Eat like a man.

EDIBLE

The new science of craving reveals a link between lust and hunger—and explains why the path to a woman's bedroom runs right through her kitchen

By Matt Bean

Photographs by George Holz



nated mollusk to melt onto her tongue, and again later as she romped in bed with her date, you'd uncover striking similarities. The overlap between food and sex in the brain is so profound that it's no surprise these two primal passions dovetail in real life, too.

Food is, this new research reveals, the ultimate sex toy.

Course 1

WHY SHE'LL CHOOSE FOOD BEFORE SEX EVERY TIME

"One cannot think well, love well, sleep well, if one has not dined well."—VIRGINIA WOOLF

It's 10:30 on a Thursday night inside the Manhattan culinary hive Allen & Delancey, where a scrum of well-heeled hipsters, mostly couples, crowds the candlellt dining room. I've chosen a panoramic perch in the corner from which to play anthropologist, and I'm hunched behind the bar's wine list, a makeshift blind, taking notes.

As mating rituals go, the one unfolding at Table 24 is as carefully chorcographed as any you'd find in the animal kingdom. In the shadow of a great velvet curtain, a studiously shaggy guy in his late 20s spoons together a glistening bite of scallop and citrus crudo while his date looks on hungrily.

Her words are lost to the din, but the woman raises an eyebrow coyly as the man lifts the spoon, reaching across the table to slide the bundle gently into her mouth. Her lips purse around the utensil, and the man pulls away with the spoon's curve. She lets the shellfish melt into her tongue and then coos, eyes wide. It's delicious, this dish, this man. A moan escapes her lips: Mmmmm.

The couple at Table 24 might not realize it, but they're being waltzed through this culinary courtship dance like marionettes, tugged from above by a network of neurotransmitters and hormones in the brain that researchers have only begun to understand.

The sea scaliop has long been thought to have aphrodisiac qualities—Greek legend holds that the goddess Aphrodite was lowered to Earth on the mollusk's shell—but no single food can cause a whiplash of desire like the one I've just witnessed. Strip away the lore behind any aphrodislac, and what emerges is a more complicated picture of how food and sex overlap in the brain.

In fact, if you mapped the brain of the woman at Table 24 as she allowed the mariThe cuisine might be less elevated and the ambience less inviting than that of Allen & Delancey, but a hamster could do worse than score a gig at the Bethlehem, Pennsylvania, coed rodent dorm of behavioral neuro-endocrinologist Jill Schneider. Ph.D.

Schneider's Lehigh University lab is lined with rows of special cages designed to encourage (and measure) the hamster equivalent of a Girls Gone Wild bacchanalia. Inside each apparatus, a female hamster is offered three choices. She can remain in her home cage or enter one of two tubes, one leading to a "food box" and the other to a "sex box" containing a "sexually experienced, adult male hamster."

Just as a sorority sister might have to choose between watching Gossip Girl reruns, running to Taco Bell, or sexting the defensive lineman she met during a keg stand last week, so too does each female hamster confront a clash of desires. But for both ladies, the question—food or sex—isn't one of free will. It's one of metabolic state. Will food, at this exact moment in time, feel better than sex? Turns out, it depends on how hungry you are.

Consider Table 24 again. The moment the woman starts eating her foie gras appetizer, her body begins to break it down into macronutrients: sugar, fat, and protein. As excess energy is stored as fat, a hormone called leptin is released and travels through the blood and across the blood-brain barrier into the hypothalamus. That's when the battle royal between food and sex begins. Leptin clears the lane for naturally occurring hormones that jumpstart arousal. It also boxes out another signaling molecule, neuropeptide Y, that oversees appetite and blocks sex hormones. In other words, every bite the woman takes brings her closer to bed.

Schneider has isolated this effect in her hamster dorms. Injecting a food-deprived female with leptin sends her straight to the sex box, regardless of her rumbling stomach. No leptin, however, and neuropeptide Y takes control, compelling the hamster to satisfy her appetite for food before she visits the furry gigolo next door.

