

# Why do women get PMS? It may exist to break up infertile relationships

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Credit: Pixel Pro Photography/Flickr

(Medical Xpress)—A brave scientist has sought to answer a question that has baffled for centuries: why do women get premenstrual syndrome (PMS)?

Professor of Molecular Evolution, Michael Gillings, believes that in our evolutionary past there was a hidden selective advantage to PMS, because it increased the chance that infertile pair bonds would dissolve, thus improving the [reproductive outcomes](#) of [women](#) in such partnerships.

"In the past, women had many fewer menstrual cycles than women in modern societies, because they did not have control over reproduction and were either pregnant or breastfeeding most of the time," said Gillings.

"Imagine that a woman was pair bonded with a sterile or infertile male. Then, even in the past, they would have had regular cycles. If women in these relationships exhibited PMS and this increased the likelihood of the pair bond dissolving, this would be a huge reproductive advantage.

"This simple phenomenon might explain the frequency of PMS. There are various lines of evidence from DNA and behavioural studies that confirm this idea."

The hypothesis was supported by the high heritability of PMS, and the fact that gene variants associated with PMS can be identified, not to mention the data that show animosity exhibited during PMS is preferentially directed at current partners.

"Under this view, the prevalence of PMS might result from genes and behaviours that are adaptive in some societies, but are potentially less appropriate in modern cultures," said Michael.

"Understanding this might help the management of PMS and will help change attitudes, for example, towards cycle-stopping contraception. PMS is a simple and natural behaviour that arose as a consequence of our evolutionary past."

PMS affects up to 80 per cent of women, and has been observed in all countries where PMS has been investigated, dating back to the time of Hippocrates.

The levels of disruption ranges, and can lead to personal, social, and economic costs. Symptoms include anxiety/tension, mood swings, aches and cramps, cravings and disinterest in usual activities.

**More information:** Gillings, M.R. (2014) Were there evolutionary advantages to premenstrual syndrome? *Evolutionary Applications*.  
[onlinelibrary.wiley.com/doi/10.1111/eva.12190/full](https://onlinelibrary.wiley.com/doi/10.1111/eva.12190/full)

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