

COVID-19 pandemic stress impacts ovulation

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Life disruptions and the stresses of the COVID-19 pandemic led to disturbed ovulation with decreased progesterone durations or levels, according to research being presented Sunday at ENDO 2022, the

Endocrine Society's annual meeting in Atlanta, Ga.

The study was the first to observe ovulatory disturbances without [menstrual cycle](#) disruption during the pandemic.

"These silent ovulatory disturbances likely explain why so many women who are not taking hormonal forms of birth control reported having early or unexpected periods in the days following a COVID-19 vaccination," said Jerilynn C. Prior, M.D., FRCPC, Professor of Endocrinology at the University of British Columbia in Vancouver, Canada.

Prior and colleagues compared two independent, similarly-designed studies 13 years apart: the Menstruation Ovulation Study (MOS), which was conducted in a group of 301 women from 2006-2008, and MOS2, which studied 112 women during the pandemic. Both studies included menstruating women ages 19-35 years, who were not taking systemic or combined [hormonal contraceptives](#).

The first MOS was used as a control to compare to the MOS2 cohort's experiences during the pandemic. All participants in both studies answered a comprehensive health, reproduction and lifestyle questionnaire and were asked to keep a daily diary of their menstrual cycles and general life experiences.

For MOS2, [ovulation](#) was documented using a validated quantitative basal temperature. Researchers will confirm MOS2 hormonal characteristics using salivary progesterone levels. For the MOS cohort, the researchers assessed ovulation by measuring urinary progesterone levels.

Nearly two in three women who took part in the study during COVID-19 were not ovulating normally, Prior said. The women either experienced short luteal phases, in which an egg was released without enough time

from ovulation for pregnancy to occur, or anovulation, meaning no egg was released at all.

In comparison, the MOS study found only 10 percent of women experienced ovulatory disturbances. The MOS2 and MOS studies showed similar body weights, body mass index values and menstrual [cycle](#) and flow lengths. Thus, the [women](#) in MOS2 experienced no obvious signs of reproductive disruption.

Menstrual Cycle Diary analyses for MOS2 showed significantly increased anxiety, depression, frustration, (overall negative moods), perceived outside stresses, sleep problems, and headaches compared to MOS.

"By comparing the two studies, and especially their daily diaries, we can infer that the SARS-CoV2 [pandemic](#) life disruptions cause silent ovulatory disturbances within mostly regular menstrual cycles—providing a unique experiment of nature," Prior said.

More information: Prior will speak at the Endocrine Society's reproductive health news conference on Monday, June 13 at 9 AM.

Provided by The Endocrine Society

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