

Food Addiction: Could It Explain Why 70 Percent of America Is Fat?

Our government and food industry both encourage more “personal responsibility” when it comes to battling the obesity epidemic and its associated diseases. They say people should exercise more self-control, make better choices, avoid over-eating, and reduce their intake of sugar-sweetened drinks and processed food.

We are led to believe there is no good food or bad food—that it’s all a matter of balance. This sounds good in theory, except for one thing ...

New discoveries in science prove that industrial processed, sugar-, fat-, and salt-laden food—food that is made in plant, rather than grown on a plant, as Michael Pollan would say—is biologically addictive.

Imagine a foot-high pile of broccoli or a giant bowl of apple slices. Do you know anyone who would binge on broccoli or apples? On the other hand, imagine a mountain of potato chips, a whole bag of cookies, or a pint of ice cream.

Those are easy to imagine vanishing in an unconscious, reptilian brain eating frenzy. Broccoli is not addictive, but cookies, chips, or soda absolutely can become addictive drugs.

The “just say no” approach to drug addiction hasn’t fared very well. It won’t work for our industrial food addiction either. Tell a cocaine or heroin addict or an alcoholic to “just say no” after that first snort, shot, or drink. It’s not that simple. There are specific biological mechanisms that drive addictive behavior.

Nobody chooses to be a heroin addict, cokehead, or drunk. Nobody chooses to be fat either. The behaviors arise out of primitive neurochemical reward centers in the brain that override normal willpower and overwhelm our ordinary biological signals that control hunger.

Consider:

- Why do cigarette smokers continue to smoke even though they know smoking will give them cancer and heart disease?
- Why do less than 20 percent of alcoholics successfully quit drinking?
- Why do most addicts continue to use cocaine and heroin despite their lives being destroyed?
- Why does quitting caffeine lead to irritability and headaches?

It is because these substances are all biologically addictive.

Why is it so hard for obese people to lose weight despite the social stigma and health consequences such as high blood pressure, diabetes, [heart disease](#), [arthritis](#), and even cancer even though they have an intense desire to lose weight? It is not because they WANT to be fat. It is because certain types of food are addictive.

Food made with sugar, fat, and salt can be addictive. Especially when combined in secret ways the food industry will not share or make public. We are biologically wired to crave these foods and eat as much of them as possible.

We all know about cravings, but what does the science tell us about food and addiction and what are the legal and policy implications if certain foods are, in fact, addictive?

The Science and Nature of Food Addiction

Let's examine the research and the similarities between high-sugar, energy-dense, fatty and salty processed junk food and cocaine, heroin, and nicotine. We'll start by reviewing the diagnostic criteria for substance dependence or addiction found in the bible of psychiatric diagnosis—the DSM-IV and look at how that relates to food addiction.

- Substance is taken in a larger amount and for a longer period than—a classic symptom in people who habitually overeat.
- Persistent desire or repeated unsuccessful attempts to quit—consider the repeated attempts at diet so many overweight people go through.
- Much time/activity is spent to obtain, use, or recover—those repeated attempts to lose weight take time.
- Important social, occupational, or recreational activities given up or reduced—I see this in many patients who are overweight or obese.
- Use continues despite knowledge of adverse consequences (e.g. failure to fulfill role obligation, use when physically hazardous)—anyone who is sick and fat wants to lose weight, but without help few are capable of making the dietary changes that would lead to this outcome.
- Tolerance (marked increase in amount, marked decrease in effect)—in other words you have to keep eating more and more just to feel “normal” or not experience withdrawal.
- Characteristic withdrawal symptoms; substance taken to relieve withdrawal—many people undergo a “healing crisis” that has many of the same symptoms as withdrawal when removing certain foods from their diet.

Few of us are free from this addictive pattern. If you examine your own behavior and relationship to sugar, in particular, you will likely find that your behavior around sugar and the biological effects of over-consumption of sugar match up perfectly. Many of the criteria above are likely to apply to you.

Researchers from Yale's [Rudd Center for Food Policy and Obesity](#) validated a “food addiction” scale.⁽ⁱ⁾ Here are a few of the points on the scale that are used to determine if you have a food addiction. Does any of this sound familiar? If it does you may be an “industrial food addict.”

1. I find that when I start eating certain foods, I end up eating much more than I had planned.

2. Not eating certain types of food or cutting down on certain types of food is something I worry about.
3. I spend a lot of time feeling sluggish or lethargic from overeating.
4. There have been times when I consumed certain foods so often or in such large quantities that I spent time dealing with negative feelings from overeating instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.
5. I kept consuming the same types of food or the same amount of food even though I was having emotional and/or physical problems.
6. Over time, I have found that I need to eat more and more to get the feeling I want, such as reduced negative emotions or increased pleasure.
7. I have had withdrawal symptoms when I cut down or stopped eating certain foods (please do NOT include withdrawal symptoms caused by cutting down on caffeinated beverages such as soda pop, coffee, tea, energy drinks, etc.). For example: Developing physical symptoms, feeling agitated, or feeling anxious.
8. My behavior with respect to food and eating causes significant distress.
9. I experience significant problems in my ability to function effectively (daily routine, job/school, social activities, family activities, health difficulties) because of food and eating.

