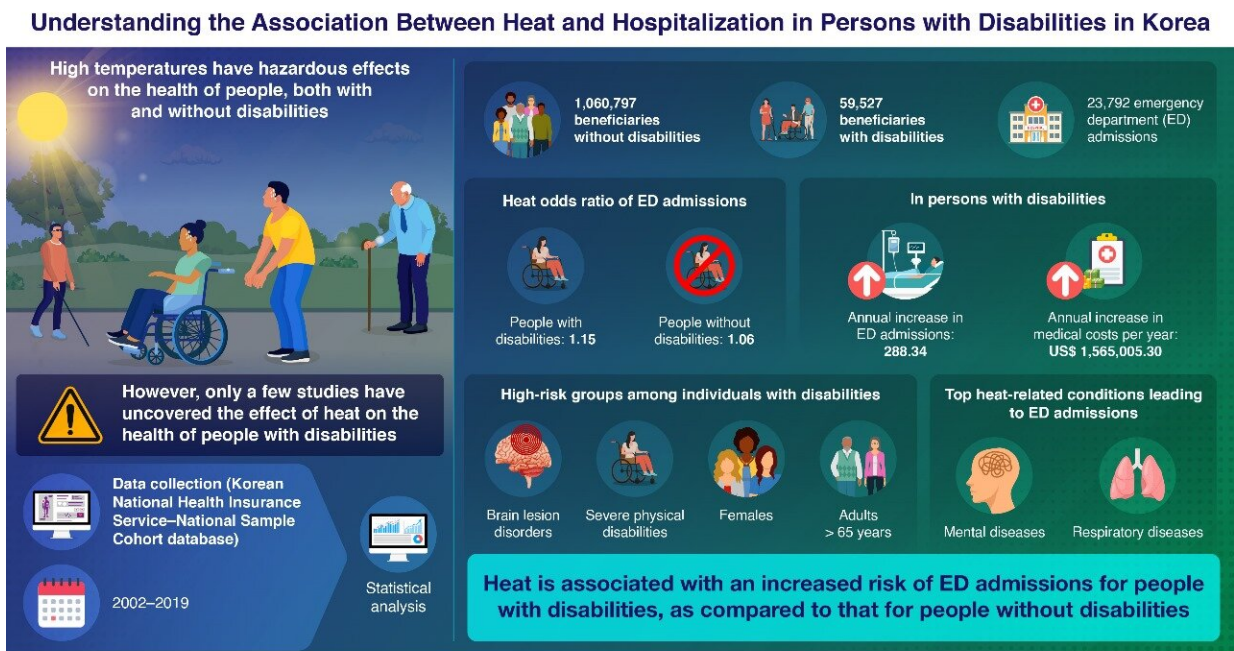


Heat waves hit harder for people with disabilities: Study finds increased emergency visits in South Korea

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Association between heat and hospitalizations in persons with disabilities: A nationwide case-crossover study
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PUSAN NATIONAL UNIVERSITY

This study by Pusan National University researchers addresses different impacts of heat on health between people with and without disabilities, together with differences among disability types. Credit: Dr. Whanhee Lee from Pusan National University, South Korea

Climate change has resulted in a global spike in temperatures, which, in

turn, has increased the likelihood of frequent and intense heat waves. Amid these concerns, the Intergovernmental Panel on Climate Change (IPCC) warns that heat waves increase in intensity, frequency, and duration with every 0.5°C increase in temperature.

Previous research on the impact of these changes has revealed that [extreme heat](#) disproportionately affects [vulnerable groups](#) such as children, the elderly, individuals with [chronic health conditions](#), and those in the low-income group. Despite these observations, however, there are limited studies on the impact of high temperatures on the health of people with [disabilities](#).

To better understand the impact of extreme heat on public health, especially on vulnerable populations like people with disabilities, a research team led by Dr. Whanhee Lee from Pusan National University, Korea, has now examined the association between heat and patient admissions in the [emergency department](#). Their study, [published](#) in the journal *The Lancet Planetary Health*, reveals disparities in admissions and medical expenses for individuals with disabilities and those without disabilities.

"Ours is a nationwide study to present scientific data on the hazardous effects of heat on the health of people with disabilities," says Dr. Lee.

To this end, the researchers examined the health records of 59,527 beneficiaries with disabilities and 1,060,797 beneficiaries without disabilities from the Korean National Health Insurance Service–National Sample Cohort database.

They used a statistical method called conditional logistic regression to examine the link between short-term exposure to hot temperatures and admissions to the emergency department (ED) in hospitals during warm seasons (June to September) between January 1, 2002, to December 31,

2019. The study covered four types of disabilities—physical, brain lesion disorders, vision, and hearing impairments—and examined hospitalizations for cardiovascular, genitourinary, mental, and respiratory diseases.

The findings revealed that exposure to heat increased the risk of hospitalizations among individuals with disabilities, especially due to the occurrence of mental and respiratory diseases. In addition, individuals with brain lesion disorders and severe physical disabilities, females, and those older than 65 years were more vulnerable to the effects of heat exposure. Overall, these results suggest that people with disabilities faced a 1.07 times higher risk, with a fourfold increase in ED admissions and seven times higher medical costs, compared to those without disabilities.

[In South Korea, around 2.7 million people have disabilities](#), and the number is expected to rise with an increase in aging population and non-communicable diseases. In this context, the findings of this study highlight the need for well-informed public health policies to support and address the specific needs of this group.

For instance, these policies and decisions can include practical actions addressing various disability characteristics and health care training to consider the diverse comorbidity of people with disabilities and the impacts of climate change on their health. Such plans will also align with UN Sustainable Development Goals (SDGs) for equal health care access and [climate action](#).

"As far as we know, there are still a limited number of guidelines against climate change in the context of people with disabilities. Our study sheds light on the importance of considering population with disabilities while developing guidelines against climate change," concludes Dr. Lee.

More information: Jinah Park et al, Association between heat and hospital admissions in people with disabilities in South Korea: a nationwide, case-crossover study, *The Lancet Planetary Health* (2024). DOI: [10.1016/S2542-5196\(24\)00027-5](https://doi.org/10.1016/S2542-5196(24)00027-5)

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