

New drug combo 'promising candidate' for on-demand contraceptive pill

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Pill bottle. Credit: CDC/Public domain

A new combination of drugs has emerged as a "promising candidate" for an on-demand contraceptive pill, suggests preliminary research published online in the journal *BMJ Sexual & Reproductive Health*.

The combination of ulipristal acetate, currently used as emergency

contraception medication, plus the COX-2 inhibitor meloxicam, a type of non-steroidal anti-inflammatory drug, seems to be highly effective at disrupting ovulation at the point in the cycle when the risk of pregnancy is greatest, known as peak fertility.

The days just before ovulation, known as the luteal surge, are when it's hardest to disrupt ovulation and when fertilization of the egg is most likely to occur.

Ulipristal acetate disrupts ovulation, but only if taken before the luteal surge begins. Drugs like COX-2 inhibitors, on the other hand, may still be able to disrupt ovulation even after the luteal surge has started.

The researchers therefore wanted to find out if the combination of both drugs might work at peak fertility, with the aim of identifying a lead candidate for a potentially highly effective on-demand contraceptive pill for use before or after sex as needed, or as an emergency contraceptive pill.

Ten healthy [women](#) between the ages of 18 and 35 were included in the study, all of whom had regular periods.

Each woman was monitored through two [menstrual cycles](#): a baseline cycle, to identify normal ovulatory patterns and a treatment cycle, when participants were given a combined dose of ulipristal acetate 30 mg and meloxicam 30 mg around the time of the luteal surge.

Ultrasound scans and key hormones were measured to identify the luteal surge and whether ovulation had occurred or been disrupted. Nine women completed both baseline and treatment cycles and were included in the final analysis.

Ovulation was disrupted in 6 women in the treatment cycle. Most (89%,

8) met some criteria for incomplete ovulation. Treatment cycles were around 3 days longer: this [cycle](#) length disruption is especially important for those who may also be using fertility awareness methods, explain the researchers.

This is exploratory research, involving just 9 women, so further studies on safety and effectiveness in larger numbers of women are needed, they emphasize.

But the results are promising, they suggest, because they show the combination of ulipristal acetate plus meloxicam can disrupt ovulation when conception risk is highest, making it "a promising candidate for evaluation as a pericoital oral contraceptive."

They add: "When we compare ovulation disruption rates in our study with the previous studies on which our protocol is based, the combination of [ulipristal acetate] and meloxicam disrupted [ovulation](#) at each phase of the fertile window more than any other medication previously studied."

The findings also suggest that adding meloxicam to ulipristal [acetate](#) may boost the latter's effectiveness as emergency contraception, they say.

More information: Potential candidate for oral pericoital contraception: evaluating ulipristal acetate plus cyclooxygenase-2 inhibitor for ovulation disruption, *BMJ Sexual & Reproductive Health* (2022). [DOI: 10.1136/bmjsex-2021-201446](https://doi.org/10.1136/bmjsex-2021-201446)

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