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FAST FOOD INTAKE AND THE RISK OF OBESITY AND CHRONIC DISEASES

Muhammad Talha Ahmad[1], Sajeeh Ul Zaman[2], Rabail Hussain[3*], Hasan Ijaz[4], Abdul Ali Khan[5], Furkhanda Kalsoom[6], Sheza Javaid[7]

[1]*Department of Human Nutrition and Dietetics, University of Agriculture Peshawar, KPK, Pakistan*
[2]*Department of Public Health, University of Northampton, Northamptonshire, United Kingdom*
[*3]*Department of Pathobiology and Biomedical Sciences, Muhammad Nawaz Shareef University of Agriculture, Multan, Punjab, Pakistan*
[4]*Department of Medical Laboratory Technology, Riphah international University, Faisalabad, Punjab, Pakistan*
[5]*Department of Public Health, University of New Mexico, Mexico, North America*
[6]*Department of Medical Laboratory Technology, Riphah International University, Faisalabad, Punjab, Pakistan*
[7]*Department of Pathology / Medical Laboratory Technology, Faisalabad Medical University, Faisalabad, Punjab, Pakistan*

[*3]rabailhussain8@gmail.com

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Corresponding Author: *
Rabail Hussain

Abstract

This review examines the correlation between fast food intake and the increased risk of obesity and chronic diseases, emphasizing the nutritional elements that contribute to these health concerns. Fast food, typically characterized by high caloric density, excessive unhealthy fats, refined carbohydrates, and elevated sodium levels, has become a fundamental component of numerous diets owing to its convenience, cost-effectiveness, and extensive accessibility. Nonetheless, its regular intake is linked to various detrimental health effects, including obesity, cardiovascular illnesses, type 2 diabetes, and mental health difficulties. This article examines the worldwide increase in fast food consumption, identifying demographic variables, marketing methods, and lifestyle alterations as the primary catalysts of this phenomenon. It further examines the nutritional composition of fast food, highlighting the contribution of imbalanced diets to the development of obesity and chronic diseases. This review examines the psychological effects of fast food, including emotional eating, and its association with mental health disorders. This review ultimately recommends several preventive measures and interventions, such as public health campaigns, regulatory modifications within the fast-food sector, and individual behavioral changes, as techniques to mitigate the adverse health impacts of fast-food consumption. This review highlights the pressing need for international efforts to address escalating health issues linked to fast food consumption and foster healthy eating habits.

INTRODUCTION

The consumption of fast food has shown an unprecedented rise over the past few decades, primarily in developing countries, and its effects have become a significant public health concern worldwide

(Pipoyan et al., 2022). Fast food was once a luxury reserved for the rich, but it has now become a staple in the lives of millions worldwide, particularly in urbanized and industrialized countries. Fast-food restaurants or chains serve billions of customers each day because of their convenience, affordability, and speedy service, making them extremely popular, especially within the fast-paced lifestyle of modern society (Li & Shi, 2017). Nevertheless, this extensive pervasion of fast-food usage, although not immediately apparent, has deadly repercussions for public health. Highly processed food consumption has been associated with the increasing trend of obesity, diabetes, cardiovascular disease, and many other chronic diseases, making us worry about the long-term implications of eating a diet high in these foods (Shahzad et al., 2022).

Fast food, known for its high calorific content, saturated unhealthy fats, refined sugar, and excess sodium, is usually deficient in the nutrients needed for a healthy, balanced diet. Thus, frequent fast-food consumption has been reported to mediate conditions such as hypertension, dyslipidemia, insulin resistance, and metabolic syndrome (Zeinab et al., 2017). These diets are especially worrisome for susceptible groups, such as children and adolescents, whose behaviors and food choices are established early in life. To compound this issue, fast-food chains market to young people with enticing advertisements, leading them to establish poor nutrition habits as children that carry into adulthood (Mansfield et al., 2020).

This review aimed to investigate the relationship between fast food consumption and the prevalence of obesity and chronic diseases. This discussion will examine the global rise in fast food consumption, its nutritional value, and the factors contributing to obesity and other non-communicable diseases (Saluja et al., 2021). In addition, this review examines the psychological and mental health effects resulting from fast food consumption, an aspect often neglected but with a significant negative impact. Finally, the review will focus on interventions and preventive actions available to national governments, the food industry, and consumers themselves to mitigate the adverse health effects of fast-food over-consumption and enhance global sustainable diets (Kim & Zapata Ramos, 2018).

