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Clearing the Confusion around Processed Food Addiction

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Commentary

Clearing the Confusion around Processed Food Addiction

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The term *food addiction* is coming into common clinical syntax, but controversy has grown about its meaning. In this commentary, we offer two possible reasons for the controversy. Processed food addiction as a substance use disorder is confused with a behavioral disorder. In addition, processed food addiction is the result of an intentional epidemic of addiction not an incidental by-product of Western environments. We then examine common misconceptions about food addiction and provide ways to consensus.

There is value in clarity about processed food addiction as a substance use disorder with an etiology similar to that of tobacco. If these concepts were generally accepted among researchers and practitioners, it would bring focus to processed foods as substances of abuse. General acceptance would open the door to both classic substance-based abstinence protocols in treatment and control measures in public policy such as taxation and limits on advertising and availability, especially to the young.

CLEARING THE CONFUSION: FOOD ADDICTION AS A SUBSTANCE USE DISORDER

Some of the controversy around food addiction may stem from uncertainty as to whether it is a substance-based addiction or a behavioral addiction. When processed food addiction is compared to substance-based addictions such as alcoholism and smoking, a clear, consistent disease concept emerges. The similarities between alcohol addiction and processed food addiction include neuro-dysfunction of cravings and suppression of cognitive function, genetics, impulsive and irritable behavior, mood disorders, conformance to addiction diagnostic criteria, family patterns, young age of onset, a fetal syndrome, serious consequences, disrupted careers and relationships, and food industry business practices of advertising, pricing,

marketing to children, and easy availability [1]. Abstinence has also been shown to be effective in treatment [2,3].

However, when food addiction is compared to non-substance-based behavioral addictions, the concept becomes confusing. A better name for a behavioral addiction might be *compulsive overeating*, which is treated with behavior modification to reduce volume eating.

Evidence for processed foods as substances of abuse exists for sweeteners, flour, salt, caffeine, and high-fat foods including dairy. These foods showed a dramatic increase in use during the spread of obesity. The research literature demonstrates addictive properties for these foods [4]. Further, food addicts report losing control over these foods and they are eliminated in recovery protocols [2,3].

CLEARING THE CONFUSION: THE ROLE OF THE OBESOGENIC ENVIRONMENT

Confusion may also come from framing obesity as the incidental by-product of an obesogenic environment as opposed to an intentionally induced epidemic of addiction. Historic examples of induced epidemics of addiction include opium in the 1800s in England and the United States due to cheap, over-the-counter laudanum [5]; alcoholism in the 18th century in the United Kingdom due to cheap gin resulting from more efficient distillation processes and excess grain production [5]; and, in the 20th century, tobacco addiction from low-cost, mechanized manufacturing of cigarettes [6]. Today, high-fructose corn syrup is cheap and plentiful due to removal of growing quotas on corn and new distillation techniques [7].

Our review of the history of epidemics of addiction shows a useful framework of “the five As of an addiction epidemic.” The five As include availability, affordability, addictive

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properties in the product, advertising, and age of onset. Availability and affordability are important because people cannot become addicted to something they cannot find and buy repeatedly. Widespread tobacco and processed food addiction both depend on cheap, subsidized, mass-produced tobacco, wheat, corn, and sugar crops as well as availability in grocery stores and convenience stores.

Reinforced addictive properties in tobacco came from nicotine as it was extracted, concentrated, and reintroduced into cigarettes. In processed food addiction, research suggests that combinations of addictive ingredients activate a more virulent addiction [8]. Examples of combinations of addictive food ingredients in fast food meals include cheeseburger/fries, taco/burrito, and pizza, all served with sweet, caffeinated drinks.

Advertising is also important. Repeat exposure to cues for both processed foods and drugs of abuse has been shown to condition craving and reward neuro-pathways [9,10]. A young age of onset appears to encourage the development of addiction [11,12], even in infants [13].

Of the five As of an addiction epidemic, advertising, availability, and affordability have been the focus of public policy through restricting advertising (especially to children), limiting points of sale, and taxation. These public policies could again be effective if focused on specific addictive processed foods [14].

CLEARING THE CONFUSION: SPECIFIC POINTS

Within the context described above, we can address other points of confusion as follows.

