Do Vegetarians Smell Sexier?

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New research shows the surprising effects of foods on body odor and skin color.

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As a conversation starter, it’s hard to beat body odor. My friends were intrigued when I mentioned at a dinner party recently that women find the smell of gay guys’ BO sexier than the scent of straight men. And my students were surprised to learn that the body odors of women became decidedly unpleasant when they watched scary horror movies. But could food also affect the way we smell? After all, we are what we eat. Recently, several groups of researchers have reported that giving up meat and eating more vegetables affects the pleasantness of human BO and even changes the color of our skin.

The Evidence

Researchers at Charles University in Prague tested the hypothesis that diet affects body odor by having men give up meat for two weeks. Their experiment was clever but a little complicated so bear with me. One problem with studying body odor is controlling for individual differences. The researchers dealt with this issue by using a “within subjects” design. In this case, they compared each subject’s body odor before and after they went on vegetarian and omnivorous diets. The No Meat/Meat group gave up red meat for two weeks, then resumed eating meat for two weeks. The Meat/No Meat group was tested in the opposite order – meat for two weeks followed by two weeks of vegetarianism.

All the subjects agreed to refrain from alcohol, tobacco and other drugs during the study. They were also instructed not to use perfumes or deodorants, and not to eat certain strong foods or have sex. During the vegetarian weeks, the participants were given a list of 33 meatless meals to choose from. During the meat weeks, the subjects had the same entrée options but with the addition of meat, for example, pork risotto in lieu of vegetarian risotto. For the four days prior to body odor collection, all meals were provided by the researchers. During meat-eating weeks, this included seven ounces of red meat a day.

Body odors were collected by having subjects place cotton pads under their arms for 24 hours. The odor-infused pads were then collected, placed in jars and sniffed by 30 female students. The women rated the smell of the pads on a seven point scale for intensity, pleasantness, sexual attractiveness, and masculinity. (The women, of course, did not know whether the pads they were sniffing were from men who had been eating meat or just veggies.)
As you can see in this graph, women rated the body odors of the men to be sexier, more pleasant, and less intense after they had given up meat for two weeks. The experiment worked. Who knew?

Will Going Vegetarian Turn Your Skin Yellow?

Researchers from Macquarie University in Australia extended this line of investigation and added another wrinkle -- skin color. Their study just appeared in an article published in the journal Evolution and Human Behavior. Like the Czech scientists, they expected that women would more attracted to the body odor of men who eat a lot of vegetables. But they also predicted that women would prefer the underarm scent of men with yellowish skin tones.

I know...the yellow skin idea sounds wacky. But here is why it makes sense. Health benefits accrue from eating foods rich in anti-oxidant compounds called carotenoids. Carotenoids are mainly found in fruits and vegetables. Dietary carotenoids enhances yellow coloration in some animals. And females in these species find yellowish-colored males particularly sexy. Eating fruits and vegetables high in carotenoids also enhances yellowish skin color in humans. For example, a 2015 study found that consuming smoothies laced with carotenoids every day for six weeks caused shifts in skin color towards the yellow end of the spectrum. Even across cultures and races, human females find yellow skin tones to be particularly attractive in men.

The Experiment

So here’s the evolutionary logic behind the Australian study. Eating more fruits and vegetables increases carotenoids levels in the human body which, in turn, causes good health and produces yellowish skin...
tones. Carotenoids are found in perspiration, including armpit sweat. Hence, women should be attracted to the smell of men who eat a lot of vegetables and to the odor of men with yellowish skin. In short, the researchers reasoned that carotenoid-influenced body odors and yellow skin tones can serve as a health-signaling component of mate choice.

The design of their experiment was complicated, but here is the simple version. Forty-three Caucasian men donated armpit odor using a technique similar to that used by the Czech research team. The subjects were recruited to represent a wide spectrum of diets, including vegetarians and avid meat-eaters. In addition to providing body odors, the subjects also completed a questionnaire on the frequency they ate several hundred food items. Finally, each subject's skin color was assessed using a device called a spectrophotometer. The body odors of the men were evaluated by nine women. The most important odor factor boiled down to ratings of pleasantness (“hedonic evaluation”).

Surprise....

As in previous studies, the men who ate more vegetables and less meat tended to have yellower skin. And, like the researchers predicted, the sniff-testers rated the armpit odor of men with yellowish skin as more pleasant.

But in contrast to results of the Czech study, the Australian women rated the body odors of frequent meat eaters to be more pleasant than men who ate a lot of vegetables. No one knows why the two groups of researchers obtained opposite results when it comes to how meat-eating affects body odor.

The Bottom Line

So, what have I learned after spending a couple of days reading about body odor, meat-eating, vegetables, and skin color? First, there is good evidence that what we eat influences the smell of our armpits. And to my surprise, I am now fairly confident that eating fruits and veggies does turn human skin yellowish. (However, I am not at all sure that a yellowish glow is a reliable indicator of good health.) Finally, it appears that giving up meat may cause you to smell better if you live in the Czech Republic but worse if you are an Australian.

I find these studies fascinating. I am, however, not convinced that laboratory experiments in which raters smell cotton pads laden with armpit sweat shed much light on the role of body odor and skin color in real world interactions between people. After all, I hang out with a lot of vegetarians, and I don’t think they smell different than the omnivores in my life.

In addition, my daughter Katie was a vegetarian for nearly 20 years, and she still does not eat much meat. I never noticed that she smelled any different than her fraternal twin sister. I have to admit, however, that Katie (as well as me, and my car) did smell vaguely of moldy polypropylene. However, that was due to our addiction to running cold mountain streams in kayaks, not what we ate for dinner. But her skin does seem a little more yellow than mine.

References


