



REVIEW

Ultra-Processed Food Addiction: A Research Update

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Abstract

Purpose of Review Detail recent advancements in the science on ultra-processed food (UPF) addiction, focusing on estimated prevalence rates and emerging health disparities; progress towards identifying biological underpinnings and behavioral mechanisms; and implications for weight management.

Recent Findings Notable developments in the field have included: (1) estimating the global prevalence of UPF addiction at 14% of adults and 15% of youths; (2) revealing health disparities for persons of color and those with food insecurity; (3) observing altered functioning across the brain-gut-microbiome axis; (4) providing early evidence for UPF withdrawal; and (5) elucidating poorer weight management outcomes among persons with UPF addiction.

Summary The breadth of recent work on UPF addiction illustrates continued scientific and public interest in the construct and its implications for understanding and treating overeating behaviors and obesity. One pressing gap is the lack of targeted interventions for UPF addiction, which may result in more optimal clinical outcomes for this underserved population.

Keywords Ultra-processed foods · Ultra-processed food addiction · Compulsive overeating · Obesity treatment outcomes

Introduction

Over the past 40 years, global rates of overweight and obesity have increased substantially [1], leading researchers to explore contributing mechanisms. While numerous biological (e.g., genetic, hormonal) and behavioral (e.g., sedentary lifestyle) factors are known to be associated with obesity [2], one of the key systemic changes in our environment that has paralleled the timeline of rising obesity rates has been the exponential increase of ultra-processed foods (UPFs) in

our food system since the 1980s [3, 4]. UPFs are not found in nature and have been intentionally created to be hyper-palatable through the addition of added fats, refined carbohydrates (e.g., white flour, sugar), and/or salt [5, 6]. Examples of UPFs include pastries, candy, packaged snacks, fast foods, and sugar-sweetened beverages [6]. Rigorous, epidemiological research has soundly implicated UPFs in not only obesity but also in an array of physical health conditions. As detailed in a recent review [7], four prospective cohort studies ($n = 11,898$ –44,551; mean follow-up = 6.6–19 years) have consistently observed that persons reporting the highest versus lowest quartile of UPF intake at baseline had a 25–62% increased hazard for all-cause mortality, and, relatedly, numerous prospective and cross-sectional studies have linked increased UPF intake with elevated rates and/or complications of diet-related conditions (e.g., cardiovascular disease, type 2 diabetes).

While it has long been possible to create homemade versions of popular UPFs (e.g., homemade chocolate chip cookies), some researchers have noted that the uptick in rates of obesity and diet-related diseases have occurred on a similar timeline as industry-driven changes in the global food system [8]. One such change was the increased development and distribution of UPFs that followed after Kraft Foods and General Foods were acquired by Phillip Morris – one of

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Table of Contents Research In Addiction An Update

1. Understanding the eBook Research In Addiction An Update
 - The Rise of Digital Reading Research In Addiction An Update
 - Advantages of eBooks Over Traditional Books
2. Identifying Research In Addiction An Update
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Research In Addiction An Update
 - User-Friendly Interface
4. Exploring eBook Recommendations from Research In Addiction An Update
 - Personalized Recommendations
 - Research In Addiction An Update User Reviews and Ratings
 - Research In Addiction An Update and Bestseller Lists
5. Accessing Research In Addiction An Update Free and Paid eBooks

- Research In Addiction An Update Public Domain eBooks
- Research In Addiction An Update eBook Subscription Services
- Research In Addiction An Update Budget-Friendly Options
- 6. Navigating Research In Addiction An Update eBook Formats
 - ePub, PDF, MOBI, and More
 - Research In Addiction An Update Compatibility with Devices
 - Research In Addiction An Update Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Research In Addiction An Update
 - Highlighting and Note-Taking Research In Addiction An Update
 - Interactive Elements Research In Addiction An Update
- 8. Staying Engaged with Research In Addiction An Update
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Research In Addiction An Update
- 9. Balancing eBooks and Physical Books Research In Addiction An Update
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Research In Addiction An Update
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Research In Addiction An Update
 - Setting Reading Goals Research In Addiction An Update
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Research In Addiction An Update
 - Fact-Checking eBook Content of Research In Addiction An Update
 - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development

- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

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