Diploma Pharmacy Part-1
Social Pharmacy
Food Safety

Food Safety

The safety of food produced, served & consumed is of utmost importance to everyone, more so to those who habitually eat outside their homes and are unaware of the intrinsic quality of food that is served to them, even though their taste buds approve it.

Food production centres or kitchens provide all conditions necessary for the growth of microorganisms, such as food, humidity & right temperature. All of which are conducive to the spread of infection, disease & infestation if not controlled & monitored through strict regimens with respect to hygiene & sanitation practices.

Definition: – Food safety is defined as keeping food safe to eat at every stage of (purchasing, receiving, storage, preparing, cooking, holding, cooling, reheating, and serving) handling as it passes through the flow of food from farm to table.

The relationship of safe food & wealth is well established & has been linked to the cultural practices of the country. The problem of getting safe food is more severe in public eating places where a large quantity of food is pre-prepared, held & finished on demand for service.

Food safety problems can be tackled at various levels in different ways with training in safety being organized. Training in safety can be organized into 3 distinct categories usually abbreviated as the 3E's, namely safety education; safety engineering and enforcement of safety.

Safety Education

- Should start during induction of the employee to the establishment.
- Is effective by the formation of safety committees in the establishment.
- Should include giving info. about the legal and financial implication of accidents.
- Should be done using audio-visual aids discussion, bulletin board, weekly safety theme.

Safety Engineering

This involves the building in of safety features in the structure of the establishment in the equipment, furniture and fittings, and their proper arrangements within the spaces equipment should be selected with care to ensure safety in design that can make it possible to maintain sanitation of parts that come in contact with food.

Enforcement of Safety

That means implementation or practice safety rules need to be enforced by rule, law or custom and practice. Also by

- Discipline at work
- Close supervision of all activities in vulnerable areas and at peak hours
- Closing all switches for fuel supply and water taps when not in use.
- Immediate attention to repair of leaks and regular maintenance and servicing of equipment to ensure optimum operation

Thus food safety is the protection of food product from unintentional contamination (means cross contamination)

Safety programs and policies can only be effective if the staffs are trained to think and act safety at work for this, educating them in the following areas is necessary.

(i) Teaching safe methods, with particular emphasis on areas of potential dangers, & how these can be guarded against.

(ii) Demonstrating the use of safety equipment installed in the established and location and use of first aid material.

(iii) Inculcating in people the ability to recognize the signs of the hazard around them, in colleagues and equipment e.g. – an unwell person or an unusual sound from an equipment.

(iv) Teaching staff the legal implication of non-adherence to safety procedures.

Food Hazards

A hazard is a biological, chemical or physical property that may cause a food to be unsafe for human consumption

Biological hazard

Biological hazard includes bacterial viral and parasitic microorganisms bacteria: e.g. Bacillus cereus, Campylobacter jejuni, Clostridium botulinum, E. coli, salmonella spp, Shigella spp.

The majority of biological hazards are bacteria that can be controlled through time, temperature, acidity and water activity. Some bacteria from spores that and highly assistant and may not be destroyed by cooking and drying.

Viruses can exist in food without growing, but they can rapidly reproduce once they are on a living host, most typically a human being. Viruses can best be controlled by good personal hygiene, because that limits the transmission of viruses via human contact or common food contact e.g. hepatitis A and E, rotavirus, nor virus, reo virus.

Parasites also need a host. They are mostly animals – host specific. What the can survive in humans. Adequate cooking or freezing destroys parasites. Special

attention to foods such as pork, fish and bear, the are known to carry parasites. E.g. taenia spp, trichinella spiralis.

Chemical hazards

Chemical hazards also cause foodborne illness. Chemical hazards may occur naturally or may be introduced during any stage of food production. Natural occurring chemicals can be found in some species of fish or shellfish some plant foods and mushrooms e.g. some chemicals added to food also make them unsafe. These include sulfites, sodium nitrates, mono sodium glutamate or lead, copper environmental additives (fertilizers pesticides) and cleaning agents (sanitizers, lubricants)

Tetrodoxim (fish), mycotoxin like aflatoxim (corn), patulin (appejuice) paralytic shellfish poisoning (psp).

Physical hazards

Any physical material or foreign object not normally found in a food that can cause illness and injury it may result from contamination carelessness, mishandling and implementing poor procedures at many points. From harvest to consumers. e.g. Glass, wood, stone, metal, fragments, bone, plastic.

Contaminants

Contaminants are substances that have not been intentionally added to *food*. These substances may be present in *food* as a result of the various stages of its production, packaging, transport or holding. They also might result from environmental *contamination*. Contamination generally has a negative impact on the quality of food and may imply a risk to human health,

Food hygiene

Food hygiene may be defined as the sanitary science which aims to produce food that is safe for the consumer and of good keeping quality. It covers a wide field and includes the rearing, feeding, marketing and slaughter of animals as well as the sanitation procedures designed to prevent bacteria of human origin reaching foodstuffs.

As per WHO, Food hygienes are the conditions and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point during slaughtering or harvesting, processing, storage, distribution, transportation and preparation. Lack of adequate food hygiene can lead to foodborne diseases and death of the consumer.