

# Food Safety in India - Enforcing Hygiene and Safety Standards

Adhip DESWAL

Resource Person, IHTM, MDU, India

## ABSTRACT

Food is a type of nutrition that people eat or drink in order to live and grow. Food safety is a scientific discipline portraying dealing with, planning, and capacity of sustenance in ways that prevent food borne illness. The occurrence of two or more instances of a similar sickness because of ingestion of typical nourishment is known as a food borne disease outbreak. This incorporates various routine that ought to be followed to keep away from potential health hazards. In this way food safety regularly covers with nourishment guard to anticipate harm to customers. The tracks inside this line of thought are security amongst industry and the market and after that between the market and the purchaser. In this research we will study about the clinically borne illness disease in food hygiene, to study the guidelines, laws and enforcement protocols of food industry in India and to study the impression and importance of food hygiene and safety practices in India.

**Keywords :** Clinical Borne Illness, Nourishment, Hygiene, Food Safety

## I. INTRODUCTION

Food safety is characterized as the conditions and measures that are fundamental amid creation, handling, stockpiling, circulation and planning of sustenance to ensure that it is safe, sound and fit for human utilization. Food is viewed as safe when it is free from synthetic, organic or physical peril that may bring about diseases or even death to the consumer. Food hygiene is the conditions and measures important to ensure the wellbeing of sustenance from generation to utilization. Food can become contaminated anytime during slaughtering or collecting, handling, stockpiling, circulation, transportation and arrangement. Absence of sufficient food hygiene can prompt foodborne diseases and demise of the consumer.

All food service faculties who are directly in contact with food are recognized as nourishment handlers. Food handlers can easily pass on destructive microorganisms unto nourishment through terrible individual propensities conveying nourishment

pathogens in their hands, cuts, injuries, mouth and skin, which can make it unsafe for utilization. It is in this manner critical that the sustenance benefit faculty keep up legitimate cleanliness norms.

The main point of food hygiene is to avoid food harming and other foodborne sicknesses. Epidemiological and surveillance data propose that faulty practices in nourishment dealing with, capacity and preparing may assume an essential part in the causal chain of foodborne sicknesses. In this way, if appropriate food and individual hygiene isn't very much honed this may put individuals danger of foodborne ailments, especially those at more serious hazard, which are kids, pregnant ladies, the elderly and those with incessant illnesses.

The World Health Organization (WHO) has been aware about the need to instruct food handlers about their duties regarding nourishment security; consequently they have been acquainting the Five Keys with Safer Food which include: keep spotless, isolate crude from cooked, cook nourishment

completely, guard sustenance at temperature and utilize safe water and crude materials.

Effective administration of microbiological hazards can be upgraded by making utilization of safeguard approaches, giving ceaseless instruction to food handlers on food hygiene and food safety, guaranteeing that observing frameworks are set up and expanding the intensity of wellbeing monitors with respect to food examination. The WHO (2002) announced that the control of wellbeing amid the assembling procedure and treatment of sustenance is best accomplished by methods for the Hazard Analysis Critical Control Point (HACCP) system.

India is an Asian Country. With a land region of 3,287,590 km and the number of inhabitants in 1,315,933,492 the nation is separated in to 5 principle districts east, north, upper east, south, west India, with Delhi as the capital city the sustenance division including essential makers, nourishment fabricates and processor which overwhelmingly are of a little medium size endeavors, retailers and nourishment sellers. The food laws in India including the nourishment and medications act 1940 which covers food safety and taking care of necessities and punishments for rupturing the law. The current cleanliness standards are not lawfully authoritative (ISA) India standard expert but rather are rules which the sustenance business can use to guarantee.

### **Food Hygiene – Importance & Safety**

Appropriate food hygiene is imperative with regards to nourishment arrangement. Without washing hands and kitchen devices, infections may effectively spread. In a few places however, this critical issue isn't generally known and is unfortunately taken lightly. Since cross-defilement is a noteworthy reason for food harming and can transfer microscopic organisms from one sustenance thing to different nourishments, it is critical to know about how it spreads so you will know how to counteract it.

