



A REVIEW ON FAST FOOD, IT'S INGREDIENTS AND OCCURRENCE OF DISEASES

Nutritional Science

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ABSTRACT

Health requires healthy foods. But nowadays in many cases the healthy foods are replaced by the fast foods. Fast food is the term given to the food that can be prepared and serve quickly. Socio-economic reasons such as prolonged working schedule, more women employed outside the home, getting food easily and quickly have made the fast-food items as the first choice. Different offers, delicious taste of the foods, advertisement of the fast-food restaurants attract the young population mostly. Fast food items contain trans fats, free sugars, butylated hydroxytoluene, propyl gallate, flourine etc., which can cause digestive system disorders, obesity, heart disease, loss of memory, pimples and spike in blood sugar level etc. People should aware of about the complications and must reduce the consumption of fast food as much as possible and must increase taking of the fibre containing vegetables and fruits, vitamins and minerals, doing proper exercise and also the treatment with proper medication who are suffering from the long-term impacts of the fast food.

KEYWORDS

INTRODUCTION

Food is important for survival & development and to prevent the diseases in humans. Balanced diet containing all the important ingredient of the food is necessary for each and every person for their well-being. However, 'fast food' or 'junk food' do not have any reputed or significant nutritional importance. But people are consuming them because of many reasons and moreover these are available almost in readymade form. Socio-economic reasons such as prolonged working schedule, more women employed outside the home, getting food easily and quickly have made the fast-food items as the first choice.

The term fast food was introduced by Merriam Webster in 1951. According to Merriam Webster, fast food is the term given to the food that can be prepared and served quickly. According to National Institute of Nutrition (NIN), fast food can be classified as follows : EDLNF or EDNPF : Energy Dense And Load Nutrient Density Foods or Energy Dense And Nutrient Poor Foods For Children, FMNV: Foods Of Minimal Nutritional Value, HFSS foods: foods that is high in fat, salt & sugar.

Fast food was first popularized in 1950 in the United States. The first fast food restaurant where established in the United States in 1916.¹ According to the survey most of the Indians like to have home cooked meals.² However, due to influence of western culture and urbanization nowadays people are choosing fast food items.

Fast food companies are targeting young children by their advertisement, delicious recipes, promotional videos, attractive ambience and attractive offers. Nowadays McDonald's, KFC and Pizza Hut this multinational corporations are present across the world, which involve in providing of pizzas, burgers, french fries, chicken nuggets, sandwiches etc. Apart from these food items also contain chips, chocolates, bakery items, ice cream, pastries and soft drinks etc. these items are made up of high quality of sugar, trans fat, natural beef flavor, propylene glycol, potassium bromate and calcium sulphate etc. which may lead to obesity, hypertension, diabetes, cavities in the teeth and so on.^{1,2}

INGREDIENTS USED IN FAST FOOD

1. Natural beef flavour It contains some amino acids found in beef, starch hydrolysate and some citric acid to drop the pH. World famous McDonald's fries are made up of natural beef flavour.³
2. Potassium Bromate It is used in roll, bun & pizza bases to improve elasticity, speeds up baking & gives bread a nice white colour.³
3. Propylene glycol It is a colourless compound used in the soft drinks, frozen dairy products, marinades & in frosting. Propylene glycol acts

- as solvent for flavouring agent and colours also preserves the texture.³
4. Phosphate additives It is generally used in the soda, flavoured waters, packed meat, processed cheese and chicken nuggets where they act as an emulsifier.³
5. TBQ (Tertiary butylhydro quinone) TBHQ is used in the fried Mills and snacks to prevent the spoilage in oil and fats.³
6. Calcium sulphate It is used in rolls and backed goods, as a anti-cooking agent, dough conditioner, pH regulator & also as thickener.³
7. BHT (Butylated hydroxytoluene) BHT is used in potato chips, saucers and sandwich spreads etc as a preservative.³
8. Propyl gallate It is the ingredient of corn products, meat products and mayonnaise and acts as a preservative and also extended self life in oils.³
9. Fluorine Per & polyfluoroalkyl substances are fluorine-based chemicals used in the packaging to pack fast foods.³
10. Trans fat It is present in fresh fries, chicken nuggets, pizza, burger, sandwiches and in rolls and are used to increase the self life of the products.⁴
11. Refined sugar is present in bread, pasta, crackers tomato and pasta sauces etc. to provide taste, bulk & thickness of the product.⁵

METHODOLOGY FOR PREPARATION OF FAST FOOD

In the restaurants and street food centers fast food are various way, however a brief common outline about the preparation can be presented by the following manner :

- 1) Collection of raw Raw materials can be collected from the different sources. Raw materials include animals, birds and vegetables etc. The raw materials are generally chopped accordingly based on the requirements.
- 2) Heating and preparation of The raw materials are there heated and some chemicals are added into them, which includes:-
 - a. Potassium bromate This additive helps to increase the texture and rising of flour.
 - b. Potassium Glycol It is added to preserve texture, to keep moist foods from drying out and also acts as a flavours and colours.
 - c. Tertiary butylhydroxyquinone It is used as a preservative in fried foods to prevent spoilage in oils and fats.
 - d. Calcium sulfate It is used in the dough of rolls & baked goods as an anti-caking agent.
 - e. Butylated Hydroxytoluene It is used to preserve freshness in the food.
- 3) Preservation of foods Until foods are sold, it is required to prevent spoilage of foods by adding following chemicals :
 - a. Propyl gallate It is used as food preserver to delay food spoilage & extended self life.
 - b. Butylated hydroxy anisol It is generally sprayed on the food to

preserve the food items.^{3,6}

OCCURRENCE OF DISEASE DUE TO FAST FOOD

Fast food is responsible for changing the body's homeostasis and does resulting in several long term and short term impact in the body. Some of the diseases^{7,8,9}, caused due to consumption of fast food are listed in Table – 1. The complications, effects and responsible ingredients are depicted in table.