Based on these criteria and others many of us, including most obese children, are “addicted” to industrial food.

Here are some of the scientific findings confirming that food can, indeed, be addictive:⁽ⁱⁱ⁾

1. Sugar stimulates the brain’s reward centers through the neurotransmitter dopamine exactly like other addictive drugs.
2. Brain imagining (PET scans) shows that high-sugar and high-fat foods work just like heroin, opium, or morphine in the brain.⁽ⁱⁱⁱ⁾
3. Brain imaging (PET scans) shows that obese people and drug addicts have lower numbers of dopamine receptors, making them more likely to crave things that boost dopamine.
4. Foods high in fat and sweets stimulate the release of the body’s own opioids (chemicals like morphine) in the brain.
5. Drugs we use to block the brain’s receptors for heroin and morphine (naltrexone) also reduce the consumption and preference for sweet, high-fat foods in both normal weight and obese binge eaters.
6. People (and rats) develop a tolerance to sugar—they need more and more of the substance to satisfy themselves—just like they do for drugs of abuse like alcohol or heroin.
7. Obese individuals continue to eat large amounts of unhealthy foods despite severe social and personal negative consequences, just like addicts or alcoholics.

8. Animals and humans experience “withdrawal” when suddenly cut off from sugar, just like addicts detoxifying from drugs.
9. Just like drugs, after an initial period of “enjoyment” of the food the user no longer consumes them to get high, but to feel normal.

Remember the movie *Super Size Me*, where Morgan Spurlock ate three super-sized meals from McDonald’s every day? What struck me about that film was not that he gained 30 pounds or that his cholesterol went up, or even that he got a fatty liver.

What was surprising was the portrait it painted of the addictive quality of the food he ate. At the beginning of the movie, when he ate his first super-sized meal, he threw it up, just like a teenager who drinks too much alcohol at his first party.

By the end of the movie, he only felt “well” when he ate that junk food. The rest of the time he felt [depressed](#), exhausted, anxious, and irritable and lost his sex drive, just like an addict or smoker withdrawing from his drug. The food was clearly addictive.

The problems with food addiction are compound by the fact that food manufacturers refuse to release any internal data on how they put ingredients together to maximize consumption of their food products despite requests from researchers.

In his book, [The End of Overeating](#), David Kessler, MD, the former head of the Food and Drug Administration, describes the science of how food is made into drugs by the creation of hyper-palatable foods that leads to neuro-chemical addiction.

This bingeing leads to profound physiological consequences that drive up calorie consumption and lead to weight gain. In a Harvard Study published in the Journal of the American Medical Association, overweight adolescents consumed an extra 500 calories a day when allowed to eat junk food as compared to days when they weren’t allowed to eat junk food.

They ate more because the food triggered cravings and addiction. Like an alcoholic after the first drink, once these kids started eating processed food full of the sugar, fat, and salt that triggered their brain’s reward centers, they couldn’t stop. They were like rats in a cage.^(iv)

Stop and think about this for one minute. If you were to eat 500 more calories in a day, that would equal 182,500 calories a year. Let’s see ... if you have to eat an extra 3,500 calories to gain one pound, that’s a yearly weight gain of 52 pounds!

If high-sugar, high-fat, calorie-rich, nutrient-poor, processed, fast, junk food is indeed, addictive, what does that mean? How should that influence our approach to obesity? What implications does it have for government policies and regulation? Are there legal implications? If we are allowing and even promoting addictive substances in our children’s diets, how should we handle that?

I can assure you, Big Food isn't going to make any changes voluntarily. They would rather ignore this science. They have three mantras about food.

1. It's all about choice. Choosing what you eat is about personal responsibility. Government regulation controlling how you market food or what foods you can eat leads to a nanny state, food "fascists," and interference with our civil liberties.
2. There are no good foods and bad foods. It's all about amount. So no specific foods can be blamed for the obesity epidemic.
3. Focus on education about exercise not diet. As long as you burn off those calories, it shouldn't matter what you eat.

Unfortunately, this is little more than propaganda from an industry interested in profit, not in nourishing the nation.

Do We Really Have a Choice About What We Eat?

The biggest sham in food industry strategy and government food policy is advocating and emphasizing individual choice and personal responsibility to solve our obesity and chronic disease epidemic. We are told if people just wouldn't eat so much, exercised more, and took care of themselves, we would be fine.

