

Seattle Area Heat/Health Watch Warning System Fact Sheet

Heat is Actually a Problem in the Urban King, Pierce and Snohomish County Area

Looking at Seattle area weather and mortality statistics back to the mid 1970s, an average of three or four fatalities have occurred each summer. During excessively warm summers such as the summer of 1992, up to 50 to 60 deaths have occurred. Most fatalities are indirectly caused by heat, such as heart attacks, strokes and respiratory illness. The most vulnerable people tend to be the elderly. Daytime heating with temperatures into the 90s is a problem, but not cooling off during the warm nights adds to the body's stress.

The Heat Health Watch/Warning System

Heat is the number one weather-related killer in the U.S., with an average of at least 1500 excess deaths attributed to heat during a typical summer. The National Weather Service (NWS) has traditionally used a heat index formula combining high temperatures and humidity for years, and issued a suite of excessive heat products to help protect lives. Now we have learned that people respond to heat events differently in different regions around the country. For instance, in the Seattle area, very few people have air conditioning when compared to other typically warmer parts of the country.

The NWS has developed a Heat Health Watch/Warning System that tailors excessive heat guidance to specific regions in the country. The Seattle area was the 15th urban region of at least 500,000 population to implement this new system in 2005.

The Heat Health Watch /Warning System

The system provides guidance to forecasters in the NWS Seattle office, based on their forecast information and a sophisticated statistical analysis of the excessive heat threat. Forecasters can then issue excessive heat outlooks, watches, warnings and advisories, depending on the lead time before the event and the intensity of the event. The warning message is transmitted to area media, emergency management and health community officials, just like other weather or flood warning type related messages. The excessive heat messages are also posted on the NWS web site, aired on NOAA Weather Radio, and many other resources for the public. Emergency management and health community officials, in partnership with the media and NWS, then reach out to the public with messages on what steps to take to reduce the heat impacts, particularly for the elderly – the most vulnerable population group.

What Steps to Take Before and During an Excessive Heat Event

Here are some steps to take before an excessive heat event.

- Install air conditioning. If that is not possible, predetermine where you could go to use air conditioning, like a mall, store, movie house or other air conditioned building. You can also obtain an appropriate number of fans for your home. They will help circulate air and evaporate sweat, cooling your body.
- Have plenty of water available.
- Have non-protein type foods in stock. Foods like meat increase metabolic heat production and increase water loss.
- If you have an outdoor exercise regime, plan to do your exercising during cooler periods of the day.

Here are some steps to take during an excessive heat event.

- Slow down. Avoid, reduce or reschedule strenuous activities to a cooler period of the day.
- Drink plenty of water, even if not feeling thirsty. Your body needs water to help keep you cooler. (Those on fluid restrictions should consult their physician)
- Dress for summer. Dress in lightweight, light-colored clothing. They help your body maintain more normal temperatures.
- Spend more time in air-conditioned places. If you do not have home air conditioning, spend at least some time in other air-conditioned places like malls or stores.

What not to do during an excessive heat event.

- Don't get too much sun. Sunburn makes your body's job of heat dissipation that much more difficult.
- Avoid alcoholic or caffeinated beverages. These beverages dehydrate the body and make the heat's effects worse on your body.
- Do not take salt tablets unless specified by a physician.
- Avoid strenuous outdoor activities, particularly during the heat of the day.

Web Site Resources

Heat Safety: <http://www.nws.noaa.gov/om/heat/index.shtml>

Red Cross Heat Safety: <http://www.redcross.org/services/hss/tips/heat.html>

Seattle/King County Red Cross: <http://www.seattleredcross.org/>

Washington State Emergency Management: <http://emd.wa.gov>

Washington State Health Department: <http://www.doh.wa.gov>

King County Health Department: <http://www.metrokc.gov/health>

Snohomish County Health Department: <http://www.snohd.org>

Pierce County Health Department: <http://www.tpchd.org>

Univ of Miami Synoptic Climate Lab: <http://www.as.miami.edu/geography/climatology/>

Centers for Disease Control and Prevention: <http://www.cdc.gov>

Terminology

Heat Cramps: Heat cramps are muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or the legs. It is generally thought that the loss of water and salt from heavy sweating causes the cramps.

Heat Exhaustion: Heat exhaustion is less dangerous than heat stroke. It typically occurs when people exercise heavily or work in a warm, humid place where body fluids are lost through heavy sweating. Fluid loss causes blood flow to decrease in the vital organs, resulting in a form of shock. With heat exhaustion, sweat does not evaporate as it should, possibly because of high humidity or too many layers of clothing. As a result, the body is not cooled properly. Signals include cool, moist, pale, flushed or red skin; heavy sweating; headache; nausea or vomiting; dizziness; and exhaustion. Body temperature will be near normal.

Heat Stroke: Also known as sunstroke, heat stroke is life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly. Signals include hot, red and dry skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing. Body temperature can be very high--sometimes as high as 105°F.