Food poisoning spreads when one food, predominantly crude sustenance, interacts with different kinds of food. Microscopic organisms can likewise be exchanged in a roundabout way, for instance from hands, devices, surfaces, blades, and garments. One thing you can improve the situation counteracting cross-defilement is, keep separate chopping boards for raw and cooked nourishments.

Refrigerators should likewise be checked frequently to ensure that they are running at the best possible temperature and they ought to likewise be cleaned, both all around.

Food hygiene helps in preventing bad bacteria to affect the food items. It also helps in stopping cross contamination. Food hygiene helps in preventing germs from getting multiplied in foods and reaching danger levels. It basically helps everyone to stay healthy and safe from diseases. Food safety and proper cleanliness on business shrewd is additionally exceptionally essential particularly when managing open buyers, by rehearsing great cleanliness, it goes far in ensuring customer's wellbeing and they have a tendency to create certainty with respect to your items and food. When they have developed confidence in the food you are accommodating them, they continue returning to you and your business surely will have a decent notoriety and longer life expectancy.

### **Need of the study**

Food is something which each and every person consumes to survive so food safety is the most important social and health priority for any country. This study was done in context of food hygiene and safety standards in India. For this research the researcher has gone through existing data from various books, articles and journals, internet to gather information on food safety and hygiene.

## II. Objective

The objective of this research is to study about the clinically borne illness disease in food hygiene, to study the guidelines, laws and enforcement protocols of food industry in India and to study the impression and importance of food hygiene and safety practices in India.

## III. Research Methodology

This study is based upon Exploratory Research Technique on existing data. This study is based on secondary data collection method. The secondary data is collected from credited sources like Internet white paper(s), international journals, published articles, reports and surveys. Collected data was evaluated and analyzed by the researcher to reach the conclusion.

## IV. Review of literature

Angelillo et al., (2001) directed a study to research the information, demeanors and related conduct on food borne infections and sustenance dealing with hones among buyers and called attention to that the general population around the district of Italy have absence of food safety practices and learning. They found that the two people required instructive projects and advising by doctors to embrace sterile nourishment taking care of practices.

Anderson et al., (2004) reasoned that cross-defilement because of gravely washed hands, unseemly techniques utilized for the arrangement of crude and thermally 10 handled food stuffs and seriously cleaned vegetables represented to the most concerning issue amid the readiness of food at home.

Anne Wilcock et al., (2004) dissected the connection between customer demeanors, learning and conduct with respect to food safety. It demonstrated that distinctive states of mind don't really prompt positive practices that expansion the wellbeing of the sustenance devoured. The investigation reasoned that

there exists a requirement for proficient help for purchasers in regards to nourishment security issues.

Avita A. Usfer et al., (2010) in their investigation expressed that 70% of all instances of the runs in youngsters might be ascribed to food contamination. The frequencies of loose bowels have expanded after the acquaintance of reciprocal nourishment due with under sterile planning of weaning sustenance, particularly in youngsters matured 6 to two years.

Bas et al., (2004) in their investigation brought up that the absence of information of microbiological sustenance perils, temperature scopes of coolers, cross pollution and individual cleanliness cause food borne infections.

Brewer et al., (2004) in their investigation proposed that while consumers may have moderately elevated amounts of worry about food safety issues, they were not excessively worried about the diverse measures to expand food security.

Clayton et al., (2002) directed an investigation about the food handlers' safety practices at home and found that dominant part of the food handlers don't take after safe food taking care of practices and they need learning about food safety and food borne sicknesses. The examination presumed that food wellbeing instruction and preparing programs are required for food handlers.

Collins (2001) in his examination demonstrated that other than poor hand and surface cleanliness, absence of individual cleanliness among food handlers was additionally a standout amongst the most generally detailed practices that offered ascend to sustenance borne disease.

Dasgupta (2005) in his study uncovered that numerous food borne illnesses and pathogenic microorganisms are spread by defiled hands. In the

event that pathogens from human excrement enter a man's mouth, it will cause the runs. School-going kids are presented to more serious dangers of diarrheal sickness by potentially devouring tainted water and food.

