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## Contact With Dads Drops When Women Ovulate: Evidence of Evolutionary Protection Against Inbreeding in Women?

*Through an innovative use of cell phone records, researchers at UCLA, the University of Miami and Cal State, Fullerton, have found that women appear to avoid contact with their fathers during ovulation.*

"Women call their dads less frequently on these high-fertility days and they hang up with them sooner if their dads initiate a call," said Martie Haselton, a UCLA associate professor of communication in whose lab the research was conducted.

Because they did not have access to the content of the calls, the researchers are not able to say for sure why ovulating women appear to avoid father-daughter talks. They say the behavior may be motivated by an unconscious motive to avoid male control at a time when the women are most fertile. But a more primal impulse may be at work: an evolutionary adaptation to avoid inbreeding.

Whatever the case, the researchers know that the findings are consistent with past research on the behavior of other animals when they are at their most fertile.

"Evolutionary biologists have found that females in other species avoid social interactions with male kin during periods of high fertility," said the study's lead author Debra Lieberman, a University of Miami assistant professor of psychology. "The behavior has long been explained as a means of avoiding inbreeding and the negative consequences associated with it. But until we conducted our study, nobody knew whether a similar pattern occurred in women."

The findings appear in the latest issue of *Psychological Science*.

The study builds on a mounting body of evidence of subtle and significant ways in which women's behavior is unconsciously affected by the approach and achievement of

ovulation -- a physical change that in humans has no outward manifestation of its own. Research has found that women tend to dress more attractively, to alter the pitch of their voices ways that are perceived as more attractive by men, and to contemplate more frequently the possibility of straying from their mates during high as opposed to low fertility periods of their menstrual cycle. Research has also shown that women are more attracted during high-fertility periods to men whose physique and behavior are consistent with virility, especially if they're not already mated to men with these characteristics.

For the latest study, the researchers examined the cell phone records of 48 women between the ages of 18 and 22 -- or near the height of a woman's reproductive years. Over the course of one cell phone billing period, the researchers noted the date and duration of calls with two different people: the subjects' fathers and their mothers. They then identified the span of days comprising each woman's high and low fertility days within that billing period.

Women were about half as likely to call their fathers during the high fertility days of their cycle as they were to call them during low fertility days. Women's fertility had no impact, however, on the likelihood of their fathers calling them. Women also talked to their fathers for less time at high fertility, regardless of who initiated the call, talking only an average of 1.7 minutes per day at high fertility compared to 3.4 minutes per day at low fertility.

The researchers concede that the high-fertile women might simply be avoiding their fathers because fathers might be keeping too close an eye on potential male suitors. But their

data cast some doubt on this possibility. It is more likely, they conclude, that like females in other species, women have built-in psychological mechanisms that help protect against the risk of producing less healthy children, which tends to occur when close genetic relatives mate.

"In humans, women are only fertile for a short window of time within their menstrual cycle," Lieberman said. "Sexual decisions during this time are critical as they could lead to pregnancy and the long-term commitment of raising a child. For this reason, it makes sense that women would reduce their interactions with male genetic relatives, who are undesirable mates."

The reluctance to engage in conversations with fathers could not be attributed to an impulse to avoid all parental control during ovulation. In fact, the researchers found that women actually increased their phone calls to their mothers, during this period of their cycle, and that this pattern was strongest for women who felt emotionally closer to their moms. At high fertility, women proved to be four times as likely to call their mothers as they were to phone their fathers, a difference that did not exist during the low fertility days. In addition, women spent an average of 4.7 minutes per day on the phone with their mothers during high fertility days,

compared to 4.2 minutes per day during low-fertility.

One possible explanation is that women call their moms for relationship advice, said Elizabeth Pillsworth, who also contributed to the study.

"They might be using mothers as sounding boards for possible mating decisions they're contemplating at this time of their cycle," said Pillsworth, an assistant professor of evolutionary anthropology at California State University, Fullerton. "Moms have a lot more experience than they do. Particularly for those women, who are close to their mothers, we can imagine them saying, 'Hey Mom, I just met this cute guy, what do you think?'"

Either way, the findings show that women are unconsciously driven during their most fertile periods to behavior that increases the odds of reproducing as well as potentially doing so with a genetically appropriate mate, said Haselton.

"We think of ourselves as being emancipated from the biological forces that drive animal behavior," she said. "But this suggests that our every day decisions are often still tied to ancient factors that for millennia have affected survival and reproduction."