"It makes total evolutionary sense," says Satya P. Kaira, Ph.D., a professor at the University of Florida who studies the same brain pathway. "If you're terribly hungry and not sure when and where your next meal is going to come from, you can't be off flirting with the hamster three holes down—you might miss your last chance at food for a long time."

With 31,000 McDonald's in 118 countries, the system is largely vestigial in humans, to say the least. But leptin, which peaks around midnight, still has a powerful effect: A well-fed woman is more easily aroused, and a hungry one may want nothing to do with you. So, yeah, invite her over for dinner. But if you're smart, you'll save sex for dessert. A quickle at the doorstep just might spoil the evening.

Course 2

HOW TRAINING THE BRAIN TO ENJOY FOOD ENHANCES YOUR SEX LIFE

"Great food is like great sex. The more you have, the more you want."

-FOOD WRITER GAEL GREENE

The wafer is paper-thin, and it is the diameter of a silver dollar. It resembles a single-serve communion cookle, though not just for its wax packaging: It has brought the 400 chattering gourmands gathered here at the New York Academy of Sciences to a reverent hush. The wafer, you see, will tell us if we're one of the chosen ones.

"You're about to find out whether you're a supertaster," says Linda Bartoshuk, Ph.D., emphasizing the label as if it's some longdormant superpower we're all about to discover. You can tell this isn't the first time the University of Florida taste researcher has left an audience rapt with her parlor trick.

"Only 25 percent of the population can say they're in this group," she continues. "I'm sad to say I'm not one of them. But we know that chefs are more likely to be supertasters. So are women. In fact, white men are the least likely to be supertasters."



Murmurs spread through the room; heads swivel as we size up our neighbors. That guy pushing 400 pounds is definitely a supertaster, but I'd bet against the nerd with the shrink-wrapped jeans and messenger bag. I catch the glance of a woman wearing black framed glasses three rows back. We both look away.

Bartoshuk seeks out supertasters so she can produce more pronounced lab results. the same way an exercise physiologist might study athletes. The wafer helps her make the first cut. A coating of a hitter chemical compound called 6-n-propylthiouracil, or PROP, will cause a supertaster to gag, while others will just taste paper. Supertasters live in a neon-flavored world, she explains; everyone else is left with varying shades of pastel.

Bartoshuk begins the culinary eucharist: "First dab it to your tongue. If that's not too bitter, pop it in. And if that's not too bitter, really get it in there, work it around And if you still can't detect anything, then, well, I'm sorry."

There's a rustle of 400 wax envelopes and we raise our wafers, expectant. In they go, and within seconds the room devolves into polite chaos. Some balk, coughing; others furrow their brows, working the wafer furiously against the roofs of their mouths as if to will the bitterness into being

I spit out the waler within seconds. I am a supertaster, I tell myself, holding onto my secret like Clark Kent. I turn around and lock eyes again with the woman with the black-frame glasses. This time, she smiles. "You, too?" her face seems to say. I shrug, and grin.

Bartoshuk asks for a show of hands and announces her tally: More than 40 percent are supertasters, 15 percent more than you'd usually find. She's intrigued, but we're just hungry. We're foodies, after all.

We shuffle like cattle out of the hall to find hummus and cheese, wine and beer, and a drug for dessert: the so-called miracle fruit, Synsepalum dulcificum, a red, pistachiosize berry from West Africa that binds to the

APPETIZERS + ORGASMS We asked 8,000 men and women to compare food and sex. Here's how they include.

70%

84%

59% 58% I'd choose a lifetime of great sex over a lifetime of great food. 54% 31% I'm better at controlling my appetite than my sex drive. Eating an amazing meal turns me on. 45% 55% 96% 83% Having a meal cooked for me turns me on. 83%

It's a turn-on to cook with my partner. 88% I believe an adventurous eater is adventurous in the bedroom, too, 66% I've brought food into the bedroom, or I'd like to.



tongue and transposes the taste profile of acidic foods to sweet. Devotees have a name for the effect: flavor tripping.

