

Effects of Heat More Severe on the Obese

By Anne Wainscott-Sargent

The United States has more deaths from exposure to extreme heat than any other natural disaster combined—including hurricanes, earthquakes and floods, according to the Centers for Disease Control and Prevention (CDC). This “silent killer” claims healthy athletes, but more often strikes the elderly and people with chronic health conditions.

Regulating Body Temperature Tougher

People with a body mass index (BMI) of 30 or greater, face greater risk for heat exhaustion and heat stroke—even when they exercise moderately. Why? According to the [Mayo Clinic](#), “Carrying excess weight can affect your body's ability to regulate its temperature and cause your body to retain more heat.”

Health officials do not track obesity as a reportable condition.

“However, epidemiologists know that obese people who do not have well functioning cardiovascular systems suffer more from poor thermoregulation,” says George Luber, Ph.D., associate director for Global Climate Change at CDC’s National Center for Environmental Health, who focuses on the epidemiology and prevention of heat-related illness and death.

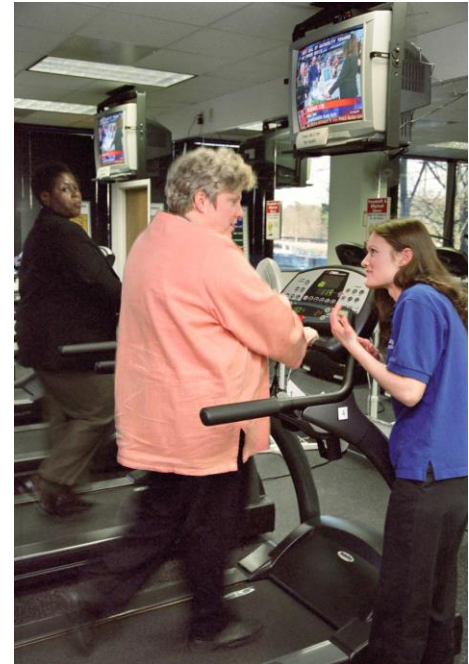
Faster Onset of Heat Complications

“If you’re not able to thermo-regulate well, your chance of experiencing heat exhaustion, which leads to heat stroke, happens at a much faster rate and perhaps at lower temperatures,” he says.

Luber notes that medical conditions associated with obesity—heart disease, chronic obstructive pulmonary disease (COPD) and diabetes—place the person at greater risk for death after exposure to extreme heat. According to Luber, analysis of death certificate data shows that people who die from heat-related exposure have these underlying medical conditions.

“The alarming thing is that heat-related illness, even if you don’t die from it, is an extremely serious health condition that will dramatically increase your probability of dying subsequent to surviving it,” says Luber.

A study examining more than 80 heat stroke patients who initially survived the 2003 heat wave in Lyon, France, found that 58 percent of patients died within 30 days, and 71 percent died within two years of suffering heat stroke. These findings underscore the significant health risk of heat exposure.



Proven Prevention Tips

Both lean and large framed individuals should follow CDC's prevention steps to minimize their heat-exposure risk:

- Start slowly and become accustomed to the heat—spend short amounts of time to become acclimatized to the heat
- Stay hydrated with clear liquids—drink before and during exercise so you don't become thirsty
- Avoid the sun in the middle of the day – instead, exercise in the morning or early evening when it is cooler
- When exercising, wear light-colored, loose-fitting clothing
- Wear a hat to shade the head and sunscreen to prevent burning—a sunburn prevents the body from cooling down
- Don't work out alone in the heat – use a “buddy system”

1. [Argaud L](#), [Ferry T](#), [Le QH](#), [Marfisi A](#), [Ciorba D](#), [Achache P](#), [Ducluzeau R](#), [Robert D](#). 2007. Short- and long-term outcomes of heatstroke following the 2003 heat wave in Lyon, France. [Arch Intern Med](#). 12;167(20):2177-83.