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- Food Safety and Hygiene Level 2 -

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Aims of this course:

- To be able to apply the best food handling techniques.
- One should be able to identify food hygiene hazards.
- One should be able to acknowledge the importance of personal hygiene.
- Be knowledgeable on how to prevent cross contamination.
- One must be able to keep their workplace hygienic pest-free.
- You should be able to understand the principles of the food safety management system.
- Know how to apply food safety controls to achieve high standards of food hygiene.

Getting Acquainted with Food Hygiene Hazards

In the realm of restaurants and catering, adopting secure methodologies during food production and preparation stands as an imperative.

The observance of commendable food practices plays a pivotal role in curbing incidents of foodborne illnesses and averting customer complaints. It is not only a legal obligation but also a moral responsibility to ensure the edibility of the food you manage.

By upholding good food hygiene, you are able to:

- Adhere to legal requirements.
- Mitigate the potential for foodborne illnesses among diners.
- Safeguard the reputation of your establishment.

A thorough comprehension of what constitutes good food hygiene is of paramount importance for both you and your personnel. All individuals operating within food handling zones must uphold an elevated standard of personal cleanliness.

Getting Familiar with Risks in Food Hygiene

A food safety hazard denotes a perilous factor capable of inducing harm to food items. To avert such food safety hazards, comprehending the pivotal threats linked to food contamination and adhering to secure protocols during every phase of food preparation becomes imperative. These aspects will be extensively addressed within this course. Within the domain of food safety hazards, categories encompass physical, chemical, biological, and allergenic perils associated with food. It remains crucial to identify food safety hazards, given that susceptibility to these hazards varies across different food items.

Pathways of Food Contamination

Food can undergo contamination via physical entities, chemicals, or bacteria that are introduced to the food, either due to improper handling procedures or through contact with other food items.

Examples of contamination include:

Contamination through Physical Agents - Physical contamination arises when foreign substances infiltrate food during its preparation and service stages, typically leading to injuries rather than illnesses. Instances of physical contamination may stem from various origins, including:

- Shards of glass introduced when bar staff utilise a glass to scoop ice,
- Particles of dust originating from inadequate cleaning practices and infestations of pests.

Contamination through Chemical Agents - Chemical-induced foodborne illnesses emerge when harmful chemicals are present in food. Instances of chemicals that might taint food encompass pesticides, insecticides, rodenticides, cleaning substances, or chemicals arising from reactions between food and unsuitable storage containers.

Contamination through Biological Agents - Adhering to appropriate food handling protocols is essential to prevent any exposure of food to potential safety risks. Inadequate handling practices can lead to bacterial contamination of food. Bacteria can be introduced by individuals, animals, or pests. Such contamination can stem from factors like subpar personal hygiene, improper storage methods, and the presence of animals within areas where food is stored.

Contamination through Allergenic Agents - Cross-contamination poses a significant risk to individuals with food allergies. It occurs when a substance that triggers an allergic reaction comes into contact with food that is supposed to be allergen-free. To illustrate, while preparing food in the kitchen, breadcrumbs might be left in a toaster, leading to potential contamination of a slice of toast meant to be free of wheat allergens.

Fundamental Food Guidelines

Proper adherence to effective food handling and cooking is vital when producing and vending food that is to be considered safe for consumption. It holds significant importance for both you and your workforce to comprehend the principles of sound food handling and hygiene. Each individual operating within an area where food is handled must uphold impeccable personal sanitation standards and guarantee the secure cooking of food to eliminate detrimental bacteria.

The 'Food Standards Agency' implemented initiatives for food hygiene aimed at enlightening food service providers while fostering consumer assurance.

The 4 Cs Approach

Effective food hygiene primarily revolves around managing harmful bacteria, which have the potential to induce severe illnesses. The 4C's strategy is designed to aid in the prevention of the most prevalent food safety issues. The 4C's, and their roles are explained below:

Cross-Contamination -Cross-contamination denotes the transfer of bacteria between food items, surfaces, or equipment. This occurrence is most likely when raw food comes into contact with, or releases fluids onto, ready-to-eat food, culinary tools, or surfaces.

It's imperative to consistently cleanse and disinfect work surfaces, cutting boards, and equipment before initiating food preparation and subsequent to employing them for handling raw food. Strictly uphold the segregation of raw and ready-to-eat food, including the separation of packaging materials for the latter. Additionally, thorough hand washing is essential.