I grab a handful of berries and a few slices of lemon and retreat to a bank of windows looking out over lower Manhattan. What began with a simple slideshow has suddenly become a meat market, with supertasters and flavor trippers all abuzz with the night's revelations. Everything sour is now sweet; everything old is now new. The raised cocktail tables and ambitious menu catalyze conversations, and I'm not alone for long.

"Hey... Matt," says the woman I spotted inside, her head tilted to make out the scrawl on my stick-on name tag. "How's your flavor trip going?"

I see a berry clenched between her teeth, and there's a wild look in her eyes.

"Not bad," I say. "Want some of my lemon?"
She takes a wedge, chomping down like it's
a Cabo lime. "Mmm," she says. "Sweet!" She
grabs me by the wrist and pulls me through
the throng to the spread of Mediterranean
grub across the room.

"Try this," she says, shoving a cube of cheese toward my mouth. I open, obligingly. I remember a video I'd seen that morning on YouTube—Anthony Bourdain and Mario Batali waxing poetic about their craft. Food is the ultimate metaphor for sex, Batali had mused. How else can you make someone happy by putting something inside of them?

We linger there, sampling foods, comparing notes, and synchronizing tastes until the crowd thins. It's just food, the stuff on our plates, and yet much more than raw calories. I wasn't about to ask this flavor-tripping femme fatale what she liked in bed; I didn't need to. You are what you eat, after all.

Thing is, the supertaster connection we shared was as much in our minds as it was on the tips of our tongues. "We don't taste with our tongues or feel with our fingers—or other, ahem, areas," Adam Pack, Ph.D., a neuroscientist at Utica College and a member of the Institute for Sensory Research in Syracuse, told me a few days later. "We do all those things with our brains."

The fireworks begin in a strip of gray matter running like a headband from ear to ear. It's called the somatosensory cortex. To understand the importance of this strip, consider the neuroanatomy of a concert

violinist—Itzhak Perlman, let's say. Perlman may have a few hundred more receptors than you do, and his may even be more sensitive or better arranged, thanks to Ma and Pa Perlman. But that's not why Perlman can wring tears from an audience with a horsehair bow and a 1714 Stradivarius, and you can't.

"Nobody is a born professional musician," says Pack. "But the part of a violinist's brain that 'listens' to his dominant hand gradually grows to become larger than the part that listens to the bow hand," says Pack. "This develops over time—and it happens for other senses and other regions of the body, too."

Experiencing new sensations—or finding new nuance in familiar ones—can create physical brain changes that make us more perceptive eaters and better lovers, says Pack. So just as Perlman's practice regimen floods his brain with a variety of musical stimuli and broadens the parts of his brain behind audition and dexterity, so too had the couple at Table 24 boosted their gustatory processing power with every romantic meal before tonight.

What's more, teaching your brain to detect the flavor components in a glass of cabernet



ways food turns her on

Aphrodisiacs might be overblown, but appetite and arousal still activate the same cerebral hot spots associated with emotion, memory, and reward. Here are four ways to turn her on at the table.

Set the right mood. A casual, comfortable neighborhood spot with gentle lighting, rustic decor, and soft but upbeat background music is a perfect date spot. "A nice, slow meal naturally draws your attention to all five senses," says Paul Dobransky, M.D., author of *The Secret Psychology of How We Fall In Love*. (If you're cooking at home, do your best to corral the same elements.) "It creates the sensual, intimate feeling that can help her unwind," says Dr. Dobransky.

Show off your skills. Knowing your way around a pasta maker can pack more than a culinary punch. "Attention to subtle details and sensations in the kitchen and at the table suggest you'll be equally attentive as a sexual partner," says Dr. Dobransky. Why bother rolling pasta by hand or deglazing a cast-iron pan? While a little more than half of the women we surveyed said a good meal turns them on, a whopping 96 percent said watching you cook the meal fires them up.

Feed her comfort foods. "Listening skills land you in bed with a woman," says James Miller, Ph.D., a professor of human sexuality at the University of Rhode Island. "Surprising her with her favorite foods shows her that you've paid attention and care about her pleasure." Bonus: Serving or ordering foods she associates with safety, satisfaction, or sex inspire those thoughts at the table.

