



# Review on Health Impact of Fast Food on Younger Children

**Vrushali Dighikar<sup>1\*</sup> and Seema Singh<sup>1</sup>**

<sup>1</sup>Department of Medical Surgical Nursing, Smt. Radhikabai Meghe Memorial College of Nursing, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (Meghe), Wardha, India.

## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/JPRI/2021/v33i44B32662

*Editor(s):*

(1) Dr. Barkat Ali Khan, Gomal University, Pakistan.

*Reviewers:*

(1) Tasnim, Universitas Mandala Waluya, Indonesia.

(2) Hong Duck Kim, New York Medical College, USA.

(3) N. K. Gayathri, Acharya N.G. Ranga Agricultural University, India.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/73107>

**Review Article**

**Received 21 June 2021**  
**Accepted 31 August 2021**  
**Published 22 September 2021**

## **ABSTRACT**

“Fast food is a food which is speedily available as well as provides, frequently at eating places as well as seasonally related with not so much cost and nutritional things like hamburgers, French fries, and soda.” The teenagers of today will be the future of tomorrow; therefore, concentrating on today's adolescents and educating them on how to modify their behaviours toward healthy eating patterns is critical. The dietary issue is one of the most serious health issues confronting millions of children of all ages. There are lots of effects of fast food on the health of adolescents. Because of peer pressure, shortage of time, attractive packages and tastes they become closer to take fast food. Fast foods are at large quantity obtain in educational institutions through various stores. Canteens are available in educational institutions to offer soda water, soft drink, cracks and lots of other foods of less nutritious rate(value). There are many ill impacts and effects of fast food and persons are not aware of its dangerous effects. It can cause many harmful disorders. Prolonged use of fast food is the reason for medical issues, chubbiness means obesity, GI Tract problem and increased fat. Excessive intake of fast foods may reduce appetite and eliminate the chance for nutrients in foods. These quick meals are rich in fat, salt, and sugar, and they are the root cause of chronic illnesses such as obesity, diabetes, and cancer in later years of life. This review focuses on what is fast food and its effect on adolescents and the evidence of its effects on mortality, morbidity and quality of life.

*Keywords: Fast food; the effect of fast food; adolescents; medical problems.*

## 1. INTRODUCTION

Fast food is a food that is speedily available as well as provides, frequently at eating places as well as seasonally related with not so much cost and nutritional things like hamburgers, French fries, and soda [1]. During this age range, good diet is a key priority. The days of high school and upper secondary school are full with educational obstacles that need a long attention span and stamina. Changes in our culture have increased the need for food, to the point where basic education is required for optimal health and survival. Poor nutritional habits, such as eating fast food, might stifle a child's growth and development. It can weaken the requirements of learning and also the energy of adolescents, thus it is necessary that the analyse what effect fast food has on health and the health hazards of poor eating habits such as fast meals and to live their life free of physical and mental problems [2]. In this review I refer 18 studies according to their findings it is found that the fast food are very harmful to adolescents and having bad health impact on their health because everyone is eating fast food in their daily lifestyle which was having lot many effect on the health.

### 1.1 Concept of Fast Food

Fast food is thought to have been coined in 1972 by Michael Jacobson, the director of the Center for Science in the Public Interest. He stated that fastfood is a derogatory phrase for food that has no nutritional value and is frequently rich in fat, sugar, salt, and calories [3].

### 1.2 Meaning of Fast Food

Fast food is a colloquial word describing food with minimal nutritional value and is often rich in fat, sugar, and calories. Fast foods are rich in fatty acids and sugar contents, as well as salt and a lack of fibre [4]. The only explanation for their increasing popularity and consumption is that they are ready to eat and simple to prepare. Fast food is given a very appealing appearance by adding food additives and colours to improve flavour, texture, and shelf life [5].

### 1.3 Common Types of Fast Foods used by Adolescents

Soft sweetened drinks and cola beverages, carbonated beverages, salted snacks, chewing

gum, and chocolate are examples of frequent quick eats. Fried fast foods such as pizza, burgers, pani puris, samosas, and so on, Fried Crispy products such as French fries, potato chips, and various types of salted chips, Noodles, Ice candy and ice cream, wafers [3].

### 1.4 Promoting Factors of Eating Fast Foods among Adolescents

Breakfast and meals are skipped. Inadequate time, In the morning, I have a lack of hunger. Fast food consumption is high.

### 1.5 Media

Television commercials, the Internet, children's magazines, Peer Influence Vending machines in close proximity to a school, Availability of pocket money for purchasing fast food [6-7].