Summary Table: Key Elements of the Review on Fast Food Consumption

Section	Key Points
1. Rising Trend of Fast Food	Global increase due to urbanization, convenience, low cost, and aggressive marketing strategies.
2. Nutritional Composition	High in calories, saturated/trans fats, sugars, sodium; low in fiber, vitamins, and essential nutrients.
3. Physical Health Impacts	Obesity, type 2 diabetes, cardiovascular diseases, hypertension, metabolic syndrome.
4. Mental Health Effects	Depression, anxiety, emotional eating, disrupted gut-brain axis, cognitive decline.
5. Vulnerable Populations	Children, adolescents, and low-income groups more susceptible due to marketing and access issues.
6. Public Health Interventions	Campaigns, education, food labeling, portion control, advertising restrictions.
7. Industry & Policy Actions	Reformulation of menu items, taxation on sugary drinks, mandatory nutritional disclosures.
8. Individual Behavioral Changes	Mindful eating, reduced portion size, healthier food choices, regular physical activity.
9. Conclusion	Urgent need for multi-level action from individuals, governments, and the food industry to curb fast food-related health risks.

1. THE RISE OF FAST-FOOD CONSUMPTION

Fast food consumption has increased globally over the last few decades. As globalization, urbanization, and recent innovations began to proliferate, fast food businesses opened in both the developed world and emerging markets. Fast food plays a significant role in daily life because it is accessible, affordable, and the most convenient method of consumption (Mumena et al., 2022). Fast food typically consists of small portions, set menus, and affordable prices, which are appealing to busy groups, especially in urban areas. The fact that fast food is easily accessible and inexpensive encourages people to opt for fast food as a meal option, hence the increased prevalence of fast-food consumption (Selvam et al., 2020).

Several factors have contributed to the global surge in fast-food consumption. A major possible reason is the continuous and rapid growth of cities, along with the metropolitan lifestyle, in which people are working more and have less time to prepare home-cooked meals. With the expansion of urban centers, fast food chains are now found not only in city centers but also in suburbs, making them readily available for people (Bayrami et al., 2023). Moreover, the rise in convenience culture has also enabled chains of fast-food restaurants to capitalize on the services they offer, such as drive-through, delivery, or extended hours. This quality of fast food has made it the ideal meal for the fast-paced modern society, especially for working-class citizens, students, and busy families (Bakaloudi et al., 2022).

Furthermore, the marketing techniques employed by fast-food chains have significantly contributed to the widespread popularity of fast food. Advertising campaigns, especially those targeted at younger consumers, have played a significant role in shaping preferences and consumer behavior (Karisa & Dewi, 2022). Types of advertisements, such as employing a celebrity, offering promotions, and sponsoring special occasions, make the fast-food label very well-known and appealing. Such marketing is not limited to traditional media, primarily television or print, but also extends to social media platforms, where fast-food brands interact with their audience, forming a sense of loyalty and emotional connection. As a result, most consumers — particularly adolescents and young adults tend to choose fast food not only based on taste but also on the relatively high perceived social status and modernity of the food compared to traditional food (Jafari-Maskouni et al., 2022).

Another reason fast food is gaining traction is the growing or ever-decreasing cost of fast food, predominantly in low- and middle-income nations. Even fast-food joints offer meals at a lower cost than the price of freshly cooked, healthy food in restaurants (Hidaka et al., 2018). Because fast food generally costs less, it is a good option for families with limited financial resources or individuals with tight budgets. Fast food chains are often able to attract a larger consumer base through price promotions and discounts, ensuring their food remains within reach of most socio-economic groups. Notably, this aspect of affordability, when combined with convenience, has led to a growing dependence on fast food as a primary source of nutrition, particularly among lower-income individuals (Liu et al., 2020).