Spoon-feed her sex drive. The acts of cooking, dining, and indulging in food together are potent sensual experiences, giving you opportunities to cooperate, communicate, and synchronize your tastes. Choose restaurants that encourage sharing, or whip up a plate of tapas at home. "Sharing spicy, juicy, messy, and delicious foods arouses the senses," says Miller, "especially if you're using your tongue, lips, or hands, since we associate these body parts with sex."

Carolyn Kylstra

is no different from teaching it to understand the hundreds of sensations during intercourse. Consider it cross-training: The same sensory apparatus that helps the woman at Table 24 detect the buttery slide of her paired Riesling Auslese wine or the velvety goosh of the roasted foie gras also picks up her date's aroma, responds to the flick of his tongue on hers as they kiss across the table, and detects his touch later.

"We literally taste, smell, and consume our lovers," says Beverly Whipple, Ph.D., a professor emerita at Rutgers University and coauthor of *The Science of Orgasm*. "The way the food looks, its texture, its aroma... all these things can spill over into your sex life, too."

Course :

WHAT SEX CAN LEARN FROM FOOD

"Sex is as important as eating or drinking, and we ought to allow the one appetite to be satisfied with as little restraint or false modesty as the other."—MARQUIS DE SADE

Craving researchers are lousy comedians. After all, what kind of buzz kill turns a topic like carnal desire into a 42-page collection of footnotes, graphs, and citations? Ask any of them about the Coolidge effect, though, and it seems they all turn into Conan O'Brien.

President Calvin Coolidge and his wife once visited a poultry farm, so the joke goes. The First Lady, upon seeing the ratio of roosters to hens, marveled over the cocks' productivity: "How can you possibly make so many eggs with so few roosters?" she asked.

"Easy," said the farmer. "The roosters perform dozens of times a day."

"Perhaps you could point that out to Mr. Coolidge," clucked the presumably unsatisfied First Lady.

"Dozens of times with the same hen?"
President Coolidge returned.

"With many hens," clarified the farmer.

"Ah. Perhaps you could point that out to
Mrs. Coolidge," said the President.

True or not, this yarn illustrates a crucial new finding in pleasure research. Our brains have two important ways of steering us toward rewards: wanting and liking. And it's the wanting part that makes the overlap between food and sex so intriguing.

"The wanting system in the brain is bigger anatomically, and also more powerful," explains Kent Berridge, Ph.D., a University of Michigan neuroscientist and the author of Pleasure in the Brain. "A male rat might like copulating with the same female over and

over again, but he'll stop wanting it as much with each successive encounter—he'll stop having sex, basically. But a funny thing happens when a new female comes along: He'll want sex just as much as before, regardless of how much he's had with the original female." In this way, clearly, most guys are rats.

The Coolidge effect isn't just a sexual phenomenon. In a 2009 study using chocolate milk and potato chips, Dutch researchers showed that the same extinguishing of desire can occur almost instantaneously with specific tastes—salty, sweet, sour, and so on. It's no surprise we seek out all-you-can-eat buffets and tasting menus. The variety we crave in sex we can actually find in food.

The culprit for our fickle desires is the powerful, multitasking neurotransmitter dopamine. While an opioid-controlled "liking" system makes us feel good once we've had a stimulus, dopamine could make us feel uncomfortable when we haven't—it creates an itch that screams for a scratch. This adds urgency to everything from basic needs, such as sucrose, to more abstract ones, such as conversation, music, or a peanut butter and jelly sandwich. When you're overtaken by the urge to consume the girl in your bed, or the Klondike bar in your freezer, for example, that's dopamine at work. Dopamine makes crack addicts kill.

Cravings can feel like attentional klieg lights because the brain's reward circuitry once had an important gig: survival. If a Cro-Magnon hadn't been sufficiently wowed by the cold mammoth leftovers on his plate or the hairy mate in his cave, you think you'd be around to scarf caviar and surf YouPorn? Probably not.