## 2. HARMFUL INGREDIENTS IN FAST FOODS AND ITS EFFECT

### 2.1 Soft Drinks

Non-alcoholic carbonated or sweetened liquids are referred to as soft drinks. They are also referred to as soda or soda pop [8].

#### 2.1.1 Harmful ingredients in soft drinks

- Soda Pop - A sodium salt of carbonic acid often found in soft drinks.
- Caffeine: is present in coffee and tea as a stimulant. It is used in soft drinks to enhance the taste.
- Aspartame: is a powerful neurotoxic and endocrine disrupting agent that is used in dietary sodas.
- Citric Acid: It contains MSG traces, is a neurotoxic
- Phosphoric Acid: It is used to smooth out the drink.
- Artificial Sweeteners and Flavors: Saccharin is an artificial sweetener for soft drinks. It's 400 times sugar sweeter.
- Preservatives: Drinks with a long shelf life are protectives, such as salt and artificial colour [9-10].

### 2.2 Effect of Harmful Ingredient

- Sweeteners: Sweetened drinks increase caloric intakes, contributing to child obesity

and also adding unnecessary non-nutritious calories to a diet when the diet leads to child obesity, and increasing body weight index (BMI) each Soft Drink increments BMI to 14 kg/m<sup>2</sup>. • Sweeteners also contribute to obesity.

- Phosphoric acid: Calcium moves out of bones, decreases the bone density and leads to weaker bones or osteoporosis, like phosphoric acid included in soft drinks (colas). The tooth rot is also responsible (loss of enamel on the teeth, causing yellow teeth), which frequently consumes the enamel layer of the teeth, which is extremely rapidly depleted. Phosphoric acid cola drinks contribute to kidney stones.
- Aspartame: It replaces sugar in coke and it leads to a career.
- Caffeine: Caffeine causes anxiety, headaches, irritability, lack of focus, and inability to sleep. It also causes GI disturbances due to reverse gastric erosion of the stomach lining, which causes significant stomach pain in the youngster.
- Artificial Sweeteners: - They can cause migraine headaches, memory loss, and depression as well as other adverse effects.
- Kidney stones: Kidney stones can be caused by cola drinks that contain phosphoric acid. It has been established that soft drink intake is linked to a 23 percent increased risk of kidney stones in youngsters [3].

### 3. PESTICIDES

Pesticides including lindane, DDT, and Malathion have been found in Coke and Pepsi Soft Drinks, according to studies. According to the CSE study, this prompted numerous state governments to prohibit the sale of soft beverages in schools (August 2006). Between 2003 and 2010, there were several alarming results, which led to decreased immunity and reproductive problems in youngsters.

### 4. SALTED SNACKS

Snacks are a type of light, casual meal. The majority of snacks consumed by youngsters, such as difficult-to-find chips and some types of biscuits, are high in salt. Excessive salt is bad for the body because sodium, together with potassium, keeps the body's water balance in

check. However, too much salt raises blood pressure (Hypertension, increasing risk of the early onset of heart disease and stroke in children).

### 5. CHEWING GUM

The ingredient of chewing gum has high sugar content (Saccharine) and it has strong bonding nature due to the presence of polymeric hydrocarbons. It bonds strongly where ever it gets struck. Frequent chewing of chewing gum leads to tooth decay in children & cavities sometimes lead to intestinal blockage in children. There are several cases that children swallowed chewing gum & it leads to constipation and intestinal blockage. It also imbalance the digestive process and cause bruxism (teeth grinding). Excessive use can cause mouth ulcers (Unbranded gums).

### 6. CHOCOLATES

Cocoa powder, caffeine, sugar, tyramine (found in processed chocolates), oxalic acid, and other possible components are found in chocolates. Many studies have shown that dark chocolate improves health and reduces the risk of heart attack. However, excessive consumption in youngsters should be monitored [11].

### 7. EFFECT ON HEALTH

#### 7.1 High Calories

Excessive chocolate intake can lead to weight gain and obesity, which are risk factors for a variety of illnesses, including cardiovascular disease in youngsters.

#### 7.2 Acne

Certain meals, such as sugar, corn syrup, and another simple carbohydrate, might develop acne in older children, according to common opinion.

#### 7.3 Addiction / Craving

Chocoholics are youngsters who have a strong need for chocolate or who consume it compulsively.

#### 7.4 Cavities

Chocolate's refined sugar contributes to tooth damage by promoting the development of germs

in the mouth. Children get dental cavities as a result of this.

## 7.5 Caffeine

Chocolates include more caffeine, which acts as a stimulant, causing the kid to feel more active, have difficulty sleeping, and have a faster heart rate [12-13].

