

Roth: Dry heat and the heat index

By [Jim Roth](#), Director and Chair of the Firm's Clean Energy Practice Group. This column was [originally published in The Journal Record](#) on July 17, 2017.



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Dry heat and the heat index

Friends have tried to convince me for years that 110-plus degrees in Arizona's summer is fine because it's a "dry heat." I've scoffed for years because the only dry heat I feel familiar with is my oven, which is not an inviting idea at all. But now that we Oklahomans are into a scorcher of a summer here, I am beginning to think those dry-heat believers may be onto something because I'm learning the heat index is a real thing. And it can feel miserable.

Bear with me for a bit while I describe the discomfort we feel

when we our body can't cool itself down because the atmosphere's moisture content works against us. I hope you are reading this inside somewhere in an air-conditioned space.

According to the National Weather Service, the heat index is what the temperature feels like to our bodies when the air temperature is combined with relative humidity. That is the apparent temperature. The index effect can work against the body's natural methods of sweating or perspiring to cool itself off, as the sweat is unable to evaporate because relative humidity, or atmospheric moisture content, is high. This humid reality, in turn, causes the human body to actually feel warmer than the air temperature alone.

Conversely, there are times when relative humidity can be so low that the apparent temperature actually feels lower than the air temperature. But I'm not sure that has ever occurred in sunny, humid Oklahoma.

And there are serious reasons to monitor the heat index, especially if you spend a lot of time outside during the summer months or you've lived long enough to witness a lot of summers. Heat stroke and similar risks can occur to people of all ages:

- Caution: 80-90 degrees: Fatigue possible with prolonged exposure or physical activity.
- Extreme Caution: 90 to 103 degrees: Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure or physical activity.
- Danger: 103 to 124 degrees: Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure or physical activity.
- Extreme Danger: 125 degrees or higher: Heat stroke highly likely.

Local news outlets certainly cover the expected heat indices each day, but if you are inclined to monitor it yourself, the National Oceanic and Atmospheric Administration has a great monitor and calculator available on its website at www.wpc.ncep.noaa.gov/html/heatindex.shtml.

And while you are there you may also read its scientific determination that the United States has so far this year experienced the second hottest year-to-date on record and a warmer-than-average June.

So please be safe during these grueling hot and humid months in Oklahoma. While we definitely need more rain in most every areas of our great state, it's hard to pray for rain and dry heat in the same breath.

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