2. NUTRITIONAL COMPOSITION OF FAST FOOD

The health risks associated with fast food are also significantly influenced by its nutritional composition. The high caloric density, high fat, sugar, and salt content, and low dietary fiber and other essential nutrient content are features of fast food that led to chronic diseases such as obesity, cardiovascular diseases, and type 2 diabetes. Fast food seems appealing because it is quick and easy, but the easy way often means that it lacks real nutrients (Isa et al., 2022).

The high caloric density of fast food is a hallmark. Most fast food is created to be hyper-palatable, with skillfully injected sugar and fat to produce an optimum flavor and taste. This makes fast food meals extremely calorically dense, packing a high number of calories into a small volume. One fast-food burger can contain more than 500–700 calories, with larger portions containing over 1,000 calories (Kazi et al., 2020). When combined with supersizing and calorie-dense sides, such as fries or soft drinks, fast food meals can exceed the daily caloric needs of most adults. Regular consumption of extra calories can cause weight gain and contribute to obesity, which is a significant risk factor for many chronic diseases (Kazi et al., 2020).

Fast food is well-known for being high in calories, but it is also high in unhealthy fats, including, specifically,

trans fats and saturated fats. This is most prevalent in fried foods, pastries, and processed meat products, all of which are staples of the fast-food industry. Fats are most notably blamed for raising low-density lipoprotein (LDL) cholesterol (the "bad" cholesterol) and lowering high-density lipoprotein (HDL) cholesterol (the "good" cholesterol), especially trans fats (Huang et al., 2020). This imbalance can lead to the formation of plaques in the arteries, known as atherosclerosis, which greatly increases the risk of heart disease and stroke. Saturated fats also increase LDL cholesterol; these fats are somewhat safer than the earlier ones, but they also increase the risk of CVD. Frequent consumption of these unhealthy fats available in fast food is associated with a high incidence of coronary artery disease, hypertension, and other cardiovascular diseases (Mohiuddin & Nasirullah, 2019).

An additional surprising piece of the fast food nutrition puzzle is the sodium content of fast food. Fast food companies tend to add salt to their foods in larger amounts so that they taste more flavorful and retain their freshness for a longer time (Huang et al., 2019). Additionally, numerous health problems are associated with sodium intake through fast food consumption. A typical fast-food meal contains a significant amount of sodium, often exceeding the daily recommended amount in a single serving. For instance, just one extra-large serving of fries from a fast-food restaurant, a burger, and a soft drink can exceed 2,000 mg of sodium, which surpasses the daily recommended maximum for most adults. Excess sodium consumption is a major risk factor for hypertension or high blood pressure, which is one of the main causes of stroke, heart disease, and chronic kidney disease. Additionally, the saltiness of fast food can lead to an electrolyte imbalance, resulting in water retention and a swollen abdomen, which can further compromise overall heart health.

The unhealthiest aspect of fast food is its lack of essential nutrients. Fast food and junk food are energy-dense, rich in calories, and provide some degree of protein and carbohydrates. However, they are lacking in essential vitamins, minerals, and fiber, which are necessary for optimal health. Most fast foods are ultra-processed foods that have had their nutrients removed or altered (Shahid et al., 2023). For instance, in most fast-food sandwiches and burgers, the bread is primarily made of refined flour, which is low in dietary fiber. Moreover, fast food generally includes very few fruits and vegetables, which are the most important sources of vitamins, antioxidants, and dietary fibers. The absence of these core nutrients can result in deficiencies in health-critical categories, such as vitamin C, potassium, and fiber, which are essential for the immune system, digestion, and blood pressure control. In the long term, a poor diet can compromise the immune system, contribute to gastrointestinal issues, and increase susceptibility to infections and chronic diseases (Theard, 2021).

In addition, the imbalanced nutrition levels of fast food contribute to the problem, as fast food eaters are more likely to choose unhealthy snacks and drinks that further compromise dietary quality. Soft drinks loaded with sugar are often served with fast food meals and can add excessive sugar to the diet. These drinks are virtually devoid of nutritional value, supplying only empty calories that contribute to weight gain and insulin resistance. Fast food sodas are super sugary, and this high sugar level is related to type 2 diabetes, a chronic condition that causes high blood sugar, insulin resistance, and other health problems (Isa et al., 2022). Indeed, research has shown that regular intake of sweet drinks is one of the most significant dietary contributors to increasing rates of obesity and diabetes worldwide. Finally, as fast food does not contain essential nutrients found in fruits, vegetables, and whole grains, consumers are missing out on vital nutrients important for metabolism, digestion, and overall health (Wellard-Cole et al., 2019).