Cleansing - Efficient cleansing eradicates bacteria from hands, equipment, and surfaces, thereby obstructing the transmission of detrimental bacteria onto food. It is imperative to guarantee that every staff member diligently washes and dries their hands before engaging with food. You should maintain the practice of cleansing and disinfecting food preparation zones and equipment after transitioning between various tasks, with particular emphasis on post-handling of raw food.

Implement a 'clear and clean as you go' approach. Continuously remove used equipment, spilled food, and similar debris during your work, all the while ensuring comprehensive cleaning of work surfaces.

Cooling - Appropriately refrigerating food is pivotal in preventing the proliferation of harmful bacteria. Certain food items necessitate refrigeration to ensure their safety, including those labelled with a 'use by' date, cooked meals, and other ready-to-eat dishes like pre-made salads and desserts. It is crucial to avoid leaving such food varieties exposed at room temperature.

Upon delivery, meticulously inspect chilled food to ascertain its coldness, promptly placing it in the refrigerator. Regularly verify the effectiveness of your cooling equipment, ensuring that the temperature gauge indicates the correct operational temperature.

Cooking - Complete and proper cooking effectively eliminates harmful bacteria present in food, outlining the paramount significance of ensuring thorough cooking procedures. Whether preparing a meal from scratch or reheating leftovers, consistently verify that the food attains a steaming hot temperature throughout its entirety.

Particular attention must be given to the meticulous cooking of poultry, pork, rolled meat joints, and items derived from minced meat, including burgers and sausages. This diligence is essential due to the potential presence of bacteria within the core of such products.

Enforcement and Oversight

In collaboration with enforcement officers from local authorities, the 'Food Standards Agency' ensures the implementation of food regulations across the entire food supply process.

The 'Food Standards Act of 1990' serves as the foundational structure for all food-related legislation in the UK. The core principles state:

- Food should not pose health risks.
- Food must be suitable for human consumption.

Establishments are granted a 21-day window for rectification. Within the framework of this Act, the 'Food Standards Agency' holds the authority to conduct inspections and even suspend operations of businesses that fail to comply with the law.

Food Safety Duties

As a food handler, it is both a legal obligation and a professional duty to uphold food safety within the workplace to remain compliant with regulations. You can ensure this by:

1. Undertaking necessary training and comprehension, including:

- Familiarity with all existing workplace policies and procedures
- Identification of food safety risks
- Adherence to the principles governing safe food management.

2. Supervising Food Handling, including:

- Oversight of food handling protocols
- Notifying instances of staff misconduct
- Reporting unsafe practices observed among staff.

3. Maintaining Workplace Hygiene:

It is imperative to guarantee personal cleanliness and uphold a clean, secure, and sanitary kitchen environment. By adhering to workplace hygiene regulations, you align with food hygiene legislations, which entrusts a significant duty to individuals engaged in food handling within food establishments.

4. Welcoming Environmental Health Officers

These officials, often referred to as 'Health Inspectors' or 'Environmental Health Officers', are tasked with enforcing the regulations outlined in the 'Food Standards Act 1990'. They possess the authority to access food-related premises without prior notice, as long as they properly identify themselves and exhibit their warrant card or official authorisation.

5. Allow Authorities to Conduct Inspections

Health officers wield extensive authority, a fact that is logical given their responsibility to safeguard public health. They possess the privilege to conduct inspections of all food establishments (which includes beverages and liquor since they are considered as food), including their equipment and the food products present within them.

6. Addressing Customer Complaints

In cases where a customer files a complaint against a food establishment, the local authority is obligated to conduct an investigation into the matter.

7. Following guidelines and Protocols

The significance of food safety policies and procedures has grown significantly. Outbreaks of foodborne illnesses can wreak havoc on businesses, impacting their personnel and patrons severely. Implementing effective practices helps in recognising food safety risks and minimises the chances of such incidents transpiring.

Advantages of Following protocol

Embracing and executing effective food hygiene practices significantly diminishes the potential for contamination. For instance, proper cleaning of chopping boards can prevent cross contamination.