Davila (2009) in his study he called attention to the explanations behind diarrheal disease among moms, babies and youngsters and found that there is an absence of mindfulness about food safety hones like washing hands before getting ready dinners and newborn child equation, washing hands subsequent to changing diaper for kids and washing hands in the wake of taking care of raw and cooked food. When all is said in done, moms detailed less incessant close by washing and had bring down nourishment security hones.

Douglas et al., (2011) recommended that a culture of food safety well based on an arrangement of shared qualities that demands administrators and their staff take after to deliver and give sustenance in the most secure way is basic. It additionally shows that making a culture of food safety necessities, utilization of the best science with the best administration and correspondence frameworks, including convincing, fast, pertinent, solid and rehashed food security messages utilizing different media are required.

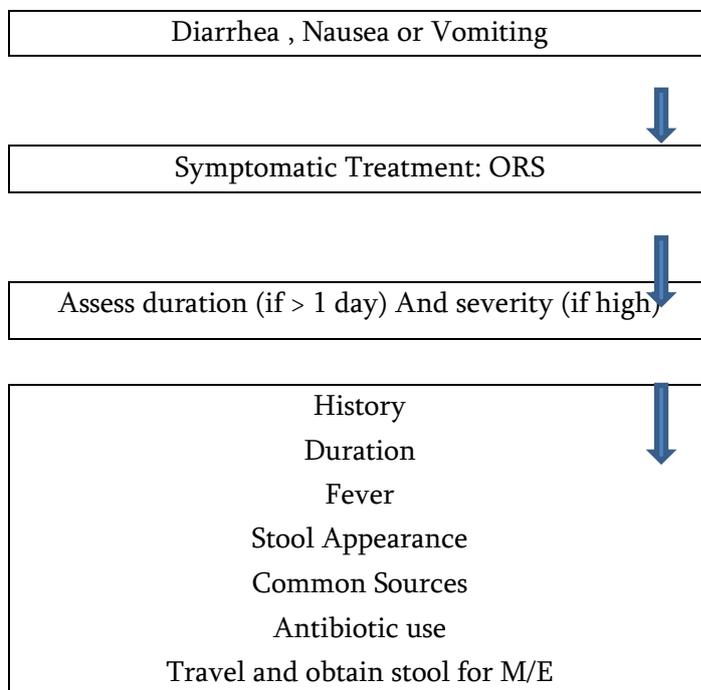
### Data analysis and Interpretation

#### Clinical Borne Illness

Clinical Borne Illness Food security the food and drugs authority (FDA) is a national administrative body under the ministry of health with the mindful of actualizing food polices and guaranteeing the safety and healthiness of food for consumers. (FDA) Roles including food assembling and preparing site review, permitting and item enlistment and observing, they additionally give great hygiene work on preparing to food handlers. The India standard authority creates

and promotes global and locally adequate principles for the food industries. Other organizations that help the same incorporate ministry of health, ministry of health agriculture, Indian tourist board and the environment agency. The government of India is additionally offered mandates to the nearby specialists including metropolitan assemblies and their areas to effectively control and screen food safety routine with regards to food merchants. Who are individual or group of individuals who pitch prepared to eat food at promptly open regions including food providers, night club, lager bars, cleave bars, chilly store, lodgings and eateries tasks and sacked water processors. The water and food cleanliness unit of the e branch environmental health of the regions is in charge of the health checking and affirmation of food vendors. This is liable to restoration on a yearly premise world health association report of high levels of diarrheal instances of which a higher rate are because of food and water borne contaminations.

TABLE OF CLINICAL BORNE ILLNESS



### THE FOOD SAFETY ACT AND AUTHORITIES

The Food Safety and Standards Act was passed by the parliament on August 23, 2006. This act was built up to join the laws identified with food and to set out the establishment of Food Safety and Standards Authority of India (FSSAI) to set the demonstrated benchmarks for various food articles managing the procedure from its manufacturing and sale(s) or import till it finally achieve the consumer. The fundamental target of this law is to ensure the accessibility of safe, healthy and nutritious food for human utilization alongside concerns related or accidental thereto. In 2008, Food Safety and Standards Authority of India was commanded by the Food Safety and Standards Act 2006. As discussed before, the intension of this demonstration was to combine the food safety laws; subsequently, the demonstration acclimatizes nine existing services identified with food safety. FSSAI fundamentally plays out the following functions:

