

## Expectant Dads May Also Have Hormonal Changes, Study Suggests

Experts can't explain why testosterone levels of men declined early in partner's pregnancy

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WEDNESDAY, Dec. 17, 2014 (HealthDay News) -- While women's hormonal fluctuations during pregnancy are well-known, new research shows that men experience swings of their own as their partner's pregnancy progresses.

"There are hormonal changes going on with men as well, and they occur earlier than other studies have suggested," said lead researcher Robin Edelstein, an associate professor of psychology at the University of Michigan, Ann Arbor.

"What we found is there is a gradual decline in men's testosterone," she said. The study was published online Dec. 15 in the *American Journal of Human Biology*.

Edelstein and her team followed 29 expectant heterosexual couples, all expecting their first child together. They looked at four different times throughout the pregnancy, evaluating salivary testosterone, cortisol, estradiol and progesterone. They looked at the levels of those hormones at weeks 12, 20, 28 and 36.

As expected, levels of all four of the hormones increased in women. (Women's testosterone declines after birth.) Meanwhile, men showed substantial declines in levels of both testosterone and estradiol but showed no changes in levels of cortisol or progesterone.

Edelstein said few studies have looked at whether men might show hormonal changes as their partner proceeds through pregnancy.

She can't explain why the hormones change as they do in men, or what effect that might have. "That is something we are really interested in," she said. "It's something we can look at, but we haven't yet."

One idea, she said, is that men with lower testosterone might be better caregivers, as they would be less aggressive.

The changes detected, she said, "are very small," and were not enough to be considered low-testosterone.

The change might be about psychologically preparing to be a father, Edelstein speculated. Or the so-called sympathy weight gain by fathers-to-be might explain the lower testosterone.

The study, while interesting, has some limitations, said Dr. Tomer Singer, a reproductive endocrinologist at Lenox Hill Hospital in New York City. One was the small number of couples studied, he said.

"They would probably have to repeat this in a larger group before coming to any conclusions," he said. Also, Singer said that testing saliva is less accurate than testing blood for the hormones studied.

The couples in the sample were mostly white, highly educated and with a relatively high income. So they might not be as stressed financially as others, he added, which might explain why there was no increase in levels of the stress hormone cortisol.

The ideas as to why the changes occur also need more study, he said.

But just knowing about the hormone change may help prospective parents, Singer said, and it may help both partners to support each other if they realize both are going through changes.

SOURCES: Robin Edelstein, Ph.D., associate professor, psychology, University of Michigan, Ann Arbor; Tomer Singer, M.D., reproductive endocrinologist, Lenox Hill Hospital, New York City; Dec. 15, 2014, online, *American Journal of Human Biology*

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