These measures guarantee:

- A positive reputation and increased profits
- Reduced employee turnover
- Minimised occurrences of foodborne illnesses
- Adherence to legal regulations

The importance of adopting proficient food hygiene strategies and methodologies cannot be stressed enough. Remember, effective food hygiene equates to a prosperous business.

Summary of food hygiene hazards:

Policies and Procedures

You must ensure you follow all legal protocol to ensure the safety of your customers and try certify their satisfaction and reappearance.

Cross Contamination and the 4 Cs

Cross-contamination is a potential risk across all aspects of the hospitality sector. It is crucial to consistently and meticulously cleanse utensils and work surfaces. Never use the same knife for raw and cooked meats. Always adhere to proper cooking and chilling procedures for food.

Food Safety Dangers

Food safety hazards encompass various risks such as physical, chemical, biological, and allergenic threats to food. Implementing effective food safety measures helps recognise these hazards and mitigates the likelihood of their occurrence.

Benefits of Adhering to Best Practices

It is imperative that all staff members comprehend their individual and collective obligations. Environmental health authorities possess the authority to shut down the establishment and procure samples for further examination.

Bacteria and Food Safety

What are Bacteria?

Bacteria are minuscule microorganisms that remain imperceptible to the naked eye and are present in nearly every corner of the globe. They inhabit diverse environments including soil, water bodies, subterranean caverns, hot springs, decomposing organic matter like fallen trees and deceased animals, as well as within the anatomies of nearly all living creatures.

It's important to note that not all bacteria are harmful. A significant portion of bacteria residing within the human body yield advantageous effects for their host. They contribute to fortifying the immune system and generating chemicals and vitamins that foster human well-being. Certain bacteria even combat other detrimental bacterial agents, thereby aiding in the prevention of illnesses. Moreover, bacteria play an indispensable role in the production of food items like cheese and yogurt.

Varieties of Bacteria

Bacteria exhibit diverse forms, each with distinct traits. Key examples include:

Hazardous Bacteria (Pathogens)

These pathogens lead to foodborne illnesses. Notably, pathogens such as salmonella or E. coli do not generate odours, unusual tastes, or alterations in the food's visual attributes. This includes the absence of slimy textures or any form of discoloration.

Spoilage Bacteria

Spoilage signifies the progression through which food degrades to an extent where it is unsuitable for human consumption, or its overall quality diminishes. Numerous external factors contribute to the degradation of food. Items susceptible to deterioration are labelled as perishable food items, such as fruits.

Toxins

Toxins can lead to instances of food poisoning, although they represent the least prevalent cause. If foodborne illness stems from toxins, it is typically a result of subpar food preparation practices or unwise food selection.

Spores

Bacterial spores primarily function as a dormant phase within the bacterial life cycle, providing a means to protect the bacterium during unfavourable circumstances. Numerous bacterial spores possess remarkable resilience and can initiate growth even after prolonged periods of dormancy, extending to several years.

Bacteria that cause Food Poisoning

Disease-causing agents are called pathogens. These pathogens are introduced through the contamination of foods by bacteria, viruses, moulds, and parasites. Certain bacteria possess the ability to create protective coatings, assuming the state of spores. In this form, they endure regular cooking temperatures and endure dormancy for extended periods, awaiting favourable conditions. If the environment becomes conducive, the protective covering dissolves, and the bacteria reactivate, undergoing multiplication once again. To exterminate spores, a minimum temperature of 122 degrees Celsius is essential.

Varieties of Food

It is fundamental to examine the diverse categories of food you might come across during your work routine, as bacteria have different reactions when interacting with certain kinds of food.

'Ready to eat' Raw Foods:

This includes fruit and vegetables. Look out for spoilage bacteria with these foods and then discard. These foods should be examined closely before eating or serving.

'Raw Foods Requiring Cooking':

This category encompasses perishable items such as raw meats, especially Poultry, Beef, Lamb and Pork. It is essential to cook these thoroughly to avert the risk of foodborne illnesses.

Low Risk foods

Foods that carry low risks include salt, sugar, cereals, dried pasta, bread, biscuits, crisps, jams and canned fruits. As well as butter/spreads which should be refrigerated.

High Risk foods

The following high-protein and high-risk items fall into this category: cooked meat products, seafood, milk, dairy, and raw egg-based products. Inadequate storage of these foods can result in rapid bacterial multiplication. These items are extremely perishable in nature.

