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Heat Related Illnesses/Deaths (Hyperthermia)

The Missouri Department of Health and Senior Services (DHSS), with the help of the National Weather Service, monitors temperatures and humidity across the state in an effort to prevent heat-related illness and death. Young children, the elderly and the chronically ill are more vulnerable to the effects of high temperatures. Young children must rely on grown-ups to see that they drink enough of the right fluids, apply sunscreen, and stay out of hot environments. The elderly and chronically ill perspire less and are more likely to have health problems requiring medications that can impair the body's response to heat. Many prescription medications make individuals more sensitive to the heat. Some of these medications include anti-psychotics, major tranquilizers, antihistamines, over-the-counter sleeping pills, antidepressants, heart drugs and some anti-Parkinsonian agents. Each year many Missourians suffer from heat-related illnesses, with some cases resulting in death. Air conditioning is the best preventive measure, especially during prolonged periods of high temperatures.

The DHSS hyperthermia website <http://www.dhss.mo.gov/Hyperthermia/> provides links to several different brochures on heat. Many of them are available in English and Spanish and two of the brochures directed toward the elderly are available in other languages such as Vietnamese and Russian. New to the website is *Tips for School Athletic and Band Programs*. Copies can be printed and distributed to schools in your locality for use when the school year starts.

Missouri's heat-related deaths are primarily in the urban, more densely populated areas of St. Louis City, St Louis County and Jackson County (Kansas City and Independence). For 2007, of the total 34 deaths, there were 27 (79.4%) deaths in these metropolitan areas. Rural deaths accounted for 7 (20.6%) of deaths.

In 2007, the 34 hyperthermia deaths in Missouri occurred in June (1/2.9%), July (6/17.6%), August (24/70.6%), and September (3/8.8%). 18 (52.9%) were in people age 65 years and older and 16 (47.1%) were in the <64 year old age group. These younger victims often have contributing causes such as physical activity (sports or work), complicating medical conditions, or substance abuse. Circumstances causing hyperthermia deaths in young children often involve a motor vehicle—a child left in or climbing into a parked vehicle during hot weather. Of the 3 deaths in children <5 years old, there were 2 deaths in 2007 where children were left in unattended vehicles. Calendar year 2007 was somewhat unusual in that several of the heat-related deaths warranted criminal investigation; one death was classified as a homicide and another is pending a determination.

Missouri is the only state which conducts on-going statewide surveillance for hot weather related illnesses and deaths. Health care providers are required to report cases of hyperthermia to the Missouri Department of Health and Senior Services. When reporting cases of hyperthermia, please include information on patient temperature, air conditioning availability/use, and contributing factors to the illness/death. Reports should be sent to Carol Braun, Bureau of Environmental Epidemiology or faxed to (573) 526-6946.