

Many people with diabetes do not know or heed dangers of hot weather

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A new survey shows that diabetic individuals who live in a hot climate have important gaps in their "heat awareness," or knowledge about proper diabetes self-care in hot weather, even though diabetes raises their risk of heat illness. The results of "Diabetes in the Desert: What Do Patients Know About the Heat?" will be presented Monday at The Endocrine Society's 92nd Annual Meeting in San Diego.

Researchers from Mayo Clinic in Arizona, in collaboration with the National Ocean and Atmospheric Administration and the National Weather Service, surveyed patients at a Phoenix [diabetes](#) clinic and analyzed 152 surveys. Responses showed that people living with diabetes in hot climates need increased awareness of how heat affects their disease, said lead researcher Adrienne Nassar, MD, third-year medical resident at Mayo Clinic.

"People with diabetes have an impaired ability to sweat, which predisposes them to heat-related illness, as do uncontrolled, high blood sugars," Nassar said. "Many patients surveyed had suboptimal glycemic control during the summer, possibly increasing their risk of dehydration."

Past research shows that during hot weather people with diabetes have an increased number of emergency room visits, hospitalizations and deaths due to heat illness.

Yet one in five survey respondents said they would not take precautions

until temperatures exceeded 100 degrees Fahrenheit. "Heat illness can take place at 80 to 90 degrees when you factor in the heat index," Nassar said.

Only about half of the patients knew the definition of the heat index—the combination of air temperature and humidity. High humidity makes heat more dangerous because it slows the evaporation of perspiration, the way the body cools itself.

Heat also can harm the effectiveness of diabetes medications and supplies. "Oral medications as well as insulin have a therapeutic temperature range above which they lose efficacy," Nassar said. The drug's package insert includes information about proper temperatures for storage.

Although 73 percent of respondents had received information about the harmful effect of heat on insulin, fewer knew about the adverse effects of heat on their oral diabetes medications (39 percent) and on glucose meters (41 percent) and glucose test strips (38 percent).

Even when survey respondents knew that they should protect their diabetes medications and glucose-testing supplies from heat, an alarming proportion—37 percent—chose to leave them at home rather than risk heat exposure.

"If they are unable to check their blood sugars while they are away from home, that's unsafe," Nassar said.

"Increasingly more people with diabetes are living in places characterized by hot weather. Patient education focusing on diabetes management in hot climates is needed," she said.

Provided by The Endocrine Society

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