Bacteria Growth

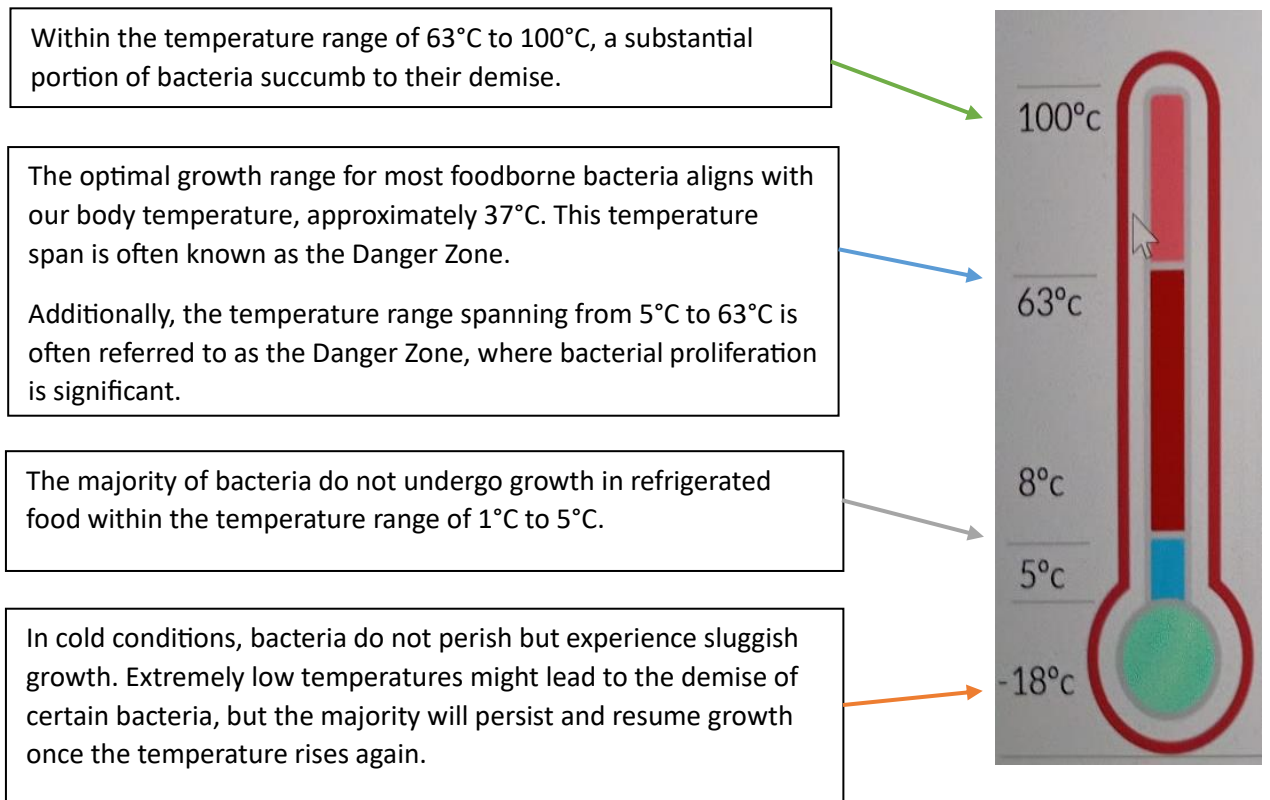
For bacteria to thrive, they necessitate the following four prerequisites:

Food	Certain foods, especially those high in protein content, are abundant in nutrients and moisture, thus serving as conducive environments for bacterial proliferation, particularly in warm conditions. Foods that are ready for consumption without subsequent treatments (such as cooking that would eliminate bacteria) are classified as 'high risk foods'. Examples of these foods encompass fish, seafood, eggs, dairy products, and fruits.
Moisture	Bacteria are unable to survive without moisture. This highlights the primary rationale behind promptly wiping up spills in food preparation zones and ensuring utensils are thoroughly dried.
Warmth	Bacteria experience rapid multiplication between 5°C and 63°C, constituting the temperature danger zone. Consequently, utmost precautions are necessary to prevent food from residing within this range.