Perhaps the most concerning aspect of fast food from a nutritional standpoint is its lack of essential nutrients. While fast food is calorie-rich and may provide some amount of protein and carbohydrates, it often lacks key vitamins, minerals, and fiber necessary for maintaining good health. Many fast-food options are heavily processed, with ingredients that have been stripped of their natural nutrients (Forouzesh et al., 2020). For example, the bread used in most fast-food sandwiches and burgers is often made from refined flour, which provides little to no dietary fiber. Additionally, fast food items typically contain very few fruits and vegetables, which are critical sources of vitamins, antioxidants, and dietary fiber. The lack of these essential nutrients can lead to deficiencies in vital areas, such as vitamin C,

potassium, and fiber, all of which are necessary for maintaining a healthy immune system, proper digestion, and balanced blood pressure. Over time, a diet that is low in essential nutrients can result in a weakened immune system, digestive issues, and increased susceptibility to infections and chronic diseases (Chikowore et al., 2017).

Moreover, the nutritional imbalances found in fast food are compounded by the tendency of fast-food consumers to opt for unhealthy side dishes and beverages, further diminishing the overall quality of their diets. Sugary soft drinks, for example, are commonly paired with fast food meals and contribute to excessive sugar intake. These sugary beverages provide little to no nutritional value, offering only empty calories that can lead to weight gain and insulin resistance (Mackay et al., 2021). The high sugar content in fast food sodas is linked to the development of type 2 diabetes, a chronic condition characterized by insulin resistance and high blood sugar levels. In fact, studies have shown that the regular consumption of sugary drinks is one of the strongest dietary factors contributing to the rise in obesity and diabetes globally. Additionally, the lack of nutrient-dense foods like fruits, vegetables, and whole grains in fast food meals means that consumers are missing out on essential nutrients that support metabolic health, digestion, and overall well-being (Wellard-Cole et al., 2019).

3. HEALTH RISKS LINKED TO FAST FOOD CONSUMPTION

Fast food is often linked to several poor health effects, especially the increased risk of obesity and chronic diseases due to its frequent consumption. Fast food provides convenience at an affordable price, but the nutrient imbalance of calorie-rich, high-fat, high-sugar, and high-sodium foods that are inherent to fast food is a public health threat (AlTamimi et al., 2023). The increased risk of becoming overweight is one of the most immediate and obvious ways in which fast food affects health. Fast food meals are nutrient-dense, meaning they are high in calories in a small amount of food. This is often because these calories have come from unhealthy sources, such as refined carbohydrates, unhealthy fats, and sugars, which create an energy imbalance in the body (Alimoradi et al., 2017). If this pattern of eating persists, these meals can quickly exceed the recommended calorie intake and lead to weight gain over time. Then there are the marathon portions of fast food, with portion sizes ballooning over decades. A single fast-food meal can easily exceed the recommended daily calorie intake, resulting in the consumption of more calories than needed while still not providing enough nutrients and leaving one feeling unsatisfied (Selvam et al., 2020).

A recent study has confirmed the association between fast food and obesity, especially in children and adolescents. According to a National Institute of Health (NIH) study, children eating fast food more than twice a week had a considerably greater chance of being overweight or obese than those consuming it less. Such fast food is energy-dense and nutrient-poor, which leads to overeating and unhealthy eating habits (Noor et al., 2021). Furthermore, eating fast food quickly, usually in a sexualized environment, may make people less conscious of portion sizes and lead to automatic overconsumption. This, alongside sedentary behavior, has resulted in an increased risk of obesity, which is the leading risk factor for several chronic diseases, including cardiovascular disease, type 2 diabetes, and some cancers (DoostMohammadi et al., 2019).

