

# Trade and Food Hazards

There are three major hazards that may be introduced into the food supply any time during harvesting, processing, transporting, preparing, storing and serving food. These hazards may be 'biological' (microbiological), 'chemical' or 'physical'. A food safety hazard refers to any agent with the potential to cause adverse health consequences for consumers and this occurs when food is exposed to hazardous agents which result in contamination of that food.

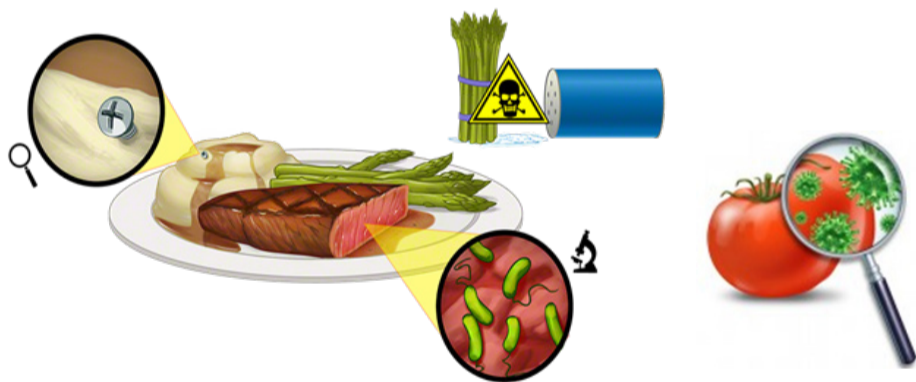
The Biosecurity Authority of Fiji (BAF) manages quarantine controls at the Fijian border whereby food items are inspected to ensure they meet import requirements and are free of food hazards.

## Biological Hazards

Biological hazards include infestation of food by bacteria, fungi, viruses and other agents like prions. These can also be called parasites. When introduced into food, these pose food safety concern for consumers. Biological hazards can be introduced to food from the environment (e.g. soil bacteria, agricultural run-off) or from inadequate sanitation practices and cross contamination during transportation, handling, processing and storage (e.g., poor food hygiene practices). The type and magnitude of microbial growth is determined in part by the nature of the food, package conditions and food storage environment.

The principal bacteria associated with food borne illnesses include: *Escherichia coli*, *Salmonella* spp., *Campylobacter* spp. and *Listeria* spp. Viruses commonly associated with food safety issues include Hepatitis A virus and Norovirus.

Parasite: any organism which obtains nourishment from its host organism in order to grow and reproduce. Unlike symbiotic organisms, which reciprocate by supplying their hosts with other resources the host would not otherwise be able to find, parasites do not supply the host with any resources, usually to the detriment of the host. Parasites commonly associated with food-borne illnesses include: *Taenia* spp. and *Trichinella spiralis*.



## Chemical Hazards

When toxic chemicals used for pest control or for cleaning and sanitizing food contact surfaces and food preparation equipment come into contact with food, the food may be contaminated by those chemicals. Toxic metals such as copper, brass, cadmium, lead and zinc can be a source of chemical contamination. Zinc, used in galvanized containers (garbage cans) and in gray enamelware containers which may be plated with anatomy or cadmium, can make acidic foods such as orange juice or tomato sauce and pickles poisonous. Pottery dishes with lead glazes should not be used to prepare or serve food.

Intentionally added chemicals help to maintain a food's freshness or to enhance flavors in foods. Check the food ingredient label for more information about the additives. Excessive use of some additives has been linked to cases of lethal allergic reactions particularly among sensitive individuals, in particular, asthmatics.

Food service establishments are prohibited by law from using sulfites to maintain product freshness. However, they are still approved for use in some food processing operations, for example, processing shrimp and manufacturing wine. If they are used, the product must be clearly labeled.



## Physical or Extraneous Material Hazards

Physical hazards usually result from accidental contamination and/or poor food handling practices. Extraneous material covers all materials (excluding bacteria, fungi and their by-products (toxins), viruses and parasites) which may be found in a food that are foreign to that particular food.

These materials are usually non-toxic but are associated with unsanitary conditions of production, processing, handling, storage and distribution of food. Some examples of extraneous materials that may be found in food are insects, hair, fingernails, false nails, metal fragments from worn or chipped utensils and containers, pieces of plastic, dirt, stones, wood chips, glass and frilled toothpicks. Extraneous material can be considered hazardous due to its hardness, sharpness, size or shape. It may cause lacerations, perforations and wounds or may become a choking hazard.



## Other Hazards: Allergenic Hazards

An allergen is any protein that is capable of producing an abnormal immune response in sensitive segments of the population. Symptoms of an allergic reaction can range in severity from a skin rash or slight itching of the mouth, to migraine headaches, to anaphylactic shock and death. The type and severity of an allergic response is determined by many factors, including dosage, route of administration, frequency of exposure and genetic factors. Examples of food with allergic reactions: Peanuts, milk, mustard and some types of seafood. Always check food labels to ensure you are consuming an allergen that may affect you.

To stay away from food hazards, keep high-risk food at 5°C or below or above 60°C (where applicable) to avoid the temperature danger zone; store raw foods below cooked foods; store food in suitable, covered containers; avoid refreezing thawed foods; and check and observe the use-by dates on food products.

### For Further Information, Please Contact:

Biosecurity Authority of Fiji on 3312512 or Short Codes: General Enquiries - 5994,  
 Termites - 5996, Giant Invasive Iguana (GII) - 5995,  
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