Pheromones — Can they really attract mates for sex? [1]

1) Dear Alice,

I have been hearing about pheromones and how animals use them to attract members of the opposite sex and use them for mating. People say that they work the same way for humans. Can you shed some light on whether this is true, and, if it is, where to get them?

Thanks-
Wondering

2) Dear Alice,

I was in a small boutique the other day and I saw a bottle of cologne that contained Pheromones. I asked the clerk what this was, and she said it is a chemical that causes women to be attracted to men. The clerk wasn't very clear on this. What exactly do Pheromones do?

Thank you,
Perplexed

Answer

Dear Wondering and Perplexed,
Wondering if that romantic chemistry you hear people talk about is actually a different kind of science? Pheromones are chemical substances released by animals, insects, and other organisms. While some believe pheromones to be hormones, they’re not — they’re chemical signals that are secreted and act outside the body, unlike hormones that work within the body. These chemicals are most commonly known for their purported ability to attract or sexually stimulate a member of the same species, often of the opposite sex. However, these chemical signals, when emitted by an individual of one species, aren’t just for mating — they may affect the behavior or physiology of other individuals of the species, including communication (or other functions, depending on the species). Though there’s evidence of pheromones among animals and insects, it’s still widely disputed as to whether or not human pheromones even exist. All this to say, those perfume companies selling pheromones may simply be using the term as a way to market their product.

Because all animals have pheromones, it’s possible that humans do indeed have pheromones. However, it’s not clear whether they still serve an evolutionary purpose of communication and mating. In fact, multiple studies have been conducted to determine which chemical compounds on humans have the potential to be pheromones. These compounds include androstenone, androstenol, androstadienone, and estratetraenol. It’s worth noting that the human body doesn’t naturally produce the latter two of these potential pheromones, and the studies that were done on all four of these compounds were on chemicals supplied by a perfume manufacturer. In addition to this potential bias, subsequent studies chose not to detail how these compounds were isolated. Perfumes and colognes are among the products that don’t need approval from the Food and Drug Administration (FDA) to be sold in the United States. As such, unless the substances advertised as pheromones are on the FDA’s list of restricted or prohibited ingredients, companies may indicate them on the label, as long as there aren’t any “personal injury” complaints related to the ingredient. This lack of regulation means that manufacturers don’t have to justify the insertion of pheromones or even prove that they actually put them in the bottle! Another thought to consider is if human pheromones haven’t yet been isolated, how are companies sure that they’re bottling and selling the correct chemical?

It’s also possible that “scent” is being conflated with human pheromones — while they’re two different things, scent itself may be perceived as a sexual stimulant. Scent is believed to be one of the strongest senses in its ability to trigger memory recall, behavior, mood, and association. This is because smell goes through fewer filters on its way to the brain processing centers than sight, hearing, taste, touch, and pressure. It’s good to be wary of claims that may not have evidence to back them up, such as a perfume that indicates it may "drive a person wild with desire." However, their appealing claim isn’t backed up by adequate evidence to support human sexual response to pheromones.

All in all, it’s best to be wary of marketed pheromones, but know that scent may still be tied to stimulation. Here’s to hoping you sense sexy scents!

Alice!
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