In addition to causing obesity, fast food consumption is a central factor in the development of chronic diseases. Fast food intake is a contributing factor to the high intake of unhealthy fats, glucose, and sodium, contributing to the development of cardiovascular diseases, type 2 diabetes, and metabolic syndrome. Trans fats and saturated fats found in many fast foods increase cholesterol in the arteries, making it a high-risk factor for heart disease and stroke (Shahzad et al., 2022). Research shows that individuals who consume much fast food are more prone to atherosclerosis, a disease characterized by plaque building up inside the arteries, which causes narrowing and reduces blood flow. This increases the chances of heart attacks and strokes and is also a major cause of high blood pressure, which contributes to more stress on the cardiovascular system (Zhou et al., 2021).

Moreover, the excessive presence of sodium in fast food is a known factor that contributes to hypertension (high blood pressure). When we have too much sodium, our body has to retain more fluid, which causes a rise in pressure and increases pressure

on the heart as shown in Figure 1. In the long term, this results in the onset of cardiovascular diseases, such as heart failure and chronic kidney disease. Soft drinks have a high sugar content, and this type of commodity has also been proven to promote type 2 diabetes in people. Eating much sugar increases blood sugar levels, and diabetes is diagnosed based on insulin resistance. Studies have shown that frequent fast-food consumption is associated with a high risk of metabolic syndrome, a cluster of conditions (obesity, high blood pressure, and insulin resistance) that increase the risk of heart disease and stroke (Żółkowska et al., 2024).

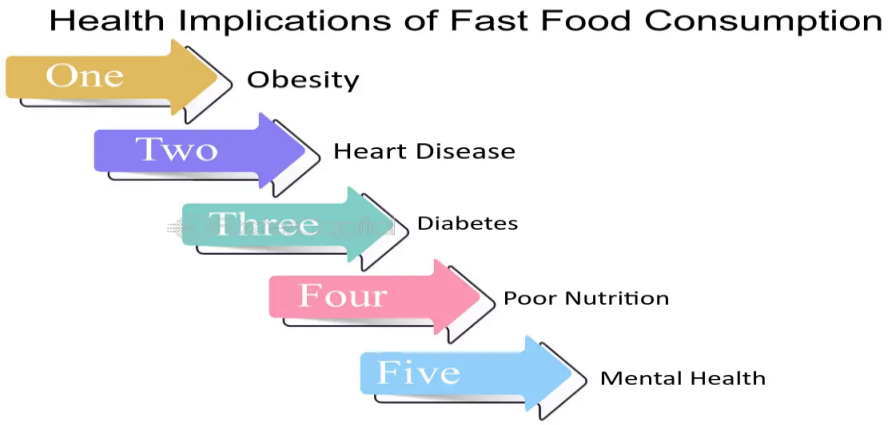

Figure 1: A stepwise flowchart illustrating five major health implications of fast-food consumption, including obesity, heart disease, diabetes, poor nutrition, and mental health issues.

Fast food health risks are not just about physical diseases, but also mental health-related issues and emotional well-being as shown in Figure 2. Evidence has continued to be illuminated around the links between unhealthy diets, including a high amount of fast food, and the health of the mind, including depression, anxiety, and cognitive decline. High fast-food consumption may negatively affect mental health through several mechanisms, although the relationship between diet and mental health is complex. This is because fast food lacks nutrients. Excessive consumption of unhealthy fats, sugars, and processed foods may create imbalances in brain chemicals that regulate mood, energy levels, and cognitive Function. For instance, omega-3 fatty acids found in seafood play a crucial role in brain function. However, they are generally missing from fast food, and the trans fats and refined sugars that typify fast food diets can promote inflammatory and oxidative changes associated with depression and cognitive dysfunction (Tang & Lee, 2024).

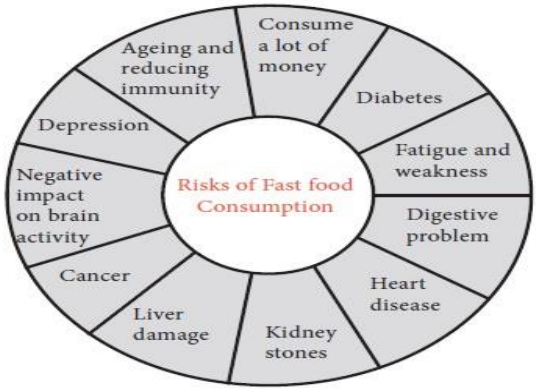

Figure 2: A circular diagram summarizing twelve diverse health and lifestyle risks associated with fast food consumption, such as diabetes, heart disease, digestive problems, cancer, and mental health decline.