- Food addiction cannot exist because we have to eat. This is like arguing that alcoholism cannot exist because we have to drink. We do not have to drink alcohol. Similarly, we do not have to eat addictive processed foods. Instead, we can eat fruits, vegetables, proteins, beans, rice, sweet potato, and winter squash.
- We should not call it addiction because it increases stigmatization of the obese. Research shows the opposite effect; study subjects who were educated about the food addiction model showed less blame, stigma, and psychopathology toward the obese [15].
- Addiction is not even in the *Diagnostic and Statistical Manual of Mental Disorders*. The word *addiction* was replaced in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, with the phrase *substance use disorder* to reduce stigmatization of addicts [16].
- Addiction to natural rewards cannot exist. Processed foods are manufactured using methods similar to those of addictive drugs including distillation, crystallization, concentration, and extraction. Processed food are no longer natural.
- It should be *eating* addiction rather than food addiction. This would be like calling alcoholism *drinking* addiction or tobacco addiction *smoking* addiction.
- Food addiction is binge-eating. Following the comparison to alcoholism, not all alcoholics are binge drinkers and not all processed food addicts are binge eaters.
- Satiety is the goal of overeating, not intoxication as in drug and alcohol use. Food addicts report seeking a euphoria or numbness that is not satiety. In fact, satiation is elusive because of constant cravings, as shown in this quote from a food addict: “From morning to night, I fought my cravings for food” [3] (p. 169).
- There is no withdrawal syndrome in food addiction. To the contrary, processed food addicts report withdrawal, including shakes, headaches, stomachaches, irritability, depression, anxiety, sleepiness, cravings, etc. An example is, “My initial reaction [to withdrawal] was an overwhelming hunger, which made no sense because I had just eaten. Then came crabbiness, followed by nausea and a headache so terrible that I had to take a nap” [2] (p. 150).
- Bread is in the Bible. It cannot be addictive. The flour in Biblical times might have been less addictive because it was coarsely ground and thus slower to be absorbed. Further, the gluten (containing gluteomorphine) content may have been lower.
- Food addiction is not as serious or devastating as drug addiction is. Descriptions from the food addiction Twelve Step manuals suggest otherwise. Health, mental capacity, family, activities, education, and relationships can be lost to food addiction, as shown in these excerpts:

The sugars in my blood caused me to lose most of my teeth. My face was a mess with acne. My self-esteem was so low and there were long periods of time that I never bathed or took care of my home. I neglected my children. [2] (pp. 141–142)

... managing my food and exercise became my primary purpose in college and gaining an education was secondary. [2] (p. 134)

Because of the physical effects of food addiction, including constant gas, diarrhea, and preoccupation with bingeing and purging, I do not think it would have been possible for me to enter a successful long-term relationship. [2] (p. 135)
- Because overweight people overeat in public, it is not an addiction. Addictions take place in secret. This is not a criterion for addiction. Early in the publication of the *Diagnostic and Statistical Manual of Mental Disorders*, social deviance was removed from the diagnostic criteria for addictions because people smoked tobacco respectably in public.
- Abstinence is not an effective protocol because people binge severely when they take a bite of sweets or flour after being abstinent. This is like saying that abstinence from alcohol in the treatment of alcoholism is not effective because

alcoholics binge drink when they take their first sip of alcohol. Similarly, the first bite of processed food is relapse, rather than a failure of the concept.

- Excessive acquisition of food is just symptomatic of a more general pattern of overspending in heavily commercialized Western economies. There is evidence that food addiction is the intentional result of food industry practices as discussed above.

Food addiction must affect only a small percentage of people. Some points are of interest here:

- In 1997, Americans consumed on average about a pound per person per day of addictive processed foods (wheat flour, corn flour, sweeteners, high-fructose corn syrup, high-fat dairy, and frozen potatoes) [17]. This is a high level of repeat consumption that would foster the development of an addiction.
- The processed food industry has reached millions of households with conditioning processed food cues for cravings through television, fast food outlets, vending machines, and giant grocery stores [18]. In 2007, the Federal Trade Commission reported spending on food advertising of \$9.6 billion [19].
- The *Diagnostic and Statistical Manual of Mental Disorders* threshold for a mild substance use disorder is only 2 or 3 addictive behaviors in a year. Three of the diagnostic behaviors are common, including eating more than intended, failed attempts to cut back, and use despite knowledge of consequences [20].
- In the tobacco epidemic, two thirds of adult Americans smoked. Two thirds of Americans are overweight or obese [21]. Addictions on the scale of an epidemic are within the capabilities of corporations.

As shown above, framing food addiction as a substance use disorder helps clarify confusion.

WAYS TO CONSENSUS AND CONCLUSION

A number of practices could help reduce confusion about food addiction. For example, it might be helpful to call the disease *processed food addiction*, rather than food addiction, to emphasize that it is a substance use disorder.

