What do women want? It depends on the time of the month

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UCLA professor Martie Haselton

(Medical Xpress)—If she loves you and then she loves you not, don't blame the petals of that daisy. Blame evolution.

UCLA researchers analyzed dozens of published and unpublished studies on how women's preferences for mates change throughout the menstrual

cycle. Their findings suggest that ovulating women have evolved to prefer mates who display sexy traits – such as a masculine body type and facial features, dominant behavior and certain scents – but not traits typically desired in long-term mates.

So, desires for those masculine characteristics, which are thought to have been markers of high genetic quality in our male ancestors, don't last all month – just the few days in a woman's cycle when she is most likely to pass on genes that, eons ago, might have increased the odds of her offspring surviving and reproducing.

"Women sometimes get a bad rap for being fickle, but the changes they experience are not arbitrary," said Martie Haselton, a professor of psychology and communication studies at UCLA and the paper's senior author. "Women experience intricately patterned preference shifts even though they might not serve any function in the present."

The findings will appear online this month in *Psychological Bulletin*, which is published by the American Psychological Association.

Whether women's mate preferences shift at high fertility has been a source of debate since the late 1990s, when the first scholarly studies to hint at such a change appeared. Since then, several papers have failed to replicate the early studies' results, casting doubt on the hypothesis.

Haselton and Kelly Gildersleeve, a UCLA doctoral candidate in psychology and the study's lead author, spent three years attempting to resolve the controversy. They solicited raw data from dozens of scholars who have conducted research on the topic and then translated the data from 50 studies into the same mathematical format so that the findings could be statistically analyzed together.

The strength of women's preference shift proved to be statistically

significant, although "small" to "medium" in size, relative to most findings in the field. As a point of comparison, the size of the shift was statistically comparable to the difference researchers have found between men's and women's self-reported number of heterosexual sex partners (with men reporting more sex partners).

The findings are less clear, however, about which male characteristics are most alluring to ovulating women. But women's responses to male body scents could be capable of producing the strongest effects, Haselton said.

In the few scent studies conducted so far, researchers asked women to smell T-shirts that had been worn by men with varying degrees of body and facial symmetry. (Across a large body of research on many different animals, body and facial symmetry are associated with larger body size, more pronounced sexual "ornaments" such as the attractive plumage on male birds, and better health, suggesting that symmetry could be an indicator of genetic quality.) Women preferred the odors of more symmetrical men when in the fertile portions of their cycles. The UCLA meta-analysis likewise showed a large shift in women's preference for the body odor of symmetrical men, although more studies are needed to determine whether this effect is robust.

Haselton, who is based in UCLA's College of Letters and Science, is one of a handful of pioneers in research on behavioral changes at ovulation. One of her studies showed that women who are partnered to men they view as less sexy are more likely to experience attraction to other men at ovulation than women who rate their male partners as very sexy.

"The excellent reputation Martie has among researchers in this field and her deep understanding of the intricacies of ovulation research make her an ideal person to spearhead this ambitious meta-analytic study," said Jeffry Simpson, a psychology professor at the University of Minnesota.

"Her extensive knowledge of this area coupled with the fact that she and her collaborators were able to identify the specific features of men that women find most appealing as short-term versus long-term mates at different points of the ovulatory cycle makes this paper a truly important one."

The presence of shifts in sexual preferences among women may generate debate, but shifts in sexual preferences and behavior are well documented in mammals as diverse as rats and orangutans. For example, female chimpanzees are known to prefer to have sex with different males within the fertile phrase than they prefer outside of this phase—a strategy thought to improve their offspring's chances of survival.

"Until the past decade, we all accepted this notion that human female sexuality was radically different from sexuality in all of these other animal species—that, unlike other species, human female sexuality was somehow walled off from reproductive hormones," Haselton said. "Then a set of studies emerged that challenged conventional wisdom."

One hypothesis for why a mate preference shift occurs is that it may be an evolutionary adaptation that served our ancestors' reproductive interests long before modern medicine, nutrition and sanitation dramatically reduced infant and child mortality rates.

"Under this hypothesis, women who preferred these characteristics were more likely to pass on beneficial genetic qualities to their children, thereby enhancing their children's chances of survival and reproductive success," Gildersleeve said.

In her past work, Haselton also has proposed the hypothesis that being torn between two types of mates may reflect powerful underlying adaptations. According to this "dual mating hypothesis," in certain circumstances, ancestral women would have been driven to pursue

kindness, reliability and resources (so-called "good dad" traits), as well as sex appeal and a masculine personality ("sexy cad" traits), even if both sets of qualities didn't come in the same package.

"Ancestral women would have benefitted reproductively from selecting partners with characteristics indicating that they'd be good co-parents, such as being kind, as well as characteristics indicating that they possessed high genetic quality such as having masculine faces and bodies," Haselton said. "Women could have had the best of both worlds—securing paternal investment from a long-term mate and high-genetic quality from affair partners—but only if those affairs were timed at a point of high fertility within the cycle, and probably only if their affairs remained undiscovered."

A different hypothesis, which Haselton and Gildersleeve also find plausible, proposes that shifts in women's mate preferences across the menstrual cycle were adaptive in a now-extinct species that predated humans and are vestigial in humans—that is, like the coccyx, or tail bone, that remains at the end of the human spine, they persist in modern humans despite serving no apparent function.

Either way, Haselton and Gildersleeve firmly believe in the value of shedding light on the preference shift.

"If women understand the logic behind these shifts, it might better inform their sexual decision-making so that if they notice suddenly that they're attracted to the guy in the next cubicle at work, it doesn't necessarily mean that they don't have a great long-term partner," Haselton said. "They're just experiencing a fleeting echo from the past."

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