1. Strategizing controls to set the measures and rules for food articles and stipulating a reasonable arrangement of actualizing these standards.
2. Articulating methods and rules for food organizations for approval of confirmation substances engaged with accreditation of food safety administration framework.
3. To chalk out directing standards and strategies for confirmation of labs and notice of the approved research centers.
4. To go about as a logical counselor and to give specialized help to Central and State Governments in the issues of confining the arrangement and guidelines in regions which have an immediate or aberrant heading of food safety and nutrition.
5. Information accumulation and its association with respect to food consumption, rate and commonness of related essential risk, food contaminants, Identification of evolving risk and presenting quick ready framework in like manner.

6. To make a data organize about food safety and concerned issues in nation to give moment, dependable and target data to individuals, consumers and Panchayats.
7. Give training to people doing food management.
8. To contribute in creating global specialized models for food, sterile and phytosanitary measures.
9. Empowering individuals about food safety and food standards.

### ROLE OF HACCP IN INDIA

HACCP is recognized as an imperative part in food safety management framework as it takes a shot at controlling food safety risks and focuses to control Critical Control Points (CCPs) amid nourishment taking care of for anticipation of nourishment security issues (microbiological, synthetic and physical tainting in sustenance store network) rather than keeping dependence on end product examination and testing.

In India, a National Center for HACCP Certification (NCHC) has been built up in Kerala. It mainly works at building up a group of specialists to ensure food safety frameworks, give rules to food industry and consumers and quickens the activity design of government to make India free of food safety issues. Additionally, NCHC likewise sorts out different mindfulness workshops, preparing programs on HACCP System and underlines to configuration, execute, analyze and authorization in such a framework in consistence with 'The Codex Principles of Food Hygiene and Application of HACCP' in small scale food organizations.

The HACCP framework can be connected all through the food inventory network from the producer to the client. An appropriately actualized HACCP System offers various advantages, for example,

- A. Viable asset utilize.
- B. Funds to the food business.

C. Setting aside proper activities on opportunity to avoid food safety risk.

D. It inspires food handlers to effectively take an interest in different exercises which help in better comprehension about food safety

Over this, Food Industries and a few Food Control Regulatory Agencies from around the globe have demonstrated their enthusiasm for actualizing HACCP System. In this manner, thinking about the advantages and significance of HACCP in food safe, it is essential in the present time of expanded food globalization to encourage a framework that advances more prominent food safety and awareness among individuals.

## V. FUTURISTIC ROADMAP ENSURING STANDARDS

Looking for the eventual fate of food safety in India, FSSAI additionally joined with the Global Food Safety Partnership (GFSP) to create activities for ventures for food safety in Asia. Their concentration is to make a way which guarantees the accessibility of safe and nutritious food for all through co-agent activities. Additionally, GFSP will give specialized help to FSSAI planned to make a detailed assessment appraisal of preparing necessities of food safety workforces' in India. To put it plainly, GFSP underpins creating nations by enhancing their food safety framework as it interestingly offers food safety preparing and specialized help. On 21st February 2017, the Governing Council (GC) individuals from GFSP had a gathering with FSSAI, financial specialists, industry majors like CEOs of Nestle, Patanjali and different members of food safety in India, where the GFSP Chairperson, Dr. Nathan Belete valued the enthusiasm of Indian partners in propelling food safety plan. Moreover, FSSAI is additionally attempting endeavors to set a perfect case of food safety checking framework in India joined by expanded worldwide trust. For this reason, FSSAI has additionally worked together with

some other food experts in created nations, for example, US, Canada.

Remembering, the significance of safety and clean food for all, FSSAI showed the guide for the future which incorporates each piece of the Food Authority. More consideration is paid on growing straightforward food safety records, distinguishing proof of developing issues, food safety consistence, enabling the system of food safety research facilities and single food safety manager in each business.