Researchers could develop an appreciation for the symptomology of processed food addiction by browsing the manuals of two 12-step groups: Food Addicts in Recovery Anonymous and Food Addicts Anonymous. Similarly, understanding business-driven epidemics of addiction could be helpful [6].

Researchers might consider using the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, addiction diagnostic criteria adapted for eating in their studies. These criteria were developed specifically to measure substance use

disorders, are considered the gold standard, and could support credibility as well as more accurate results about the prevalence of the disease.

Research is needed on withdrawal syndromes in humans for commercial food combinations.

In conclusion, considering processed food addiction as a substance-based addiction driven, by the five As of an addiction epidemic could clarify concepts and pave the way for a solution to the obesity epidemic. Common use of classic abstinence and cue-avoidance protocols combined with public policies to limit availability of processed foods could be successful, as has been the case with tobacco and alcohol.

REFERENCES

1. Ifland JR, Preuss HG, Marcus MT, Rourke KM, Taylor WC, Lerner M: The evidence for refined food addiction. In Bagchi D, Preuss HG (eds): "Obesity: Epidemiology, Pathophysiology and Prevention." 2nd ed. Boca Raton, FL: CRC Press, pp 53–72, 2012.
2. Food Addicts Anonymous: "Food Addicts Anonymous." Port St. Lucie, FL: Food Addicts Anonymous, 2010.
3. Food Addicts in Recovery Anonymous: "Food Addicts in Recovery Anonymous." Woburn, MA: Food Addicts in Recovery Anonymous, 2013.
4. Wright HT, Ifland JR: Obesity epidemic: understanding addiction in managing overeating. Behavioral Health Nutrition Newsletter, Academy of Nutrition and Diet 32:1, 3–6, 2014.
5. Vaillant GE: "The Natural History of Alcoholism Revisited." Cambridge, MA: Harvard University Press, 1983.
6. Brandt A: "The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product That Defined America." New York: Basic Books, 2007.
7. Hanover LM, White JS: Manufacturing, composition, and applications of fructose. Am J Clin Nutr 58(5 Suppl):724s–732s, 1993.
8. Connor JP, Gullo MJ, White A, Kelly AB: Polysubstance use: diagnostic challenges, patterns of use and health. Curr Opin Psychiatry 27:269–275, 2014.
9. Holland PC, Petrovich GD: A neural systems analysis of the potentiation of feeding by conditioned stimuli. Physiol Behav 86:747–761, 2005.
10. Killgore WD, Yurgelun-Todd DA: Sex differences in cerebral responses to images of high versus low-calorie food. Neuroreport 21:354–358, 2010.
11. Hill C, Saxton J, Webber L, Blundell J, Wardle J: The relative reinforcing value of food predicts weight gain in a longitudinal study of 7-10-y-old children. Am J Clin Nutr 90:276–281, 2009.
12. Picherot G, Urbain J, Dreno L, Caldagues E, Caquard M, Pernel AS, Amar M: Teenagers and age of first drinking: a disturbing precocity? Arch Pediatr 17:583–587, 2010.
13. Townsend E, Pitchford NJ: Baby knows best? The impact of weaning style on food preferences and body mass index in early childhood in a case-controlled sample. BMJ Open 2:e000298, 2012.
14. Brownell KD, Warner KE: The perils of ignoring history: Big Tobacco played dirty and millions died. How similar is Big Food? Milbank Q 87:259–294, 2009.

15. Latner JD, Puhl RM, Murakami JM, O'Brien KS: Food addiction as a causal model of obesity. Effects on stigma, blame, and perceived psychopathology. *Appetite* 77:77–82, 2014.
16. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition Text Revision (DSM-IV-TR)*. Washington, DC: American Psychiatric Association, 2000.
17. Ifland JR, Preuss HG, Marcus MT, Rourke KM, Taylor WC, Burau K, Manso G: Refined food addiction: a classic substance use disorder. *Med Hypotheses* 72:518–526, 2009.
18. Cohen DA: Obesity and the built environment: changes in environmental cues cause energy imbalances. *Int J Obes (Lond)* 32 (Suppl 7):S137–S142, 2008.
19. Federal Trade Commission: "A Review of Food Marketing to Children and Adolescents." Washington, DC: Federal Trade Commission, 2012.
20. Kant AK: Weight-loss attempts and reporting of foods and nutrients, and biomarkers in a national cohort. *Int J Obes Relat Metab Disord* 26:1194–1204, 2002.
21. Ogden CL, Carroll MD, Kit BK, Flegal KM: Prevalence of childhood and adult obesity in the United States, 2011–2012. *JAMA* 311:806–814, 2014.

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