We don't need to change our policies or environment. We don't want the government telling us what to do. We want free choice. But are your choices free, or is Big Food driving behavior through insidious marketing techniques?

The reality is that many people live in food deserts where they can't buy an apple or carrot, or live in communities that have no sidewalks or where it is unsafe to be out walking. We blame the fat person. But how can we blame a two-year-old for being fat? How much choice do they have?

We live in a toxic food environment, a nutritional wasteland. School lunchrooms and vending machines overflow with junk food and "sports drinks." Most of us don't even know what we're eating. Fifty percent of meals are eaten outside the home and most home cooked meals are simply microwavable industrial food.

Restaurants and chains provide no clear menu labeling. Did you know that a single order of Outback Steakhouse cheese fries is 2,900 calories or a Starbucks venti mocha latte is 508 calories?

Environmental factors (like advertising, lack of menu labeling, and others) and the addictive properties of "industrial food" when added together override our normal biological or psychological control mechanisms.

To pretend changing this is beyond the scope of government responsibility or that creating policy to help manage such environmental factors would lead to a "nanny state" is simply an excuse for Big Food to continue their unethical practices. Here are some ways we can change our food environment:

- **Build the real cost of industrial food into the price.** Include its impact on health care costs and lost productivity
- **Subsidize the production of fruits and vegetables.** Eighty percent of government subsidies presently go to soy and corn, which are used to create much of the junk food we consume. We need to rethink subsidies and provide more for smaller farmers and a broader array of fruits and vegetables.
- **Incentivize supermarkets to open in poor communities.** Poverty and obesity go hand in hand. One reason is the food deserts we see around the nation. Poor people have a right to high-quality food too. We need to create ways to provide it to them.
- **End food marketing to children.** Fifty other countries worldwide have done this, why haven't we?
- **Change the school lunchroom.** The national school lunch program in its present form is a travesty. Unless we want the next generation to be fatter and sicker than we are, we need better nutrition education and better food in our schools.
- **Build community support programs with a new workforce of community health workers.** These people would be able to support individuals in making better food choices.

We can alter the default conditions in the environment that foster and promote addictive behavior.^(v) It's simply a matter of public and political will. If we don't, we will face an ongoing epidemic of obesity and illness across the nation.

For those with personal struggles with food addiction, remember it is not a moral failing or lack of willpower. Here are five suggestions I offer my patients to help them break their food addictions.

1. **Balance your blood sugar:** Research studies say that low blood sugar levels are associated with LOWER overall blood flow to the brain, which means more BAD decisions. To keep your blood sugar stable:
 - **Eat a nutritious breakfast** with some protein like eggs, protein shake or nut butters. Studies repeatedly show that eating a healthy breakfast helps people maintain weight loss.
 - **Have smaller meals throughout the day.** Eat every 3-4 hours and have some protein with each snack or meal (lean animal protein, nuts, seeds, or beans).
 - **Avoid eating 3 hours before bedtime.**
2. **Eliminate sugar and artificial sweeteners and your cravings will go away:** Go cold turkey. Eliminate refined sugars, sodas, fruit juices, and artificial sweeteners from your diet, as these can trigger cravings.
3. **Determine if hidden food allergies are triggering your cravings:** We often crave the very foods that we have a hidden allergy to. For a simple allergy elimination program, consider trying [The UltraSimple Diet](#), or [The UltraSimple Diet Challenge Home Study Coaching Program](#).

4. **Get 7-8 hours of sleep:** Research shows that lack of sleep increases cravings.
5. **Optimize Your Nutrient Status: [Craving Cutting Supplements](#)**
 - **Optimize your vitamin D level:** According to one study, when vitamin D levels are low, the hormone that helps turn off, your appetite, doesn't work and people feel hungry all the time, no matter how much they eat.
 - **Optimize omega-3s:** Low levels of omega-3 fatty acids have also been associated with depression, Alzheimer's disease, and obesity.
 - **Consider taking natural supplements for cravings control.** Glutamine, tyrosine, and 5-HTP are amino acids that help reduce cravings. Stress reducing herbs such as rhodiola can help. Chromium balances blood sugar and can help take the edge off cravings. Glucomannan fiber is very helpful to reduce the spikes in sugar and insulin that drive cravings and hunger.

Please leave your thoughts by adding a comment below—but remember, we can't offer personal medical advice online, so be sure to limit your comments to those about taking back our health!

And if you like this House Call, I encourage you to share it with your friends and family on [Twitter](#) and [Facebook](#), sign up for the newsletter, and [submit your questions](#), so that, next week, I may make a House Call to you.

Wishing you health and happiness,
Mark Hyman, MD

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