final analysis included 82,455 patients with AIS.

The researchers found a monotonically increasing risk for AIS onset in association with higher temperatures. The excess AIS risk occurred immediately at lag 0 hours and lasted for 10 hours. The cumulative odds ratio over lag 0 to 10 hours of AIS onset associated with extremely high temperature (33.3 degrees Celsius) compared with the reference temperature (12.1 degrees Celsius) was 1.88 nationwide.

Compared with the South, the exposure-response curve was steeper in the North (odds ratio, 1.80 versus 1.57). Greater odds ratios were seen for men and patients with a history of dyslipidemia or [atrial fibrillation](#), but the differences were not significant.

"The findings underscore the ongoing need for public health agencies to advocate for interventions that mitigate heat exposure and bolster cooling measures, particularly among populations at high risk for AIS," the authors write.

More information: Xinlei Zhu et al, Hourly Heat Exposure and Acute Ischemic Stroke, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.0627](#)

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