

Heatwaves don't just give you sunburn. They can harm your mental health too

August 7 2020, by Harriet Ingle



Credit: AI-generated image ([disclaimer](#))

Heatwaves undoubtedly bring a certain joy at the opportunity to be out in the sunshine. But as the planet heats and weather records [tumble](#), increasingly normal bouts of baking heat aren't all sun and games. Aside from the grief and guilt we may feel about the human causes behind increasingly frequent spells of hot weather, heatwaves can also harm our

mental health in hidden but surprisingly severe ways.

Chief among them is their tendency to make our blood boil. Historic studies dating back to the early 19th century found that hotter regions tend to have [higher violent crime rates](#) than cooler regions, and this trend is still echoed [today](#). Even within regions, violent behavior is [higher](#) during hotter days, months, seasons and years. This link between heat and aggression holds even when controlling for other factors that affect violent crime rates, such as poverty, unemployment, age distribution and culture.

The mechanisms behind this link are extremely complex to interpret, as many factors are likely to play a part. One is that [hotter temperatures increase](#) the level of stress hormone cortisol in our blood. Similarly, there's evidence that our bodies produce [more adrenaline](#) and [testosterone](#) when temperatures spike. These changes can lead to an increase in sexual appetite, but can also make aggressive and violent behavior more likely.

Increases in temperature are also consistently associated with increased [suicide rates](#). For example, one study from the UK [found](#) that above 18°C, each 1°C increase in temperature is associated with a 3.8% increase in the incidence of suicide, and a 5% increase in the incidence of more violent methods of suicide, which are much more likely to result in death. In fact, during the 1995 [heatwave](#) in the UK, [suicide increased by a staggering 46.9%](#). [Similar](#) results have also been observed in [other](#) parts of the world.

An increase in social behaviors such as [alcohol consumption](#), as well as physiological changes and increases in impulsive and violent behavior similar to those mentioned above, have all been suggested as contributing to this effect. However, these are all speculative explanations for what is a very complex behavior whose causes are very difficult to ascertain.



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Vulnerable populations at risk

The poorest and most marginalized are disproportionately more vulnerable to the harms caused by climate breakdown-related weather events—and heatwaves are no exception. Countries such as [India and Pakistan](#) have already suffered immense loss of life and livelihoods thanks to waves of more than [45°C heat](#), and the emotional trauma of the aftermath lasts well beyond temperatures have cooled.

Millions of people with pre-existing [mental health](#) conditions are also known to be at greater risk of harm during heatwaves than the general population. This is because many psychiatric medications [inhibit temperature regulation](#) and the ability to sweat, making dangerous

heatstroke more likely. This is also the case for [recreational drugs](#) like [cocaine and ecstasy](#), whose typical use during sweat-inducing rave activities can also lead to dangerously low sodium levels in the blood—a problem that can be exacerbated by drinking excessive volumes of water.

Similarly, those with dementia or other serious mental illnesses that limit their ability to self-care are also more at risk, as they may not adjust their behavior sufficiently to protect themselves from the heat. For example, they may not notice if their clothing is inappropriate for the [temperature](#), or forget to turn their home's heating down. One study demonstrated that the risk of death for patients with severe and enduring mental illnesses such as psychosis, dementia, and substance misuse increases by [as much as 5%](#) with every 1°C increase above roughly 18°C.

We are only just starting to scratch the surface of the complex ways in which heatwaves—and [other extreme climate events](#) – affect mental health. For now, as future heatwaves envelop us, take time to make sure those most vulnerable to its effects are kept safe. As for yourself, make sure not only to keep your body cool, but your head too.

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