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Can You Be Addicted to Foods?

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Many people tend to think that all obese people have to do to solve their problems is eat less and move more. Alcoholics, on the other hand, need treatment.

But are the two disorders really all that different? Is it possible that eating in today's sweet and salty fast-food world is actually somewhat, well, addictive? Could people with a predilection to abusing alcohol and drugs just as easily abuse food?

A study published in The Archives of General Psychiatry this week is not the first to examine the neurobiological similarities between behaviors that drive obesity and those that drive substance abuse. The researchers, from Washington University School of Medicine in St. Louis, examined two large surveys of nationally representative samples of American adults questioned about alcoholism in their families. Each included about 40,000 adults; one survey was carried out in 1991 and 1992; the other was done a decade later, in 2001 and 2002.

The people surveyed were asked whether a relative had "been an alcoholic or problem drinker at any time in his/her life," a question repeated for several types of relative — mother, father, brother, sister, half-sibling and children. Participants also reported their own weight and height, so body mass index could be calculated (B.M.I. is a calculation of weight in kilograms divided by height in meters squared, and a result of 30 or more is considered obese).

The first survey, from the early 1990s, found no link between a family history of alcoholism and obesity. “There was an almost perfect overlap between the B.M.I. distribution of people without a family history of alcoholism and people with a family history of alcoholism,” said Richard A. Grucza, assistant professor of psychiatry at Washington University and lead author of the new paper.

Ten years later the survey told a different story. In 2001 and 2002, adults with a family history of alcoholism were 30 to 40 percent more likely to be obese than those with no alcoholism in the family. Women were at particularly high risk: they were almost 50 percent more likely to be obese if there was family alcoholism than if there wasn’t. (Men were 26 percent more likely to be obese.)

Why the change over time? Dr. Grucza says our so-called obesigenic, or obesity-inducing, food environment has changed in the decade between the two surveys. The most likely culprit, he said, “is the nature of the food we eat, and its tendency to appeal to the sorts of reward systems, which are the parts of the brain implicated in addiction.”

Certain foods — loaded with sugar, salt and fat and specially formulated to appeal to consumers — might be cues that trigger overeating in people with the predisposition for addiction, appealing to the primitive reward centers of the brain, and reinforcing the addictive behavior. These types of foods, which the former Food and Drug Administration commissioner Dr. David Kessler has called “hyperpalatable,” may be more reinforcing of overeating than, say, green vegetables, Dr. Grucza said, and they’re more commonly and easily available than they were in the past.

In his book “The End of Overeating,” Dr. Kessler describes how these highly palatable foods — the kind served at fast-food and chain restaurants — change brain chemistry, triggering a neurological response that stimulates people to crave more food, even if they’re not hungry. The sense some people have that they cannot control their intake may in fact be true, he argues, because these rich, sweet and fatty foods stimulate the brain to release dopamine, a neurotransmitter associated with the pleasure center. In the process, they rewire the brain, so that the dopamine pathways light up even at the thought of eating these foods.

Other explanations for the increased obesity among relatives of alcoholics are possible, however. For example, it may be that people from families with alcoholism are more susceptible to stress generally, or to suffer from underlying depression that leads them to drink or overeat.

No single gene is responsible for making someone obese or alcoholic, Dr. Grucza said. But people who eat or drink excessively may share critical characteristics like lack of impulse control and the inability to stop once they get started, a sort of “missing stop signal,” he said. Stress is also implicated in both behaviors.

“The notion of alcoholism being a disease can be oversimplified,” Dr. Grucza said. “At some point, it’s a behavior and a choice. It’s just that some people are more vulnerable to the effect of that choice than others. I think the same is probably true of overeating — some people just don’t have the predisposition to find certain kinds of food that pleasurable, or to eat that much.”