## 8. FRIED FAST FOOD

Fast food is defined as food that is made and served rapidly. Noodles, Pizza, Burgers, French Fries, Samosa, Panipuri, and more dishes are included.

### 8.1 Ingredients

- Ajinomoto: Monosodium glutamate (Chemical) is a flavour enhancer used in food.
- Oil: Palm oil or hydrogenated oil is used in the preparation of the majority of fast meals. It has a lot of transfecting in it.
- High sodium level: All fast meals include high salt levels beyond a specific threshold of 1000 mg, which can cause water retention and elevated blood pressure in youngsters.
- Increased calories and fat: Pizza and hamburgers are high in calories and fat, but they are also low in vitamins, minerals, and fibre.
- Acrylamide: Acrylamide is a carcinogen or neurotoxic that forms in foods through high-temperature cooking, baking, roasting, and extending.
- Chemical Preservatives: Salt & Sugar: Trans fats and hydrogenated fats are commonly used to extend the shelf life and flavour of processed goods. Trans fats are created by the food industry in order for inherently fatty and oily items to seem fresh [3].

### 8.2 Effects

- Ajinomoto: It is a cancer-causing component in fast food.
- Excessive use of fat, carbohydrate: As a result, children's weight growth increases, resulting in childhood obesity.
- Oil: The use of the same oil for fancying on a regular basis produces a rise in

carcinogens in the body, which leads to cancer.

- Ulcerative Colitis: Children will get ulcerative colitis if they eat burgers on a regular basis.
- Trans fats: Trans fats found in fast food raise cholesterol levels, which can contribute to heart attacks and strokes later in life.
- Diabetes: A high intake of potatoes and fresh juices is linked to a higher risk of diabetes.
- Gastro-Intestinal Disturbances: In children, improper fastfood cooking, an unsanitary atmosphere, and eating raw or rotten meat in fast food causes indigestion, food poisoning, vomiting, and diarrhoea [3].

## 9. NOODLES

Noodles, commonly known as instant noodles, are a popular quick snack for kids

### 9.1 Ingredients

- High sodium content: Noodles have a high sodium level, which poses a health concern. The salt content of a cup of noodles is 800 mg.
- High in Monosodium glutamate (msg): msg gives flavour to the noodles, and cup noodles have a lot of it.
- Propylene glycol: Propylene glycol is found in noodles and has antifreeze qualities that keep the noodles from drying out.
- Carbohydrate: It's high in carbs but low in vitamins, minerals, and fibre.
- Preservatives and plasticizers: Preservatives are used in the noodles, while plasticizers are used in the packaging cup.
- Ajinomoto: The Masala used to make noodles contains a lot of Ajinomoto, which causes children's digestion to be messed up [14].

### 9.2 Effects

- Affects Nutrient Absorption: Noodles inhibit the body's capacity to absorb other nutrients from meals like fruits and vegetables. It has an effect on digestion after many hours of eating.
- Kidney stones: The high salt level raises the risk of kidney stones and other kidney issues in youngsters.

- Allergic reactions: Children will have rapid headaches and a burning feeling in their stomach due to the presence of Mgs or Mono Sodium Glutamate [3].

## 10. FRIED CRISPY ITEMS

Fried crispy foods include potato chips, corn chips, deep-fried potato products such as French fries, lay, and KFC's deep-fried chicken.

### 10.1 Ingredients

- Acryl amide: Acrylamide is a carcinogen that is produced when high heat are used to fry chips. They should be 300 times higher than the safe limits, according to the WHO.
- High sodium level: All deep-fried foods have a high sodium content to improve the taste.
- Trans-fat (Hydrogenated oil): Trans-fat (Hydrogenated oil) is used to create a crispy texture as well as a longer shelf life and freshness [3].

### 10.2 Effects

- Obesity: The frequent intake of fast meals is one of the leading causes of obesity in youngsters. Experts say that stuffing your plate with calories puts your health at jeopardy and can lead to a variety of lifestyle disorders [15].
- Diabetes: Children who consume high-sodium, high-fat, and high-sugar foods are more likely to acquire type 2 diabetes as an adult.
- Cardiovascular diseases: An excessive quantity of fat intake clogs the arteries, resulting in plaque development and serious heart failure, such as a myocardial infection, later in life.
- High Blood Pressure: Too much salt causes high blood pressure.
- Cancer: Fast meals, which are high in dietary fibre and poor in nutritional value, are the leading cause of breast and colorectal cancers [16-17].