Fast food is another area that affects the gut microbiome. The gut microbiome is a diverse collection of bacteria and microorganisms residing in the gut that plays a crucial role in maintaining mental health. Research has shown that the gut bacteria associated with diets high in processed foods — the typical diets consumed when eating out at fast-food restaurants — are the same that hurt both mood and performance (Ma, 2020). This disruption of the gut microbiome has been associated with increased anxiety, stress, and depressive symptoms. Finally, regularly consuming fast food, sometimes as a social activity, can lead to dysfunctional eating habits that are linked to distress, low self-esteem, and body image issues and intensify mental health conditions (Yu, 2022).

Other studies have suggested that fast-food consumption may increase the risk of developing eating disorders. Fast food is easy to obtain, easy to eat, and generally loaded with calories but lacking in nutritional value, which can lead to overeating and the development of unhealthy eating habits (Li et al., 2020). Because fast food is often consumed in response to stress or negative emotions (also known as emotional eating), it can set the stage for this pattern of eating to develop. These habits can develop over time into more serious eating disorders, such as binge eating disorders and bulimia. Eating low-nutrient foods with high calories in response to emotional triggers creates a cycle that reinforces guilt and shame, thereby adding to mental health issues (Yu, 2022).

4. INTERVENTION AND PREVENTIVE MEASURES

Solutions to the increasing public health concerns regarding the associated risks of fast-food consumption must encompass a combination of interventions, including public health initiatives, modifications within the fast-food sector, and individual behavioral strategies. Raising awareness of the detrimental health effects of fast food and encouraging people to adopt healthier eating habits could play a beneficial role (Teo et al., 2019).

Public health campaigns are among the most effective strategies for reducing fast food consumption and promoting awareness of related health issues. Government and NGO programs aim to improve diets through education and mass media campaigns. These campaigns typically aim to educate the public on the negative health impacts of eating too much fast food, including obesity, heart disease, and diabetes (Nabila et al., 2024). For example, initiatives that promote a balanced diet rich in fruits, vegetables, and whole grains have positively influenced the eating habits of communities. Food advertising, especially to children, is another area where public health authorities play a crucial role, as children are a vulnerable target for the marketing strategies of fast-food chains. One method that authorities can use to tackle this issue is to limit advertisements of unhealthy foods through channels such as television and social media platforms, thereby encouraging children to opt for healthier options instead of fast food (Frates, 2023).

Mass media campaigns, school-based food and nutrition education, and workplace initiatives can all support the consumption of healthy dietary practices. Nutrition education programs within schools will enable children to learn about healthy eating and make informed choices regarding food consumption (Cole et al., 2022). Schools can also create policies that limit access to vending machines and provide healthy drink and snack options, rather than just low-calorie ones. Workplaces can also help encourage healthy eating by offering healthier meal options in their cafeterias or providing employees with nutritional resources. If healthy eating becomes the expected norm of society, public health campaigns and educational initiatives can help change societal perceptions of food and eventually diminish fast food consumption (Sadegholvad et al., 2016).

The fast-food industry itself is a significant part of the solution to the health risks associated with it. Over the past few years, there has been a movement to encourage fast food and restaurants to offer more healthy options on their menus, limit portion sizes, and provide consumers with nutritional information. Fast food chains have begun to respond to this pressure by offering salads, fruit cups, and low-calorie alternatives to traditional fast food, such as grilled chicken instead of fried chicken (Kwiatkowska et al., 2017). Additionally, several fast-food establishments have begun to provide nutritional information on their menus and websites to help consumers make more informed choices. However, for those who do not have time to prepare meals at home or have no

way to make healthy choices when eating out is inevitable, these changes help them make informed decisions (Xu et al., 2021).

