

Human Sex Pheromones? We've Got a Nose for Gender

<http://www.iflscience.com/health-and-medicine/human-sex-pheromones-weve-got-nose-gender>

IFL Science: Health and Medicine (Video on website)

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photo credit: Point-light walkers ranging from feminine (left) to masculine (right) / Current Biology, Zhou et al.

The human nose is full of surprises. Not only can we detect a trillion odors, it appears that scents influence our behavior. According to a new study, humans produce chemical cues that communicate our gender to the opposite sex, and just a whiff of these compounds influences our perception of someone as masculine or feminine.

"Our findings argue for the existence of human sex pheromones," Wen Zhou of the Chinese Academy of Sciences says in a press release. "They show that the nose can sniff out gender from body secretions even when we don't think we smell anything on the conscious level."

Specifically, what we're smelling are active steroids: androstadienone in males and estratetraenol in females. Androstadienone, which is found in semen and armpits, have been showed to improve women's moods, but not men's. Estratetraenol, first identified in female urine, has similar effects on males.

To figure out if those chemicals are acting as sexual cues, Zhou and her colleagues asked males and females to watch "point-light walkers" (PLWs, pictured) move in place on a screen. These consist of 15 dots representing the 12 major joints in the human body, plus the pelvis, thorax, and head. You can see examples of the PLWs in this video. Each participant watched seven digitally morphed gaits, one at a time and in random order. They had to judge whether the walker was a male or female.

Additionally, they completed that task while being exposed to androstadienone, estratetraenol, and a control solution -- all of which smelled like cloves -- each on a separate day.

The results revealed that smelling androstadienone biased heterosexual females (but not males) toward perceiving walkers as more masculine. However, smelling estratetraenol biased heterosexual males (but not females) toward

perceiving walkers as more feminine. Homosexual males responded to the scents more like heterosexual females did, and bisexual or homosexual female responses fell somewhere in between those of heterosexual males and females.

Watch the video again. The figure on the far left is supposed to have a quintessential female strut. (It's in the hip dots, though I can't see it.) The figure on the far right has a flat gait more typical of males.

The walk in the middle is gauged as gender-neutral. But androstadienone conveys masculinity to straight women and gay men, while estratetraenol conveys femininity to straight men. "When the visual gender cues were extremely ambiguous, smelling androstadienone versus estratetraenol produced about an eight percent change in gender perception," Zhou explains.

The work was published in *Current Biology* this week.

[Cell Press via Science]

Image/video: Current Biology, Zhou et al.

Read more at <http://www.iflscience.com/health-and-medicine/human-sex-pheromones-weve-got-nose-gender#jdXKYadLACegTdpp.99>