Too much exercise could actually trigger a hot flash

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Hot flashes affect roughly 80% of women during the years around menopause. Despite how common they are and how much research has been conducted relative to what causes them, much remains unknown. A

new study suggests that acute changes in physical activity, temperature, and humidity may play a role in the hot flash experience. Results of the survey are published online today in the journal *Menopause*.

As one of the most frequently experienced menopause symptoms, hot flashes are sudden heat dissipation events that often involve an increase in heat transfer from the body's core to the skin, as well as sweating. Previous medical studies have shown that a reduction in estradiol levels during the menopause transition leads to changes in the hypothalamus that control body temperature.

Physical activity has many benefits for health and wellness. However, physical activity can increase body temperature, and therefore, has been suspected of influencing the hot flash experience. In a previous study, all women who reported a history of hot flashes experienced a hot flash in response to acute laboratory exercise, whereas asymptomatic women did not exhibit the same response. But few studies to date have used ambulatory monitoring to study the effect of physical activity on hot flashes.

More recent results have shown that performing greater amounts of moderate physical activity than usual in a day was related to more subjectively reported hot flashes. However, researchers acknowledged that it was equally important to objectively evaluate hot flashes through physical monitoring because not all hot flashes are noticeable, especially at night when women may not wake up as a result of a hot flash.

Beyond exercise, researchers have also theorized that ambient temperature and humidity also may have an effect on hot flashes, but the results in natural settings have been less clear, including the fact that the relationship between temperature and hot flashes may be different between sleep and wake periods.

This newest study involved nearly 200 participants across the three menopause stages (premenopause, perimenopause, and postmenopause). Data indicate that there are significantly higher odds of acute increases in physical activity preceding both objective and subjective hot flashes during waking and sleeping periods. In addition, restlessness and increased microclimate temperature at night may precede hot flashes, suggesting that certain behavior measures, such as using lighter blankets and fans, may be beneficial.

Survey results are published in the article "Acute increases in physical activity and temperature are associated with hot flash experience in midlife women."

"This study shows a link between increases in physical activity and subsequent subjective and objective hot flashes during both waking and sleeping periods. Clinicians may advise patients of this link while acknowledging the multiple well-known benefits of physical activity. Because temperature during sleep affected the odds of having a hot flash, modifications such as the use of lighter-weight blankets and sleepwear, as well as keeping the room temperature cooler, may help with nighttime hot flashes," says Dr. Stephanie Faubion, medical director for The Menopause Society.

More information: Acute increases in physical activity and temperature are associated with hot flash experience in midlife women, *Menopause* (2024). DOI: 10.1097/GME.0000000000002373

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