Finally, the last key area of the fast-food industry that could help positively influence public health is through portion control. Most fast-food meals are characterized by large, expensive meal portions that can lead to excess calorie consumption, contributing to weight gain. Reducing portion sizes and decreasing caloric content are two strategies that fast food establishments can employ to mitigate the impact of their offerings on public health (Steenhuis & Poelman, 2017). Several companies have developed alternative entrée options that are marketed as "healthy" by implementing a general reduction in portion size and caloric content, thereby appealing consumers who priorities wellness. Additionally, many fast-food meals can be reformulated to maintain taste while reducing trans fats, sodium, and added sugars. Although slow, such changes can significantly reduce the health risks associated with junk food and promote healthier diets among consumers (Cobo et al., 2022).

Individual behavior change also needs to occur, along with public health campaigns and changes in food. Offering messages that lead to an ordering of healthy consumption may also help individuals consume food, including healthy options, which can support a sustainable lifestyle. Such a strategy involves promoting mindful eating. Mindful eating recommends listening to hunger cues, chewing slowly, and avoiding distractions while eating, such as watching TV or scrolling through smartphones (Maneesing et al., 2023). This practice also prevents binge eating and encourages individuals to pay more attention to the quality of food, rather than just its convenience or taste. Mindful eating fosters greater insight into food choices, promotes healthy decision-making, and helps avoid fast food (Cornil & Chandon, 2016).

Along with mindful eating, lifestyle modifications that include regular exercise are key to addressing the harmful effects of fast food. Fast foods are loaded with calories, and exercise helps burn the excess calories. The disadvantages of obesity and its association with cardiovascular ailments can be mitigated by regular exercise. Encouraging people to engage in any physical activity, such as walking, cycling, or taking fitness classes, can significantly improve their health and mitigate the effects of a poor diet (Torrence et al., 2018). These lifestyle changes can be supported by expanding access to parks and exercise facilities as well as offering community programs that promote active living. People who exercise regularly tend to gain less weight and cope better with the chronic effects of fast-food diets (Finlay et al., 2023).

Furthermore, fast food consumption can be minimized by government action through policy changes. Many other governments are already implementing policies that help compel nutrition labelling on fast food packaging and menus, which have proven effective in changing dietary choices among consumers (Bucher et al., 2016). These policies promote consumer choice by improving access to accurate nutrition information regarding the food being consumed. In addition, they could also apply taxes to sugary beverages and energy-dense, nutrient-poor foods, which have led to a reduction in their consumption in multiple nations. These "sin taxes" can disincentivize the consumption of unhealthy products, with wider positive economic impacts because the revenues can be used to fund other resources aimed at improving public health (Robinson et al., 2016).

Urban planning policies that support the development of improved food environments are also key. For instance, reducing access to fast food in food deserts or areas where healthy food is not readily available ensures that people from all walks of life can eat healthily. Governments are in an ideal position to act on the availability and costs of healthy foods to decrease fast food reliance, ultimately changing the health profile of populations (Ali et al., 2018).

5. CONCLUSION

Fast-food consumption has emerged as an important public health issue because of its close relationship with obesity and the development of chronic diseases, including cardiovascular disease, type 2 diabetes, and mental health disorders. The nutritional profile of fast food—high in calories, unhealthy fats, added sugars, and sodium—has contributed to the worldwide epidemic of nutrition-related diseases. Although fast food represents an easy and inexpensive way to eat, it is one of the primary causes of adverse dietary habits and one of the most attractive options for children

and adolescents, who are more susceptible to indirect advertisements and poor dietary habits. Providing a solution to the negative health effects of fast food is not a simple matter; it is a complex combination of public health campaigns, food industry regulatory changes, and individual behaviour adaptations. They can, in turn, be encouraged to curtail their consumption through government policy, for example, by limiting the automatic suggestion of unhealthy foods, promoting nutritional guidelines passively, and developing healthier food options via a cost tax and clear labeling of food products. Ultimately, the fast-food sector should be encouraged to reformulate these products to remove harmful ingredients and introduce healthier alternatives. In addition, encouraging mindfulness in eating, physical activity, and making healthy food choices in everyday life can help people make healthier choices for themselves. Addressing the adverse health impacts of fast food will ultimately require concerted action by individuals, the food industry, and public health authorities to help create healthy environments and mitigate the menace of chronic diseases in the global population.

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