Table- 1: Complications Due To Fast Food, Effects And Responsible Ingredients

Complications	Effects	Responsible ingredients
Obesity	Deposition of fat in the coronary artery resulting in atherosclerosis leads into angina, hypertension	Free sugars, chemical additives, sodium, fats
Heart disease	Rising blood pressure, atherosclerosis, angina, heart attack , stroke	Salt low density lipo protein
Digestive system disorder	Heartburn, nausea, vomiting, irritable bowel, alter the positive effects of probiotics	Gluten, bad oils sugar, chemicals and preservative (TBHQ)
Allergies	Asthma, eczema (shortness of breath), rhino-conjunctivitis	Saturated fat, oleosins, legimin
Spike in blood sugar	Diabetes	Refined sugar
Dental problem	Erode the teeth enamel, cavities	Sugar, amino acid, phosphoric acid
Acne	Pimples, severe acne, irritation, redness, itchiness, excessive oiliness	Sugar, fat, refined carbohydrate

MEDICAL ATTENTION

Urgent medical attentions are required to be taken in the following cases which are associated with fast food:

- 1) Attention in heart problem associated with fast food: Primary preventive care should be suggested by the physicians which includes proper exercise, balanced and healthy diet maintenance of the body weight. Secondary preventive care includes taking of medication like Aspirin and cholesterol lowering statins drugs.
- 2) Attention in digestive system disorder associated with fast food: Eating of more fiber containing fruits vegetables and beans, drinking of plenty of water, which aids our digestive system by helping to clean the entire system. In case of severity should be treated with Omeprazole, lansopramide, ondansetron, granisetron etc.
- 3) Attention in acne: Eating of low glycemic food made up of complex carbohydrates such as whole grains and unprocessed fruits and vegetables, also the food containing zinc vitamin A and E are also helpful to reduce acne. For treatment of acne drugs such as Tetracycline or macrolide antibiotics can be used.
- 4) Attention in diabetic patients: Diabetic patients should be restricted to take soft drinks, chocolates, bakery products and other junk foods containing refined sugar and should be treated with drugs such as rosiglitazone, piogletazone, metformin, glipizide, glimepiride etc.^{10,11}

CONCLUSION

Fast food centers attract the attention of the general public by their delicious taste representation and advertisement. The ill effects of fast food can be overcome if fast food restaurants or street food centers serving the healthy food in their menu and also promote videos and other advertisements to attract the public towards healthy food. Fast food items, which can cause digestive system disorders, obesity, heart disease, loss of memory, pimples and spike in blood sugar level etc. People should aware of about the complications and must reduce the consumption of fast food as much as possible and must increase taking of the fibre containing vegetables and fruits, vitamins and minerals, doing proper exercise and also the treatment with proper medication who are suffering from the long-term impacts of the fast food.

REFERENCES

1. Jahan I, Karmakar P, Hossain MM, Jahan N, Islam Mz. Fast Food Consumption and its Impact on Health. Eastern Med coll J. 2020; 5(1):28-36
2. Tawheed Amin, Nisha Choudhary, H.R. Nail. Abida Jabeen & A.H. Rather. Study of Fast Food Consumption Pattern in India in Children Aged 16-20 years. Intl. J Food Ferment

- Technol. 2017; 7(1): 1-8
3. Amy Capetta. The 10 Most Toxic Ingredients Lurking in Fast Food. Eat This, Not That! June 15, 2022. 5:20 A.M (Uploaded), searched through Google engine
4. Mayo Clinic Staf. Trans Fat is Double Trouble for Health. MAYO CLINIC. Feb.23,2022 (Uploaded), searched through Google engine
5. Alina Petre, MS, RD (NL), Adda Bjarnadóttir, MS, RDN (Ice), What Is Required Sugar? Helathlife. September 5, 2019 (Uploaded), searched through Google engine
6. Michael Symons, Encyclopedia of Food and Culture, searched on 6/9/2022 in https://www.encyclopedia.com/food/encyclopedias-almanacs-transcripts-and-maps/preparation-food (Uploaded), searched through Google engine
7. Timothy, tluzar, Jerlyn Jones, MS MPA RDN LD CLT. Is Fast Food Bad For You? All You Need To Know About Its Nutrition And Impacts. Medical News Today. December 17,2021 (Uploaded), searched through Google engine
8. Joel Fuhrman, MD, The Hidden Dangers Of Fast And Processed Food. Am. Lifestyle Med. 2018; 12(5): 375-381
9. Rachel Link, MS, RD, Amy Ritcher, RD, Nutrition. 8 Foods That May Cause Itching As Allergic Reaction. Healthline. March 1, 2021. (Uploaded), searched through Google engine
10. Antonio Corsello, Daniela Pugliese & Alessandro Armuzz. Diet & Nutrients in Gastrointestinal Chronic Disease. Nutrients. 2020; 12(9):2693
11. Amy Ritcher, RD Nutrition, Erica, Cirino. Anti Acne Diet. Healthline. Feb 17,2020. (Uploaded), searched through Google engine.