



Special Report on Heat Stress (excerpt)

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"Energy issues are truly life and death issues for the elderly. The ultimate risk is death from hypothermia or heat stress," said Virginia H. Knauer at last winter's energy conference of utility, consumer, senior citizen, and energy public interest groups.

According to the Center for Environmental Physiology, the body needs time to adjust to hot weather. A sudden increase in temperature, especially at this time of year, is particularly serious because it can place a dangerous strain on the heart and blood vessels before the body can acclimate itself.

Heat stress, which can lead to heat exhaustion, heart failure, and strokes, may well be a life threatening problem for the elderly this summer. Remember, the blistering heat during the summer of 1980 claimed several thousand more lives than during previous years. The death toll was highest among people over 65. This Special Report describes warning signs and offers precautions that may avert the recurrence of problems for the elderly, similar to those encountered in 1980.

The elderly are more vulnerable to heat stress than younger people because they do not adjust as well to heat. They perspire less. They are also more likely to have health problems requiring medicines that work against the body's natural defenses to adjust to heat. For example, diuretics (often prescribed for high blood pressure, a common disease of the elderly) prevent the body from storing fluids and restrict the opening of blood vessels near the skin's surface. Certain tranquilizers and drugs used to treat Parkinson's disease interfere with perspiring. These and other chronic conditions (such as circulatory problems, diabetes, a previous stroke, overweight, and a weak or damaged heart) often upset normal body responses.

Warning Signs

Early symptoms - feeling hot, uncomfortable, and listless - are mild and usually pose no threat unless they persist. However, because the serious signs of heat stress listed below are usually preceded by the milder ones, it is important that you get medical attention if you experience any of the following:

- Dizziness
- Rapid heartbeat
- Diarrhea
- Nausea
- Cramps
- Throbbing headache
- Dry skin (no sweating)
- Chest pain
- Great weakness
- Mental changes
- Breathing problems
- Vomiting

NOTE: These symptoms can also signal other major problems, such as heart failure. Again, if you experience any of them, call a doctor immediately.

Keeping Cool

The best advice for avoiding heat stress is to keep as cool as possible. So if you are up in years or have a loved one who faces a special risk from heat stress, this information may help you avoid problems:

- Air conditioning can provide lifesaving relief from heat stress, especially if you have heart disease. If you don't have air conditioning, spend as much time as possible in cool shopping malls, senior centers, libraries, movie theaters, or in the coolest room in your home.
- Fans can draw cool air into your home at night or help to circulate indoor air during the day. Air movement reduces heat stress by removing extra body heat.
- Cool baths or showers provide relief from the heat because water removes extra body heat 25 times faster than cool air. Placing ice bags or wet towels on the body is also helpful.
- Loose fitting, lightweight, light colored clothing is more comfortable in hot weather. Hats and umbrellas protect your head and neck when you are outdoors.

- Your body needs more water in hot weather. Don't wait until you are thirsty to have a drink! If you have a disease, a medical condition, or a problem with body water balance, CHECK WITH YOUR DOCTOR for advice on how much water you should drink

Special Precautions

- Curtail physical activity during extremely hot weather. Activity adds to heart strain.
- Avoid hot foods and heavy meals. They add heat to your body.
- Watch salt use. Check with your doctor before increasing the amount of salt or potassium in your diet. Don't take salt tablets without your doctor's permission.
- Avoid alcohol. Alcohol acts as a diuretic, resulting in fast water loss. In addition, alcohol can promote a sense of well-being, making you less aware of the danger signs of heat stress.
- If you live alone, make sure a relative or neighbor checks on you regularly.
- Take the heat seriously! Pay attention to the danger signs and call your doctor at the first sign of trouble.

This Special Report is based on information furnished by the National Institute on Aging and the Center for Environmental Physiology, a non-profit organization which conducts research and develops educational programs about heat and cold stress with particular emphasis on the needs of older Americans.

Apparent Temperature

The thermometer does not always tell the whole story. If you live in an area with significant relative humidity, you may well be at risk for heat stress, even if the temperature is in a reasonable range. The combination of temperature and humidity forms what is called "apparent temperature" or what your meteorologist refers to as "heat index". Be sure you know all the numbers before you decide if it is safe to work or exercise outside:

		Environmental Temperature (F)										
		70	75	80	85	90	95	100	105	110	115	120
		APPARENT TEMPERATURE*										
Relative Humidity (%)	0	64	69	73	78	83	87	91	95	99	103	107
	10	65	70	75	80	85	90	95	100	105	111	116
	20	66	72	77	82	87	93	99	105	112	120	130
	30	67	73	78	84	90	96	104	113	123	135	148
	40	68	74	79	86	93	101	110	123	137	151	
	50	69	75	81	88	96	107	120	135	150		
	60	70	76	82	90	100	114	132	149			
	70	70	77	85	93	106	124	144				
	80	71	78	86	97	113	136					
	90	71	79	88	102	122						
	100	72	80	91	108							

* Combined index of heat and humidity = what it "feels like" to the body.

<u>Apparent Temperature</u>	<u>Heat Stress Risk with Physical Activity and/or Prolonged Exposure</u>
95 -105	Heat cramps or heat exhaustion possible
105 - 130	Heat cramps or heat exhaustion likely, Heat stroke possible
131 and above	Heatstroke highly likely