	Bacterial growth causing food poisoning does not occur below 0°C (no growth below -17°C) and is minimal below 5°C or above 50°C. Therefore, it's advised to store food either below 5°C or above 60°C for safety reasons.
Time	Bacteria replicate approximately every 10 to 30 minutes, contingent on prevailing conditions. This signifies that over a suitable duration, their population can escalate to a level capable of inducing contamination and subsequent illnesses.

Managing Bacteria in Food

The most efficacious approach to manage bacterial proliferation in food is through temperature regulation.



Temperature Oversight

Upon food delivery, it's crucial to verify that it has been transported under suitable temperature conditions. Staff members must refrain from accepting chilled or frozen items that haven't maintained the requisite coldness. Storage refrigerators should sustain temperatures that maintain high-risk foods at or below 8°C, while freezers should be kept below -18°C.

A recommended practice involves assessing the internal temperature of cooked dishes, especially larger portions, to guarantee it reaches 75°C for a duration of 2 minutes. This method complements visual assessments, helping to ascertain proper cooking.

Food Appearance

Alterations in a food's typical environment can lead to changes in its appearance. Major factors include:

- **Air and Oxygen** - A notable contributor to food spoilage is the presence of air and oxygen. Due to air's lack of colour, smell, and taste, its impact is occasionally underestimated and overlooked as a catalyst for food deterioration.
- **Moisture** - Water is among the most prevalent substances on Earth. It constitutes a fundamental element of all foods. The quantity of water within a food (referred to as the water percentage) impacts the food's visual attributes, texture, and taste.
- **Light** - Virtually all foods encounter light from both natural and artificial sources. The exposure of foods to light can lead to their photo-degradation or spoilage.
- **Temperature** - Inadequate temperature control can trigger food spoilage. i Elevated temperatures accelerate the pace of natural food enzyme reactions and the reactions involving other constituents in the food. Unregulated exposure to cold temperatures can also lead to physical spoilage. Accidental freezing and subsequent thawing of fruits and vegetables adversely affects their texture and appearance.



Summary of Bacteria's effect on foods:

It is essential you are aware of the impacts of bacteria on various food types and understand ways to thwart this behaviour.

Key points:

- Bacteria require specific conditions for growth, including food, moisture, warmth, and time. To impede these conditions, proper food storage is imperative.
- Upon food delivery, it's advisable to verify if it has been transported under suitable temperature conditions. Additionally, it's considered a prudent practice to assess the core temperature of cooked dishes, especially larger portions, to ascertain they reach 75°C for a duration of 2 minutes.
- Maintain a constant awareness of the various food items you handle. Bacteria can elicit varying reactions based on the type of food they interact with.

Food poisoning and Bacteria

Here, we will be focusing on the diverse categories of foodborne bacteria, the symptoms they induce, and their resulting consequences.

Bacterial-borne Food Illness

This stands as one of the most prevalent, if not the most significant, sources of foodborne illnesses. The term encompasses a broad spectrum of infections triggered by different bacteria. These bacteria inhabit specific foods, like chicken.

Upon ingestion, they induce an array of symptoms that collectively constitute foodborne illnesses. Upon consumption, the bacteria make their way into your body through the digestive system, involving the stomach and intestines. These bodily sections are where the symptoms of foodborne illnesses typically manifest.

Biological and Chemical Foodborne Hazards

Biological Hazards

- Biological bacteria replicate within food and generate mycotoxins that can lead to sickness or fatality.
- Viruses replicate within living cells (smaller than bacteria), and even a small quantity can induce illness.
- Molds can spoil food items such as bread and fruits.

These hazards often emerge due to improper storage practices.

Chemical Poisoning

Instances of chemical poisoning are uncommon in commercial establishments. The key points are as follows:

- Metallic food poisoning (acidic food/drink contaminated by copper or zinc storage).
- Resulting from undercooked kidney beans and certain fish types.
- Occurs through ingestion of toxic mushrooms.

Symptoms can manifest within an hour.

Food Poisoning Symptoms

The symptoms of food poisoning differ based on the origin of contamination. Most instances of food poisoning result in one or more of the ensuing signs and symptoms:

- Vomiting
- Diarrhoea
- Headaches
- Stomach Cramps

These indications might emerge within hours after consuming contaminated food, or they could manifest days or even weeks later. Food poisoning typically subsides within a few hours to several days. Seeking prompt medical attention is crucial, as there have been instances where death has occurred as a result of food poisoning.

