Are Ultra-Processed Foods Addictive? Transcript

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Why Food Feels Rewarding

"Are Ultra-Processed Foods Addictive?" Food tastes good for the same reason sex feels good. We wouldn't last very long as a species without both. Without pleasure centers and reward pathways in our brains incentivizing our efforts, we might not have sufficient drive to seek out either.

Hunting and gathering take a lot of work. No surprise, then, that our appetites and food cravings are governed in part by the "feel good" messengers in our brains: the "reward hormone" dopamine, our bodies' natural cannabis compounds for a "munchies" effect, our own body's natural opioids, the "happiness hormone" serotonin, and even the love hormone oxytocin.

Dopamine release is such an important motivator of food intake that animals genetically engineered to be unable to make dopamine simply starved themselves to death.

Food just didn't seem to do much for them anymore.

How the Food Industry Engineers Cravings

We evolved for millions of years in an environment where the essential mineral sodium was scarce, so a taste for saltiness used to give us a survival advantage.

Calories were sometimes scarce too, but we didn't need nutrition labels to tell us which foods had more energy. Our taste for sweetness led us to ripe fruit, and our taste for fat drew us to nuts and seeds.

The food industry, however, has hijacked these natural drives and turned them against us. Tobacco industry documents reveal that tactics used to formulate cigarettes to be as addictive as possible have been applied to create ultra-processed foods with optimal combinations of rewarding ingredients like fat and sugar to maximize palatability and profitability.

Taste engineers manipulate the salt, sugar, and fat contents of foods to achieve what the industry calls the "bliss point," the peak of craveability. While owned by tobacco companies, food brands are generally three times more hyperpalatable than comparable brands not under tobacco ownership.

Evidence for Ultra-Processed Food Addiction

Now, ultra-processed foods addiction is not recognized as an official diagnosis, but highly processed foods can be considered addictive substances based on established scientific criteria using the standards set for tobacco products.

Criterion 1: compulsive use, which is clearly the case for highly processed foods. Criterion 2: psychoactivity, defined as "producing transient alterations in mood that are primarily mediated by effects in the brain." Chocoholics get a euphoria rating similar to what is achieved after a smoker is infused with nicotine.

And when you give people opioid blockers like Narcan, they eat fewer candy and cookies. This suggests sugar consumption causes the release of endorphins, explaining why more than 100 randomized controlled trials have found pain-relieving effects of a little sugar water for infants undergoing painful procedures.

In contrast, opiate blockers did not affect the intake of an unprocessed, whole-food source of sugar- orange segments- like it did with chocolate cookies and especially cheese sandwiches.

Criterion 3: reinforcing, meaning you keep wanting to do it, which is also a no-brainer. Criterion 4: cravings, and

indeed, highly processed foods tend to be the most craved.

There are also two secondary criteria that the Surgeon's General report suggested- withdrawal symptoms and tolerance- like when you need a bigger hit to get the same effect.

And both of those fit the bill. People have reported physical and psychological symptoms reminiscent of tobacco withdrawal when they've attempted to cut down on ultra-processed foods, with symptoms peaking at two to five days and decreasing over the next week or two, which actually parallels the time course of withdrawal syndromes for addictive substances.

Withdrawal, Tolerance, and the Debate

And in terms of tolerance, increased consumption of sugary beverages is associated with a blunted dopamine brain response to a mouthful of sugar. Frequent consumption of ice cream seems to reduce brain reward-region responsivity in humans, paralleling the tolerance observed in drug addiction.

The emerging field of food addiction is not without criticism and debate. Some suggest food addiction can't exist because we have to eat. But that's like arguing that alcoholism can't exist because we have to drink.

Yes, we have to inhale, too, but we don't have to inhale tobacco. And, yes, we have to eat, but we don't have to eat junk. It's certainly true that not all people exhibit an addictive pattern when it comes to ultra-processed foods, but the same is true of addictive drugs.

For example, only about one in six people who try cocaine go on to develop a cocaine addiction. A researcher funded by the largest soda company argued that blaming excess eating on food addiction risks trivializing serious addictions.

That's just what employees of the largest tobacco company said, too. The Coca-Cola guy even argued that there was a well-documented case of carrot addiction, so we should leave soda alone.

And it's actually true. "I just wanted to eat a nice juicy carrot and couldn't stop munching after that." But that has to be the exception that proves the rule.

In a study of ultra-processed foods and binge eating, a hundred percent of the foods people binged on were ultra-processed foods. Nobody was binging on broccoli.