## VI. CONCLUSION

Indian food industry has fundamentally developed from recent years yet there is more space in the court of improvement in terms of awareness and usage of the laws. Still India is confronting general difficulties like numbness to fusing controls and subsequently they are not yet completely authorized. Thinking about all the safety and financial effects of food on society, starting endeavors to expand awareness about food safety among food handlers and consumers is fundamental to limit adverse consequences for strength of people. Street food merchants must be directed, administered and skillfully prepared. Regulation-explanatory memoranda and managing standards for food safety ought to be made easy to understand to boost awareness and participation among individuals and for better consistence. Food safety is a participatory approach, which makes no difference for us is conceivable without us. In this manner, each progression started in food supply network ought to be carefully taken care of. Updated framework, viably actualized strategies and crossing over any barrier amongst execution and implementation of control are a portion of the imperative keys that are possibly wanted to enhance food safety in India. Information and good hygiene practices ought to be received by food handlers and to accomplish this, community oriented activity of different nearby bodies; government, media and Non-

Governmental Organizations (NGO) can play a noteworthy part.

Also, new advancements ought to be fused in food industry just on the off chance that they fall in accordance with food safety. More noteworthy consideration ought to be given towards utilizing local or worldwide system of researchers to guarantee food safety as opposed to copying risk assessments. Joint-endeavors of Global Food Safety Partnership (GFSP) and Food Safety and Standards Authority of India (FSSAI) reassure the protected fate of food safety practices to keep up the higher level of hygiene and henceforth the public health in India.

## VII. REFERENCES

- [1]. Ababio, P. F., & Adi, D. D. (2012). Evaluating food safety practices among food handlers in the Kumasi Metropolis. *Internet Journal of Food Safety*, 14, 35e43.
- [2]. Ababio, P. F., Adi, D. D., & Commey, V. (2012). Food safety management systems, availability and maintenance among food industries in Ghana. *Food Science and Technology*. [www.fstjournal.org/node/add/article](http://www.fstjournal.org/node/add/article).
- [3]. Abelson, P., Forbes, P. M., & Hall, G. (2006). The annual cost of food borne illness in Australia. *Common Wealth of Australia*, 1e108. [www.ag.gov.au/cca](http://www.ag.gov.au/cca).
- [4]. Ackah, M., Gyamfi, E. T., Anim, A. K., Osei, J., Hansen, J. K., & Agyeman, O. (2011). Economic profile, knowledge of hygiene and food safety practices among streetfood vendors in some parts of Accra- Ghana. *Internet Journal of Food Safety*, 13, 191e197.
- [5]. Addo, K. K., Mensah, G. I., Bonsu, C., & Akyeh, M. I. (2007). Food and its preparation conditions in hotels in Accra, Ghana. A concern for food safety. *African Journal of Food Agriculture Nutrition and Development*, 7 (5).
- [6]. Afoakwa, E. O. (2005). Enhancing the quality of school feeding programs in Ghana. Unpublished article. Legon: Department of Nutrition and Food Science.
- [7]. Ministry of Food and Agriculture/World Bank. (2007). Review of food safety in Ghana. [www.worldbank.org](http://www.worldbank.org).
- [8]. Viewed 14/10/12. WHO. (1997). Pesticides residues in food: 1997 evaluations. Geneva, Switzerland:
- [9]. World Health Organisation Expert Group On Pesticides Residues. December 6e15, 1997
- [10]. "Assessment of Practice of Food Safety and Hygiene among Food Vendors within Jos North Local Government Area of Plateau State, Nigeria", Author: Emmanuel Andy, Mangai JM, Kayong EA, Afoi BB, Goshit JD, NamanKasang, Innocent O, Publication: *International Journal of Medical and Health Research*, Volume: 1, Issue: 2, 83-86 Sep 2015
- [11]. "A Study of Food Safety and Hygiene in India", Author: Chef GauravKhurana, Publication: *International Journal of Advance Research and Innovative Ideas in Education*, Volume: 2, Issue: 2, 2016
- [12]. "Implementation of Hazard Analysis and Critical Control Points System in the Food Industry: Impact on Safety and the Environment", Author: SueliCusato, Paula Tavolaro, Carlos Augusto Fernandes de Oliveira, Publication: *Novel Technologies in Food Science* (Page 21-37) and part of book series *Integrating Food Science and Engineering Knowledge into the Food Chain (ISEKI-Food*, Volume 7)
- [13]. Information from food safety and standards authority of India official web portal <http://www.fssai.gov.in/home/about-us/introduction.html>
- [14]. Information from Hazard Analysis Critical Control Point (HACCP) System for food industry official web portal <http://www.haccpindia.org/index.php/about-us>

