

Painful periods increase sensitivity to pain throughout the month

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A brain imaging study has found that women with painful periods are more sensitive to pain throughout the month

(Medical Xpress) -- Women with painful periods show increased sensitivity to pain throughout their cycles, even when there is no background period pain.

The [brain](#) imaging study carried out at Oxford University shows that period [pain](#) is associated with differences in the way the [brain processes](#) pain, and that these differences persist throughout a woman's menstrual cycle.

The findings are published in the journal *Pain*.

The Oxford researchers in the Nuffield Department of Obstetrics and Gynaecology and the Centre for Functional Magnetic Resonance Imaging of the Brain applied hot pads to the inner arm and abdomen of 12 [women](#) with painful periods (but who were otherwise healthy), and 12 women

without, while they were in an MRI scanner.

Their brain's responses to this painful stimulus were compared at three different points in the women's menstrual cycles.

The team found that the group of women with painful periods were more sensitive to the hot pads - the pads didn't have to be turned up as far to get the same reports of pain.

The brain imaging data revealed that women who experience period pain showed changes in activity in brain areas known to be involved in the pain response.

Importantly, differences in the way the brain processed the pain from the hot pads continued to be seen at times in their menstrual cycles when there was no period pain. This suggests there may be longer-lasting changes to the experience of pain and discomfort.

These changes in sensitivity and processing of pain are similar to what is seen in patients with chronic pain conditions.

Also in common with chronic pain conditions, the researchers saw significantly lower levels of cortisol, a hormone connected to the body's stress response. These low levels persisted throughout the women's menstrual cycles and were correlated with the length of time women had experienced period pain.

The women with painful periods also reported reduced quality of life suggesting the period pain may interfere with physical activity such as sport and work, although this is a small study for identifying such effects.

'Many of the features of [chronic pain](#) conditions are present in women with painful periods, even though the pain is experienced for just a few days every

month,' says Dr Katy Vincent, a clinical lecturer in the Nuffield Department of Obstetrics and Gynaecology at Oxford University and first author on the paper.

Painful periods are common. Estimates vary, but can they can affect up to 90% of women at some time in their lives and are particularly common among adolescents and young women. According to Dr Vincent, the condition is sometimes taken less seriously because it is so common and it is often considered normal; teenagers in particular don't always seek treatment.

The researchers argue that because painful periods can measurably affect women's lives and alter the way they experience pain, the condition should always be given prompt and adequate treatment.

More information:

[dx.doi.org/10.1016/j.pain.2011.03.029](https://doi.org/10.1016/j.pain.2011.03.029)

Provided by Oxford University

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