Fortunately, evolution developed a failsafe system for guiding our distant ancestors toward the stuff they needed to survive. In the wild, the opioid and dopaminergic parts of our brains seldom act alone—they're linked, part of a loop of cooperating regions that come online to dole out reward.

"Desire for just about anything—sex, food, a sports car—activates the same circuitry in the brain," says Marci Pelchat, Ph.D., a researcher at the Monell Chemical Senses Center, in Philadelphia, who studies the human craving response using a bland food called "the Loaf." "The brain can even create cravings for things nobody would even like."

Trigger one part of the loop—the liking part, say—and a switch flips on the other, creating a veritable feedback loop of desire.

"That's why it's impossible to eat just one potato chip," says Barry Komisaruk, Ph.D., a professor of psychology at Rutgers and a coauthor of *The Science of Orgasm*. "You eat the first because you like chips. But that ignites the wanting system. And soon you've eaten the entire bag."

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Perhaps something similar is happening at Table 24. Everything from the ambience of the brick-clad, candlelit room to the tasting menu—a carefully orchestrated parade of sumptuous, ever-changing flavors—serves to heighten the sensual anticipation. By that math, the better the restaurant, the sooner she'll want to rip off your clothes.

I run my theory by one of the restaurant's managers later that night. She smiles and shakes her head. "Let's just say our bathrooms are expansive."

Course 4

WHY YOU WANT TO COVER HER IN WHIPPED CREAM

"Cooking is like sex; it's about giving pleasure. You can't climax too early."

-CHEF GORDON RAMSAY

"I'm all yours!" writes Eden, a 21-year-old Brit I've friended on FetLife.com, a sort of Face-book for fetishists. "There are links to all my pictures on the left if you're into that kind of thing. I have a psychology degree. I love reading, snowboarding, motorbikes, and pole dancing. And, of course, sploshing."

Sploshing is a fetish in which devotees smear themselves with food, often during sex. While most of FetLife's pie-curious members aren't exactly appetizing, Eden's a buxom, flame-haired, pigtailed phoenix rising from a pile of foodstuffs in her photos, a treacle-covered diamond in the roughage. I've contacted her not to fawn over her pictures or to suggest poses or pudding varieties for her next shoot, but to demonstrate a uniquely human side of desire.

When you're a rodent, the desire to eat or reproduce isn't far removed from the bleating of your biological imperatives, with your actions controlled, in large part, by states of hunger and arousal—and by neurochemical middlemen like leptin and dopamine.

Work your way up the evolutionary flagpole, though, and food and sex become progressively more wedded to each other. White-fronted parrots regurgitate food into the mouths of their mates during make-out sessions. African elephants woo females with Peapod-like delivery service ("Need anything? I'm running out for some branches"). Chimp suitors bribe mates with sticks of sugarcane before copulating. And George Costanza, in an episode of Seinfeld, famously wolfed a pastrami sandwich during the act with his girlfriend. With billions

of years of evolution behind the dinner date, who needs roses?

This rich overlap is brokered by our frontal lobes, the centers of planning and learning located just above our eyes—the brain's CPUs, in a sense. Thanks to the frontal lobes, humans add a third major piece to the motivational engine. All animals have wanting and liking, but only humans and their close primate relatives add thinking to the mix.

Eden describes her first sploshing session like this: "We used custard and Angel Delight (a whipped pudding), and kept the amounts small. I wore a crisp white shirt, black designer pencil skirt, heels, and black tights. I felt silly as I began to pour the food over my breasts—I didn't know whether I was doing it right, or what I was supposed to feel. But as I poured custard on myself, shedding the blouse and pouring it directly on my skin, my face started glowing."

How could a moment so awkward suddenly turn so, well, hot?

"Human cognitive capacity transforms and elaborates pleasure," explains Berridge. In other words, if you believe organic eggs taste better than regular eggs, they will. Your frontal lobes will make it so. They also have the power to put an invisible flavor on your tongue. Imagine a juicy steak: Can you practically taste it? Probably so.

