

Excessive Heat Safety

For Rural Communities

Facts

- As many as 175 Americans die from extreme heat every year.
- The state of Kentucky averages nearly 33 days a year with temperatures 90° or higher.

The **Heat Index** is a factor of two things, temperature and moisture (dew point). The more moisture in the air (higher dew points) relative to the temperature, the more humid the air becomes. This directly effects how "comfortable" it will feel outside. Higher relative humidity (RH) values will make conditions feel warmer than they really are, resulting in a higher heat index.

For instance, a temperature of 90° and a dew point of 70° results in a RH of 52%. Instead of feeling like 90°, the heat index says it will feel closer to 95° based on the RH level.

General comfort levels USING DEW POINT that can be expected during the summer months:

- Less than or equal to 60°: dry and comfortable
- Between 60° and 65°: becoming "sticky" with muggy evenings
- Greater than or equal to 65°: lots of moisture in the air, becoming oppressive

HEAT EXHAUSTION		OR	HEAT STROKE	
Faint or dizzy			Throbbing headache	
Excessive sweating			No sweating	
Cool, pale, clammy skin			Body temperature above 103° Red, hot, dry skin	
Nausea or vomiting			Nausea or vomiting	
Rapid, weak pulse			Rapid, strong pulse	
Muscle cramps			May lose consciousness	

- Get to a cooler, air conditioned place
- Drink water if fully conscious
- Take a cool shower or use cold compresses

CALL 9-1-1

- Take immediate action to cool the person until help arrives

Heat Index	Possible Heat Disorders
80° - 90°	Fatigue Possible
90° - 105°	Sunstroke, Heat Cramps & Heat Exhaustion Possible
105 - 130°	Sunstroke, Heat Cramps, or Heat Exhaustion Likely, and Heatstroke Possible With Prolonged Exposure
130° or higher	Heatstroke/Sunstroke Highly Likely

How To Beat The Heat	
Slow Down	Strenuous activity should be reduced, limited, eliminated, or rescheduled.
Dress For Summer	Lightweight light-colored clothing reflects heat & sunlight, & helps stay cool.
Drink Plenty Of Water	Your body needs water to keep cool.
Don't Get Too Much Sun	Sunburn makes the job of heat dissipation that much more difficult.
Find A Cool Spot	Find a shaded or air-conditioned spot to reduce danger from the heat.



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Extremely cold air comes every winter and affects millions of people across the United States. The arctic air, together with brisk winds, can lead to dangerously cold wind chill values. People exposed to extreme cold are susceptible to frostbite in a matter of minutes. Areas most prone to frostbite are uncovered skin and the extremities, such as hands and feet. Hypothermia is another threat during extreme cold. Hypothermia occurs when the body loses heat faster than it can produce it.

Cold weather can also affect crops. In late spring or early fall, cold air outbreaks can damage or kill produce for farmers, as well as residential plants and flowers. A freeze occurs when the temperature drops below 32°F. Freezes and their effects are significant during the growing season. Frost develops on clear, calm nights and can occur when the air temperature is in the mid-30s. Each plant species has a different tolerance to cold temperatures.



The Science of Wind Chill

NO WIND

98.6°F
Average temperature of the human body

Under calm conditions, the body radiates heat, creating a layer of warmth between our skin and the cold surroundings.

WINDY

95°F
Hypothermia begins when our body temperature drops two to four degrees

But when it's windy, the moving air breaks up this insulating layer. It speeds up heat loss by whisking away the warmth from our skin.

Heat is moved away from our bodies.

weather.gov/winter

Wind Chill Chart

Wind (mph)	Temperature (°F)																	
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes (light blue), 10 minutes (medium blue), 5 minutes (dark blue)

Tips for Staying Warm

- **Stay Dry:** Wet clothes result in much faster heat loss.
- **Stay Covered:** Wear mittens or gloves, and a hat. At least half of your body heat is lost if your head is not covered.
- **Dress In Layers:** Trapped air between loose fitting clothing helps to insulate. Wool keeps you warmer than cotton, because wool fibers trap air pockets, helping to insulate you from the cold. When wool is exposed to damp conditions, it has natural wicking properties that pull moisture away from your skin and keep you dry. Also, try to use an outer layer that is water resistant, to keep clothes and skin underneath from getting wet in the first place.
- **Stay Informed:** Use wind chill temperatures to guide you in dressing properly outdoors.



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