- [15]. "Industry Challenges in Food Regulations", online Reference source:[http://ficci.in/Sedocument/20057/FICCI\\_Survey\\_on\\_Industry\\_Challenges\\_in\\_Food\\_Regulations\\_F.pdf](http://ficci.in/Sedocument/20057/FICCI_Survey_on_Industry_Challenges_in_Food_Regulations_F.pdf), Survey by Confederation of Indian Food Trade and Industry (CIFTI) in May 2010
- [16]. "Food Safety in India – Regulatory Framework and Challenges", Reference Source: <http://www.swaniti.com/wp-content/uploads/2015/06/Food-safety-in-India-1.pdf>, Online report published by Swaniti on 10 June 2015
- [17]. "Public Health Nutrition and Food Safety Challenges in India", Author: Anitha Thippaiah, Reference Source:<http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/globalhealth/events/Documents/Public%20health%20%20nutrition%20%20food%20safety%20challenges%20facing%2021st%20century%20India.pdf>, Publication: Public Health Foundation of India Institute of Public Health, Hyderabad 8th January 2014
- [18]. "FSSAI-Transforming the Food Safety and Nutrition Landscape in India 2016-2017", online Reference Source at: [FSSAI\\_Report\\_Transforming\\_Food\\_Safety\\_Landscape\\_23\\_06\\_2017.pdf](http://www.fssai.gov.in/Portals/0/FSSAI_Report_Transforming_Food_Safety_Landscape_23_06_2017.pdf), Report published online by FSSAI on 23 June 2017
- [19]. Achaya, K.T. The Food Industries of British India, Delhi: Oxford University Press. 1994.
- [20]. Adam S., M. O. Moss, Food Microbiology, New Delhi: New Age International Ltd., 1995.
- [21]. Asopa, V. N. Sr, Kalro, A.H. Fruits and Vegetables Processing Industry in India, Ahmedabad: Indian Institute of Management, 1992.
- [22]. Banwart, George J.. Basic Food Microbiology, (second ed.) Delhi: CBS publishers, 1998.
- [23]. Baron, Christopher G. Technology, Employment and Basic Needs in Food Processing in Developing Countries ,New York: Pergamon Press, 1992.
- [24]. Bhalla, A. S. (Ed.), Technology and Employment in Industry, Geneva: ILO.1975.
- [25]. Bhattachana, S.C. Kerala's Utilization of Fruits and Vegetables, New Delhi: Himalaya Publishing House,1978
- [26]. Aiyar, A.S. 'Food Safety consideration in the context of Globalisation', Indian. Food Industry, Vol. 20.Jan-Feb. 2001.
- [27]. Bhatnagar, P. S. ' Food Processing Industries: A Sunrise Sector'. Employment News : March 11-17, 2000.
- [28]. Boer, K.D. and A Pande, "India's Sleeping Giant Foodn, Mc Kinsey Quarterly, Number I, 1997 Bog,
- [29]. A. K., "Horticulture prospects for India" Agriculture and Industry Survey, 1996.
- [30]. C.F.T.R.I. Mysorc, Fruit and Vegetable Preservation Industry in Kerala. 1983.
- [31]. Chatterjee, S., Going Dualism in Food Processing, Corporate Trends,3 (14), Press Trust of India, September, 1989.
- [32]. Confederation of Indian Food Trade and Industry: Workshop on Raw Material for Food Processing Industry - Background Paper. New Delhi, Jan 3 151, 1989.
- [33]. Deepakumar, V.S. Seminar, on 'Marketing of Fruits and Vegetables Problems and Prospects'. Kerala Agricultural University, College of Horticulture, Vellanikkara. Department of Agricultural Economics 1998.

#### Author Profile

Adhip DESWAL had done BHM from WGGSHA Manipal University, Manipal. Done MHM from IHTM, MDU Rohtak. Have attended various International hospitality symposium and seminars. Have worked in BPSMV Khanpur as teaching assistant in H.M department and now working with IHTM MDU