Your frontal lobes also regulate associative memory, which explains why a sip of the same wine you had on vacation instantly reminds you of the woman you shared it with—and can even cause a stirring in your pants. Our frontal lobes are why foods trigger fantasies instead of just filling us up.

In Eden's case, pouring food on herself became sexy thanks to her frontal lobes. They constructed a craving from whole cloth, mashing two completely unrelated stimuli—food and sex, together—that as a pair have no bearing whatsoever on survival.

Associative memory is one of the most powerful aphrodisiacs, in fact. Eden can't even bang out her grocery list now without thinking about sex. "Sploshing is now a very sensual experience," Eden tells me. "Till see a big creamy cake in the store, and a flirtatious sideways glance at my boyfriend will let him know I'm considering it—to sit on, naturally. It's opened up another type of flirting, one that not many other people would pick up on."

Unless, of course, you're crouched in the corner of a restaurant like Allen & Delancey. It's late, and Table 24 has reached the end of the meal: gianduja panna cotta with a salted dark chocolate sorbet. An innocent dribble of chocolate syrup lands on the chest of the woman. As she dabs her shirt, they both giggle. This is their fifth course, and yet somehow, they still look hungry.

The Aphrodisiac Myth

History's most heralded aphrodisiacs go flaccid when subjected to the harsh light of science. Here's your ultimate guide to the so-called libido boosters.

CHOCOLATE

Chocolate is full of anandamide and phenylethylamine, two compounds that cause her body to release the same reel-good endorphins triggered by sex and physical exertion. Cocoa also contains methylxanthines, which make skin sensitive to every erotic touch. A team of U.S. and Canadian researchers found that chocolate stimulates the same brain centers that respond to cocaine, but that eating too much can eliminate the effect. Aim for dark chocolate, which packs more cocoa than lighter milk chocolates, and keep portions small.

PHYSICAL EFFECT * (out of 5 stars)
PLACEBO EFFECT **

OVSTERS

These slippery shellfish have been shucked in the name of love for centuries, but it wasn't until 2005 that a team of researchers identified two amino acids in shell-fish that had been linked in another study to increased sexual hormone release in rats. If that's not a tenuous enough link to love, consider that oysters are also high in zinc, which regulates some sexual hormones and boosts semen production. Critics question just how potent the shellfish really are, but the history of shell-fish as a heralded aphrodisiac, and the intimacy of consumption—slurping it from the shell—could contribute to a small psychosomatic boost.

PHYSICAL EFFECT *
PLACEBO EFFECT *****

WATERMELON

The summer staple contains citrulline, a nutrient that relaxes blood vessels throughout the body in the same way Viagra works below the belt, according to Texas A&M researchers. A 4-ounce serving contains 150 milligrams of citrulline, but the researchers haven't yet assessed what dosage is necessary to stimulate a sexual appetite. If you're giving it a try, juice an entire wedge; the rind contains 60 percent more citrulline than the fruit.

PHYSICAL EFFECT*

PHYSICAL EFFECT **
PLACEBO EFFECT **

PHALLIC OR VAGINAL FOODS

Suggestive staples—bananas, avocados, strawberries—might not pack a physical punch, but they can still prompt provocative thoughts, cuing associative instincts and providing a flirtatious food toy, says University of Michigan neuroscientist Kent Berridge. No kielbasa? No problem. Feed her foods with your fingers, like strawberries or sushi, and let your digits linger on her lips.

PHYSICAL EFFECT 0 STARS PLACEBO EFFECT ***

ALCOHOL

Booze acts as a depressant in the brain's cerebral cortex, lowering inhibitions that could otherwise restrain arousal. Too much, though, and your decision-making skills plummet, according to a 2007 study published in the Journal of Studies on Alcohol and Drugs. Another reason to quit while you're ahead: Research from the University of Washington found that intoxicated men with blood alcohol levels of 0.8 to 0.10 percent (about two or three drinks) had lower "peak erection levels," or hardness. So split a bottle of cab with her and whisk her off to bed.

PHYSICAL EFFECT ****
PLACEBO EFFECT ****

Erin Harris