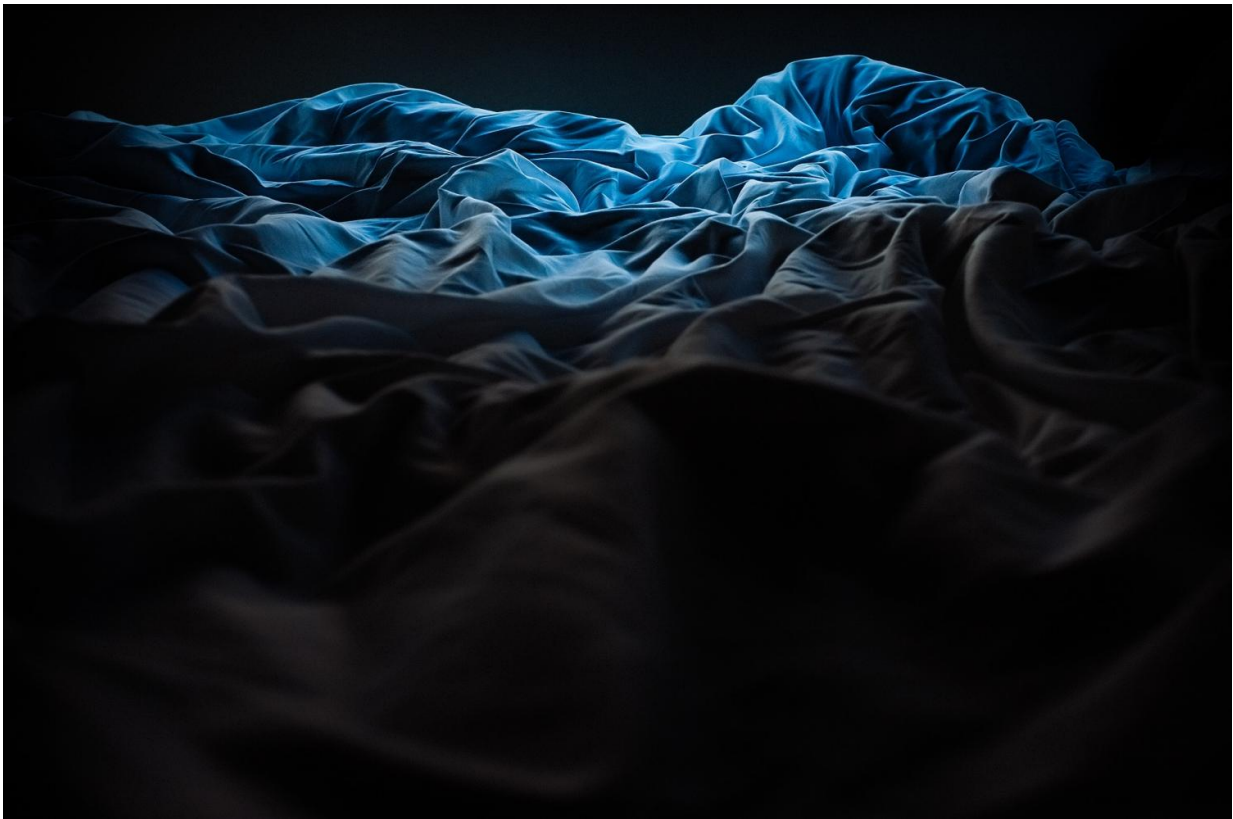


# Contraception influences sexual desire in committed relationships

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Sex is quite wonderful when the goal is to have children. But sex can also serve as a "glue" in a committed relationship.

Most animals have periods when they come into heat, and outside these periods they don't find sex interesting at all. Humans, however, are constantly interested in sex. This sex interest can seem like a waste of energy, but an evolutionary perspective may explain why we function this way.

### **More sex with progesterone and commitment**

A new study from the Norwegian University of Science and Technology (NTNU) and the University of New Mexico confirm that sex is important for pair-bonding between men and women in relationships. The researchers also found a correlation between the type of oral contraceptive women use and how often couples have sex. The findings were recently published in the scientific journal *Evolution & Human Behavior*.