## 11. ICE CREAMS AND ICE CANDY

Ice creams contain a lot of milk products in them, as well as a lot of sugar, artificial flavours, preservatives, thickness, and artificial sweeteners.

### 11.1 Effects

- Children who consume too much sugar get cavities. Teeth can be fractured or cracked if they are exposed to the cold on a regular basis.
- Artificial sugar sweeteners like aspartame and saccharine have been linked to bladder cancer and hyperactivity in youngsters.
- Colorants: There are approximately 3,000 tonnes of synthetic colourants, the majority of which are generated from tar coal. In children, they are known to induce hyperactivity, respiratory difficulties, and asthma.
- Artificial Flavorings: Of all the addictive substances, the most often used are artificial or natural flavourings, which include a plethora of compounds that cause behavioural and allergic responses in children, as well as learning issues [3].

### 11.2 Psychological Effects of Fast Foods

- Eating fast food is also one of the childhood addictions.
- Children's hyperactivity and attention lapses are caused by high sugar content and food colouring.
- Artificial colouring causes learning problems and a lack of attention in the classroom.
- Poor eating habits deplete their strength and contribute to low self-esteem, poor family relations, and a lack of engagement in sports and activities.
- IQ scores in later years of life are influenced by food habits in early childhood and school days, according to several research. Nutrition during childhood aids in the development or construction of a developing brain [18].

## 12. CONCLUSION

In the Garden of Eden, Fruit was given to our first parents as a part of their original diet. Sound Nutrition plays a vital role in the prevention of several chronic diseases including obesity, coronary heart disease, diabetes, hypertension and even cancer in children. To prevent disease healthy eating habits should be established in childhood by educating the children about a

balanced rich diet so that they can live a disease-free life in adulthood.

## DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Smith AF. Encyclopedia of junk food and fast food. Greenwood Publishing Group; 2006.
2. World Health Organization. Nutrition in adolescence: issues and challenges for the health sector: issues in adolescent health and development.
3. Shirely C. Effectiveness of planned instructional module regarding knowledge about health hazards of junk foods among school children in selected school at Vellore (Doctoral dissertation, Arun College of Nursing, Vellore).
4. Whitaker J. The Mini-fast Diet: Burn Fat Faster Than Ever with the Simple Science of Intermittent Fasting. Rodale; 2013.
5. French SA, Story M, Neumark-Sztainer D, Fulkerson JA, Hannan P. Fast food restaurant use among adolescents: associations with nutrient intake, food choices and behavioral and psychosocial variables. International journal of obesity. 2001;25(12):1823-33.
6. Story M, Neumark-Sztainer D, French S. Individual and environmental influences on adolescent eating behaviors. Journal of the American Dietetic association. 2002;102(3):S40-51.
7. Sabaghzadeh Tousi A. Impact of Tv Advertising on Children's Food Choices (Doctoral dissertation, Istanbul Aydin University Institute of Social Sciences).
8. Christensen E. True Brews: How to Craft Fermented Cider, Beer, Wine, Sake, Soda, Mead, Kefir, and Kombucha at Home. Ten Speed Press; 2013.
9. Khatri P, Shalini R. Additives used in soft drinks. Beverage and Food World. 2008:30-4.
10. Sidorov M. Steps to Health. The Big Diabetes Lie, ICTM. 2015.
11. Bell AM. Consumer Activism: An Analytical and Philosophical Prototype for Point of Purchase in the 21st Century (Doctoral dissertation, WORCESTER POLYTECHNIC INSTITUTE).
12. Sondike SB, Copperman NM, Jacobson MS. Bringing a formidable opponent down to size. Contemporary Pediatrics. 2000;17(5):133.
13. Porta M. A dictionary of public health. Oxford University Press; 2018.
14. Greene JH. Restricting dietary sodium and potassium intake: a dietitian's perspective. Daugirdas JT. Handbook of Chronic Kidney Disease Management. Philadelphia, PA: Lippincott Williams & Wilkins. 2011:81-96.
15. Delpeuch F. Globesity: a planet out of control?. Routledge; 2013.
16. Tangvarasittichai S. Oxidative stress, insulin resistance, dyslipidemia and type 2 diabetes mellitus. World journal of diabetes. 2015;6(3):456.
17. Hongbao M, Shen C. Cardiovascular diseases, protection and treatment. Nature and Science. 2006;4:68-78.
18. Gnanagowri V. Effectiveness of Structured Teaching Programme on Health Hazards of Junk Foods among School Children (Doctoral dissertation, Adhiparasakthi College of Nursing, Melmaruvathur).

© 2021 Dighikar and Singh; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:  
<https://www.sdiarticle4.com/review-history/73107>