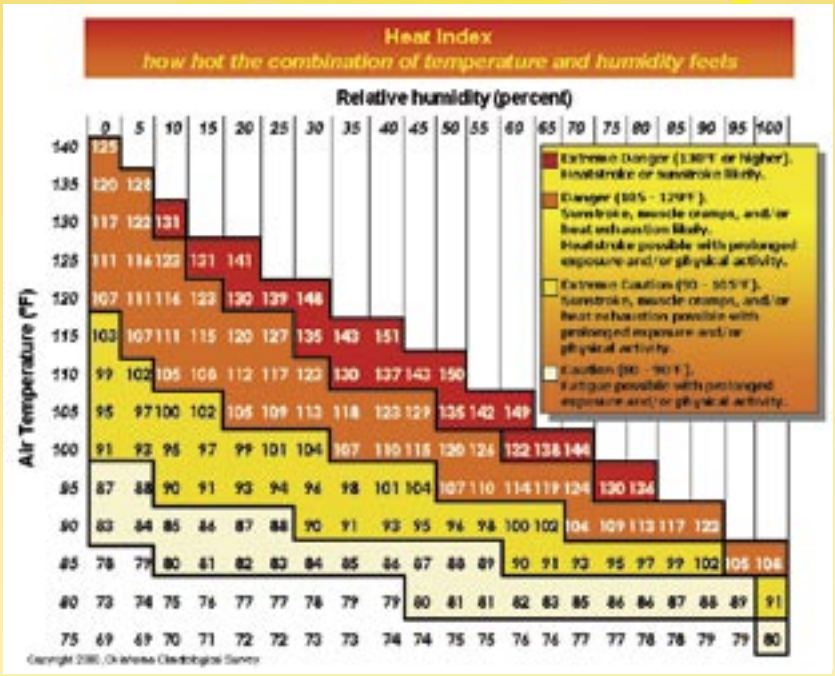
Weather Wise

Heat

Oklahoma experiences long, hot summers. As the temperature and relative humidity increase, your risk for heat exhaustion and heat stroke increases. The "heat index" represents how a body reacts to the combination of relative humidity and high temperature. Use the heat index to decide when to slow down physical activity, or to take frequent breaks and drink fluids.

When the human body gets too warm, it perspires. As the perspiration evaporates, the skin cools. When the relative humidity is high, the rate of evaporation slows and the perspiration falls off the skin. The body continues to produce perspiration without the benefit of evaporational cooling.



Heat Index Table: Air temperature (°F) is on the vertical axis and relative humidity (%) is on the horizontal axis. Use these values to determine the Heat Index.

Activity: Use the information above to answer these questions.

1. Find Harper, Love, and Nowata counties on a map of Oklahoma. Use the table to determine the heat index for each of the stations below.

   Station in Harper County: Air Temperature 101°F, Relative Humidity 6%
   Station in Nowata County: Air Temperature 87°F, Relative Humidity 73%
   Station in Love County: Air Temperature 93°F, Relative Humidity 55%

2. Explain how your body would react if you spent several hours outside at any of the three locations.

3. Of the three stations above, explain why the station in Harper County did not have the highest heat index even though it measured the warmest temperatures.

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