

A woman's nose knows body odor

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It may be wise to trust the female nose when it comes to body odor. According to new research from the Monell Center, it is more difficult to mask underarm odor when women are doing the smelling.

"It is quite difficult to block a woman's awareness of body odor. In contrast, it seems rather easy to do so in men," said study lead author Charles J. Wysocki, PhD, a behavioral neuroscientist at Monell.

The researchers speculate that females are more attuned to biologically relevant information in sweat that may guide [women](#) when choosing a mate.

In the study, women and men rated the strength of underarm odors, both alone and in conjunction with various fragrances.

The fragrances were selected to test their ability to block underarm odor through a method known as cross-adaptation. Olfactory adaptation refers to the loss of sensitivity to an odor when one is constantly exposed to that odor. Olfactory cross-adaptation occurs when the nose adapts to one odor and then also becomes less sensitive to a second odor.

Sniffed alone, the underarm odors smelled equally strong to men and women. When fragrance was introduced, only two of 32 scents successfully blocked underarm odor when women were doing the smelling; in contrast, 19 fragrances significantly reduced the strength of underarm odor for men.

Wysocki noted that in earlier studies, men and women did not differ in their ability to cross-adapt to odors not from the body.

"Taken together, our studies indicate that human sweat conveys information that is of particular importance to females. This may explain why it is so difficult to block women's [perception](#) of sweat odors," he said.

Not only were women better smellers than the men, but male odors were harder to block than female odors. Even though underarm odors from the two sexes didn't differ in how strong they smelled, only 19 percent of the fragrances successfully reduced the strength of male underarm odor; in contrast, over 50 percent decreased intensity of female underarm odor.

In the study, one sensory panel evaluated fragrances for their ability to counteract female underarm odor; a second panel judged the effectiveness of fragrances against male odor. Each panel contained both men and women.

To make their odor evaluations, panelists sniffed vials of underarm sweat previously collected in the laboratory from volunteers.

Panelists first rated the intensity of underarm odor to provide a measure of the odor's strength. They then continued to rate underarm odor intensity while sniffing a fragrance for 2-1/2 minutes.

A drop in intensity ratings for the underarm odor indicated that the fragrance was a successful cross-adapting agent, capable of neutralizing the odor.

"Men and women differ in how they perceive body odors from both their own and the opposite sex," summarized Monell scientist George

Preti, PhD, an analytical organic chemist who co-led the research with Wysocki. "Women are more aware of underarm odor and they appear to be detecting differences in odor quality."

More information: The study appears online in *Flavour and Fragrance Journal*.

Source: Monell Chemical Senses Center

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