

THE EMERGING CONCEPT OF FOOD ADDICTION

ARE WE READY TO TREAT FOOD AS A DRUG?

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INTRODUCTION

The term *food addiction* was first introduced into scientific literature in 1956 by Theron Randolph, but it wasn't until the early 2000s that investigators began to systematically examine and define this concept. The most obvious way to conceptualize it is to compare it to the DSM criteria for substance use disorders (SUD). In fact, in 2009, Gearhardt et al. developed the Yale Food Addiction Scale (YFAS), a 25-item instrument based on the substance dependence criteria of the DSM-IV, most recently updated according to DSM-5 (YFAS Version 2.0.). The validity of this concept remains controversial and evokes polarized positions. Whether agreeing with the concept or not, it seems widely accepted that adopting an addiction perspective on food has practical implications for the prevention and treatment of eating disorders and obesity.

Criteria for Food Addiction based on the Yale Food Addiction Scale 2.0

1. Food is often taken in larger amounts or over a longer period than intended
2. There is a persistent desire or unsuccessful efforts to cut down or control certain foods
3. A great deal of time is spent in activities necessary to obtain, use, or recover from the effects of eating
4. Craving, or a strong desire or urge for certain foods
5. Recurrent eating patterns resulting in a failure to fulfill major role obligations at work, school or home
6. Continued eating patterns despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of food
7. Important social, occupational or recreational activities are given up or reduced because of eating
8. Recurrent eating in situations in which it is physically hazardous
9. Eating patterns are continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by food
10. **Tolerance**
 - a) need for markedly increased amounts of food to achieve desired effect
 - b) markedly diminished effect with continued use of the same amount of food
11. **Withdrawal**
 - a) withdrawal syndrome when refraining from eating specific foods
 - b) specific foods are eaten to relieve or avoid withdrawal symptoms

OBJECTIVES

- Review the recent findings and perspectives on the concept of food addiction.
- Summarize the current state of affairs and the most important questions arising from the debate.

METHODS AND MATERIALS

A PubMed search of English-language publications (January 1, 2014–January 31, 2019) was conducted using the term *food addiction*. Relevant articles known to the authors were also included.

RESULTS

Should food addiction be conceptualized as a substance use disorder (SUD) or as a behavioral addiction, like gambling disorder?	<p>SUD : Certain foods, especially refined and excessively palatable combinations of sugars and fats, have an addictive potential. Therefore, so-called food addiction represents a substance use disorder. Some have argued that sugar is the culprit, but as far as now, the addictive substance remains undiscovered.</p> <p>Behaviour addiction: Other substances of abuse contain a clear addictive agent, but such specific substance has not been identified in foods. Therefore, so-called eating addiction represents a non-substance-related, behavioral addiction.</p>
What are the neurobiological mechanisms that overlap in food and drug addiction?	<p>Food consumption is rewarding, in part, through activation of the mesolimbic dopamine pathways. Both food and drug addiction involve a dampening of dopaminergic signaling and downregulation of the mu opioid receptor (MOR), coupled with impairment of prefrontal regions that are involved in inhibitory control and decision-making.</p> <p>A notable argument for the neurobiological similarity between food and drug addiction is the efficacy of the anti-craving drugs naltrexone and bupropion in treating both addictions.</p>
To what extent does food-addiction behaviour overlap with binge eating-related disorders: bulimia nervosa (BN) and binge eating disorder (BED)? Should we include food-addiction as a new diagnosis?	<p>Food addiction strongly overlaps with binge eating as displayed by individuals with BN and BED. When applied the YFAS 2.0, 40-80% of individuals with BED and more than 80% of those with BN classified as food addicted.</p> <p>There are of course individuals that show addiction-like eating but do not receive a BN or BED diagnosis. However, if we were to employ structured clinical interviews, it may be that the large majority of those individuals also receive an established eating disorder diagnosis (mostly those listed in the other specified feeding and eating disorders in DSM-5). If that is the case, the inclusion of a possible new food-addiction diagnosis would be redundant.</p>
What are the implications of the food addiction concept for the treatment of eating disorders and obesity?	<p>Incorporating an addiction framework in the treatment of such individuals may be useful.</p> <p>It may reduce external stigma and self-blame.</p> <p>Psychotherapeutic strategies that successfully reduce craving for and consumption of drugs can be applied to food.</p> <p>Whether using an abstinence model (not eating certain foods) as part of such an addiction framework produces better outcomes than using a flexible model, as is done in state-of-the-art cognitive-behavioral therapy, needs to be rigorously tested.</p>
What can we learn from Overeaters Anonymous (AO)?	<p>OA is a 12-step mutual help group founded in 1960 to support individuals who perceive themselves as food addicts. It has applied the addictive-like eating framework for decades to help members achieve recovery. Attendance to meetings show some benefits but studies remain scarce.</p>

CONCLUSIONS

Food addiction as a model has been subject of considerable debate in recent years. No clear consensus has yet emerged on the validity of the concept. Either way, adopting an addiction perspective on eating disorders and obesity may have practical implications on prevention and treatment of these disorders, and may provide promising avenues for future research.

I have no conflict of interests to declare.

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