"The function of sex in humans outside ovulation is an evolutionary mystery. But we believe that it has to do with binding the parties in the relationship together," says Leif Edward Ottesen Kennair, a professor of psychology at NTNU.

Kennair worked with Trond Viggo Grøntvedt, Nick Grebe and University of New Mexico Professor Steve Gangestad to ask hundreds of Norwegian heterosexual women about contraception, sex and relationships.

Their results show that of women in long-term relationships and who are using hormonal contraception, those who are more committed to their relationships have more sex with partners, as one might expect.

"But this association was especially true when the contraceptive that women used had potent levels of synthetic hormones that mimic the effects of the natural hormone progesterone, and lower levels of the

hormone estrogen," Gangestad said.

"We're talking about intercourse here, not other types of sex like oral sex, masturbation and such. This strengthens the idea that sex outside the ovulation phase has a function besides just pleasure," says Grøntvedt.

### **Big differences between types of contraceptives**

Hormonal contraceptives, like birth control pills, implantable rods and patches, contain two types of hormones: estrogen, which naturally peaks just before ovulation when naturally cycling women can conceive offspring, and hormones that have the same effect as progesterone, which naturally peaks during the extended sexual phase, a time when offspring cannot be conceived. The levels of each hormone type vary in different contraceptives. Hence, some contraceptives mimic hormones that are more characteristic of ovulation, whereas others mimic hormones when women can't conceive. The women who used contraception with more estrogen were most sexually active when they were in a less committed relationship. On the other hand, women who used contraception with more progesterone were the most sexually active when they were faithful and loyal to their partners.

"Before we did this study, we didn't know how much difference there was between the two types of [hormonal contraceptives](#)," says Grøntvedt.

### **A credible holistic picture**

The researchers surveyed two groups of women. All the women were using hormonal contraception and were in committed, heterosexual relationships. One group consisted of 112 women that researchers followed over a 12-week period. The women were asked how often and when in their cycle they had sex.

The second sample group consisted of 275 women in long-term relationships who used hormonal contraception. This group was not followed over time, but the researchers asked them how many times they had had sex in the past week. This type of study - using data collected at a specific point in time - is called a cross-sectional study. Both groups were asked to indicate the type of contraception they were using, and if a pill, which brand it was.

"Since we examined these two groups using different methods - a snapshot for the one group and a longitudinal study for the other - we can be confident that the results provide a reliable overall picture," says Dr Grøntvedt.

### **Natural or synthetic hormones appeared to be the same**

The basis for the NTNU study was a 2013 American study, where 50 women and their partners answered a series of questions about their relationships, menstrual cycles and frequency of sex. None of these women were using any kind of hormonal contraception, so only their natural hormones were involved. The study showed that women initiated sex more in the extended sexual phase - when they were not ovulating and progesterone was the dominant hormone - if they were invested in the relationship.

NTNU researchers wanted to verify the American results in their study, but with participants who were using a hormonal contraceptive that simulates a natural cycle. Their results were the same as in the US study, in which women were not using any hormonal birth control.

The researchers were thus able to show that how often [women](#) have sex is linked to how committed they feel towards their partner and the type of hormone they are governed by, whether natural or synthetic.

"A lot of social psychology studies that have led to cool discoveries through the ages have lost status, because it hasn't been possible to copy them and verify the results. We are extremely pleased to have been able to verify the results of the study by Grebe and his colleagues, and we are equally pleased that we have also made new discoveries," Kennair says.

**More information:** Trond Viggo Grøntvedt et al, Estrogenic and Progestogenic Effects of Hormonal Contraceptives in Relation to Sexual Behavior: Insights into Extended Sexuality, *Evolution and Human Behavior* (2016). [DOI: 10.1016/j.evolhumbehav.2016.10.006](https://doi.org/10.1016/j.evolhumbehav.2016.10.006)

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