



# Recognizing and Addressing the Addictive Nature of Ultra-Processed Foods

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## The U.S. leads the world in ultra-processed food consumption, with many Americans consuming more than half of their daily calories from these products.<sup>1</sup>

Ultra-processed foods (e.g., chips, candy, ice cream, soda) are designed to be tastier and more affordable than healthier alternatives, and are heavily marketed to the American consumer. While the Food and Drug Administration and U.S. Department of Agriculture are currently working to develop a uniform definition, ultra-processed foods are generally considered to be industrially produced products made from highly processed ingredients that are very different from their raw components. They are generally unnaturally high in fat, sweeteners, and salt, are made with low-quality, shelf-stable ingredients, have little nutritional value, and include additives like artificial

sweeteners, hydrogenated oils, refined carbohydrates, artificial colors, thickeners, and flavor enhancers.<sup>2</sup>

Research suggests the unique combination of ingredients in ultra-processed food stimulates the brain in ways that can lead to addictive-like eating. People often consume these products not just for sustenance, but also for comfort, stress relief, or emotional coping.

To better understand addictive-like eating behavior and the consequences for health, Ashley Gearhardt, PhD, MPhil, MS, director of the Food Addiction Science & Treatment lab and professor at the University of Michigan, co-developed the Yale Food Addiction Scale in 2009, during her prior work at Yale University. The scale measures addictive patterns of eating, including diminished control over intake, cravings, withdrawal, and continued consumption of food despite negative consequences—using specific diagnostic criteria for substance use disorders.<sup>3,4</sup> With over 1,000 citations from around the world, the scale is a leading tool in assessing addictive-like eating and has contributed numerous insights to the field of addictive eating since its creation.

## What does the research show?

### 1 Ultra-processed foods may meet scientific criteria for addictive substances

Mounting evidence, including a review of nearly 300 studies across 36 countries using the Yale Food Addiction Scale, suggests ultra-processed foods may meet scientific criteria for addictive substances.<sup>5,6,7,8</sup> These foods, which have been engineered to be high in both refined carbohydrates and added fats in a way not seen in nature, have been shown to:

- Trigger the brain's reward system and release dopamine in a way similar to nicotine and alcohol
- Lead to behavior that meets the clinical criteria for substance use disorders, such as excessive intake, loss of control over consumption, and intense craving
- Create a physiological dependence that causes intense cravings and withdrawal-like symptoms for some people when they cut back, making it difficult to adopt lasting dietary changes, even in the face of serious health risks<sup>9</sup>



## 2 Ultra-processed food addiction is widespread in the U.S., especially for those with obesity and food insecurity

Systematic reviews of studies using the Yale Food Addiction Scale found that a sizeable percentage of children<sup>10</sup> and adults<sup>5</sup> met criteria for addiction to ultra-processed food (15% of children, 14% of adults).<sup>\*</sup> People with obesity were more likely to meet the criteria for addiction (19% of children, 28% of adults).

People who are food insecure may also be more likely to experience addiction to ultra-processed foods, as these foods are more affordable and easily accessible than healthier alternatives. A national study of low-income adults found that those experiencing food insecurity were nearly four times more likely to show signs of food addiction than those who were food secure.<sup>11</sup>

Additionally, studies find nearly half of Americans report at least one symptom of addiction to ultra-processed foods (e.g., intense cravings, a loss of control over consumption, or an inability to cut down despite a desire to do so).<sup>3,12</sup>

## 3 Consuming high levels of ultra-processed foods is associated with poor health outcomes, highlighting the risks of addictive-like behavior

Growing evidence links high consumption to rising rates of obesity and diet-related disease such as diabetes, heart disease, and cancer, mental health concerns such as anxiety and depression, and cognitive decline in older adults.<sup>13,14</sup>

Evidence shows that the risk of poor health outcomes increases when ultra-processed foods make up 40% or more of an individual's diet<sup>15</sup> – a concerning threshold, given that the average American now consumes 60% of their daily calories from these products.

## What are the implications for health policy?

Findings from this growing body of work suggest that ultra-processed food addiction is an important, yet often overlooked, factor in the public health crisis related to diet, obesity, chronic disease, and mental well-being. Addressing it goes beyond relying on individual consumer behavior change and will necessitate a coordinated set of policies focused on the food environment, food regulation, and our health care system.



### Opportunities to expand access to nutritious foods

- Federal and state government programs that provide food in public schools, hospitals, and military facilities could improve health by offering fewer ultra-processed foods (like chips, sugary drinks, or packaged snacks) and serving more fresh, whole foods including fresh fruits and vegetables, legumes, dairy, and whole grains.
- Food assistance programs could be tailored to make it easier and more affordable for families to access nutritious foods, for example by providing fresh produce boxes or expanding programs such as Double Up Food Bucks, which give people incentives to buy fruits and vegetables. In addition, programs that provide medically tailored meals for people with chronic conditions such as diabetes could also be expanded.



### Opportunities to develop labeling for ultra-processed foods

- The Food and Drug Administration (FDA) could require clear front-of-package labels on ultra-processed foods to help consumers easily understand the nutritional content and make more informed choices. This may be especially important for products targeted at infants and children as they are developing their taste preferences and eating patterns.
- The FDA could establish clear standards for health-related claims on processed foods. Guidance could be revised to ensure that *any* nutrient or health claim (e.g., “high-protein,” “low-fat,” “contains whole grains”) can only be made if the overall product meets baseline standards for nutritional quality and degree of processing. This would prevent companies from using single-nutrient claims

<sup>\*</sup> People who meet the criteria for addiction to ultra-processed food using the Yale Food Addiction Scale have 2 or more symptoms of addiction in the past 12 months plus clinically significant impairment or distress.

to “health-wash” ultra-processed foods that are still engineered for maximal palatability and overconsumption.



## Clinical and health care policy opportunities

- Medical classification systems (e.g., Diagnostic and Statistical Manual of Mental Disorders, International Classification of Diseases) could be updated to include addiction to ultra-processed foods as a formal disorder. This could reduce stigma for those struggling with addictive eating behaviors and pave the way for improved access to treatment.
- Primary care providers could incorporate routine screening for signs of ultra-processed food addiction into health care visits (e.g., using a free assessment tool such as the 13-item abbreviated Yale Food Addiction Scale 2.0<sup>16</sup>). Screening could help identify patients experiencing addictive-like eating and connect them to appropriate support, such as nutritional counseling, behavioral health care, pharmacological treatment, or community-based programs that provide access to healthy foods.

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