

## Food safety: should be a top priority in every menu

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Food safety is a scientific discipline that describes handling, storage and preparation of food in ways that prevent food borne illness/diseases. Food safety is a fundamental element of food security and should be present in every menu.

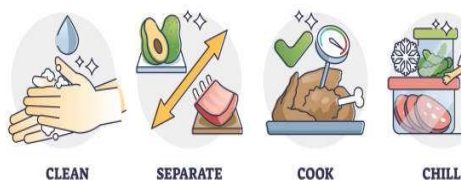
Food of animal origin is a vital source of human nutrition and hence should be free from all sources of contamination. Safe foods enable us to fulfil the appropriate nutritional requirement and hence stimulate long term human development. It exerts a positive influence on economies and livelihood of the countries by reducing the burden of food borne diseases. The five keys to healthy and safe food are: Keep clean, separate raw and cooked food, cook food thoroughly for appropriate length of time and at appropriate temperature, keep food at safe temperature and keep it out of danger zone (5-60 degree Celsius), use safe portable water and raw materials. According to the Centers for Disease Control and Prevention (CDC), foodborne diseases arising from a known pathogen are responsible for an estimated 14 million illnesses, 60,000 hospitalizations, and 1,800 deaths each year in the USA (CDC), particularly among lower-income consumers and young children in lower-income countries with annual economic costs estimated at \$110 billion USD.

toxins that may be acutely toxic but may also have chronic sequelae, such as teratogenic, immunotoxic, nephrotoxic, and estrogenic effects.

Contaminated food not just causes temporary harm but generate a vicious cycle of food borne illness that is detrimental to individual's life. As per WHO, foodborne diseases affect 1 in 10 people worldwide each year. Above and beyond 600 million people fall ill and 420000 die every year by consuming contaminated food. Children under the age of 5 years carry 40 % of the foodborne illness burden with 125,000 deaths each year. Over 200 diseases occur owing to consumption of food contaminated with microorganism and chemical substance. According to a journal of medical science, Indian households have 13.2% prevalence of hazardous food practices. Presence of antibiotics residue in food of animal origin generate potential threat to man as low level exposure to antibiotics causes alteration of micro flora, and increases the possibility of antimicrobial resistance. Annually, approximately 5 million people die across the world due to infections with antimicrobial resistance. Food borne illness burden hinders the economic growth of low and middle income countries. As per a report of World Bank (2019), in low and middle income countries, the total loss bound up with food borne disease was evaluated as US\$95.2 billion per year.

Food standards across the world provide myriad benefits. It aims to minimise burden of diseases linked to unsafe food, keeps consumers' health safe and promotes safe trade in food. They offer multitude of hygienic food handling norms and standards for food manufacturer, processors, handlers etc. They define the maximum permissible level (MPL) of additives, preservatives, veterinary drugs etc that can be innocuously consumed by all. At the same time, standards delineate how the food should be measured, packaged and transported in order to keep it safe. Nutrition and allergen labelling on the food package

### 4 STEPS TO FOOD SAFETY



Food safety is challenged by a plethora of pathogens that results in multitudes of foodborne diseases, algal toxins causing acute disease, and fungal

enables the consumer to pick healthy food for their consumption.

Food Standards should hinge on scientific risk management covering all measures to eliminate biological, physical or chemical hazards in food. To augment international food standards and guidelines and to ascertain fair practices in food industry, Codex Alimentarius Commission (CAC) was jointly established by FAO and WHO in 1963. Its recommendations are regarded as gold standards for food safety by World Trade Organisation Sanitary and Phytosanitary Agreement and Technical Barriers to Trade Agreement. CAC gives scientific guidance to fortify international food safety standard, guidelines and code of practices to safeguard consumers' health. 'CAC are at the heart of food safety.' It paves the way for a world with safe food for everyone everywhere.

## Food safety and sanitation



### Cook

- 1 Cook food to the recommended internal temperature.



### Clean

- 1 Practice food hygiene (e.g. handwashing, not working when sick, wearing hair net, etc)
- 2 Thoroughly clean and sanitize food contact surfaces and equipment before and after use.
- 3 Only use the suggested level of cleaning and sanitizing solutions for kitchen surfaces.



### Store

- 1 Properly store foods inside a refrigerator. Follow the recommended fridge food safety layout.
- 2 Maintain at least 40°F (4°F) during refrigeration and 0°F (-18°C) for freezing temperatures.
- 3 Maintain a temperature of 135°F (57°C) for hot holding foods.
- 4 Storage areas must always be clean.



### Separate

- 1 Use separate utensils and kitchen tools for preparing raw and ready-to-eat foods.
- 2 Do not use a shared preparation table for raw and ready-to-eat foods.

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The food industry in India is governed by multitudinous legislation that regulates permits, licensing and sanitation issues. FSSAI has act as a watchdog on food safety regulatory issues to ascertain that only safe food is served to the consumer by the food industry. FASSI is a statutory body established under Food Safety and Standard Act, 2006. It lays science based standards for food and regulates manufacturing, processing, storage, distribution of food to ensure safe and wholesome food is made available for human consumption. Everyone engaged in a food business should adhere to safety and hygiene norms. They

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should adopt Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), Hazard Analysis Critical Control Point (HACCP), and such other practices as notified by the competent authority.

Today, the greatest challenge posed by the food industry in their bid to accord with food safety standards is shortfall of information and clarity. Millions across the globe are undernourished, emaciated, debilitated as well as unaware about the very concept of food safety. Unchecked use of pesticides, antibiotics are responsible for serious human health issues. In the recent times, formalin, a hazardous chemical is often used illegally to preserve fish. As per a report, twenty tones of fishes and prawns were seized from the country as a whole. In order to stop such malpractices; awareness should be raise regarding false signs of fish's freshness. Escalating consumption of junk food has also put a challenge to food safety across the globe. Processed and packaged foods are often laden with chemical additives that pose a serious risk to human health. Primary challenge India is facing to achieve food safety is non compliance with food safety standards and regulations. To combat food borne health hazards, FSSA,2006 should be implemented properly, food testing laboratory and skills should be reinforced, Govt. should impart training to all the stake holders and a national level diseases surveillance system and public alert system should be brought into play. Stringent actions should be taken as and where there is any case of infringement with the provisions of FSSA'2006.



Food Safety should top the priority list of the one engaged with food or beverage industry. Dedicated efforts should be made by policymakers, food safety authorities, farmers, food business operator, cooks etc to keep the food safe and to reduce food borne illness. Awareness should prevail among the general public about food safety and hygienic norms, failure of which may lead to food borne illness. Food borne diseases are preventable and adopting a holistic and comprehensive one health approach to food safety will provide us an upgraded food safety system.

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