Reasons for Foodborne Illness

At any point during its production, processing, or preparation, food has the potential to be breached by pathogens. The introduction of contaminants can occur due to various factors, such as:

- Inadequate cooking, particularly for meat items.
- Allowing cooked food to remain at room temperature for extended periods.
- Food service personnel practicing subpar food hygiene.
- Improper storage of items requiring temperatures below 5°C.
- Transfer of contaminants between different foods, surfaces, and utensils.

To avoid food poisoning, you should:

- Prioritise handwashing to stay healthy.
- Ensure thorough cooking of food items.
- Adhere to proper food storage practices.

- Avoid cross contamination.

The linkage between certain bacteria and food:

Salmonella Bacteria - The salmonella microorganism exhibits a cylindrical shape and displays rapid, unrestricted mobility. It is present in poultry, particularly in inadequately cooked chicken, raw eggs, or improperly handled food. It also prospers in unsanitary kitchens and environments marked by substandard hygiene.

These bacteria have the capacity to endure extended durations in both moist and dry surroundings. Consequently, they frequently inhabit water sources tainted by excrement from birds and reptiles.

E. Coli 0157 - The E. Coli 0157 Variant typically resides in raw or insufficiently cooked meat, particularly beef, as well as unwashed vegetables, unpasteurised milk, and milk that has been contaminated post-pasteurisation.

These bacteria are introduced into the human body through consumption of undercooked meat, such as ground beef, through personal contact with an infected individual or animal, or by coming into contact with soil tainted by contaminated animal faeces.

Campylobacter - Campylobacter-related foodborne illness can impact anyone, although specific demographic segments are more susceptible to this condition. These high-risk groups encompass children, the elderly, and individuals with compromised immune systems.

While chicken is the primary culprit, other poultry varieties like turkey, duck, and goose also harbour this pathogen.

Norovirus - This is commonly referred to as the 'winter vomiting bug.' A norovirus that resides in the intestinal tract of an infected individual can be excreted in their diarrhoea.

The virus spreads readily from one infected person to another through close contact, often due to the virus being present on the hands of the infected person after using the restroom. Additionally, surfaces or objects touched by the infected individual can serve as a means of transmitting the virus.

Ensuring Food Safety and Hygiene

Understanding HACCP and Food Safety

The HACCP system (Hazard Analysis and Critical Control Point) is designed to assist food business operators in assessing their food handling processes and implementing protocols to guarantee the safety of the produced food. It:

- Ensures food is safe for consumption.
- Minimalises food poisoning risk.
- Provides clear documentation for food safety procedures.
- Promotes food hygiene and appropriate handling practices.

According to legal mandates, food business operators must ensure proper supervision and training for food handlers. These essential skills can be acquired through on-the-job training, self-directed learning, or relevant prior experience.

Implementing the Food Safety Management System

Food business operators are obligated to create and uphold a food safety management system grounded in HACCP principles. This includes:

Recording Daily Documentation - Maintaining thorough records is crucial. This encompasses:

- Receipt details (timings, dates, and items received)
- Ensuring food temperature safety (developing a checklist for reference)

Secure Techniques for Food Storage - All staff members should receive appropriate training to guarantee the safety of storage methods. Whenever uncertain, seek guidance from a more experienced team member.

Embrace Prudent Procedures - It is essential for all staff members to be knowledgeable about optimal methods for food handling. This awareness might involve:

- Protocols to prevent cross-contamination.
- Techniques for inspecting food through probing and visual examination.
- Timetables and methods for effective cleaning.

Tailored Business Strategies and Frameworks

Every business has the flexibility to adopt unique approaches and principles. However, these distinct systems must receive endorsement from the Local Environmental Health department.

Prior to Consuming Food

It is imperative to shield food items from risks of physical, chemical, and microbial contamination during their transit and storage. This precaution guarantees the provision of a safe product to the consumer.

Storing Food - Food items need to be transported to the establishment in a secure manner. The packaging should be suitable, ensuring proper sealing and security. Potential hazards encompass:

- The risk of cross-contamination between cooked and raw meats
- Potential contamination from vehicle residue or chemicals
- The arrival temperature of goods not adhering to specified standards

Dry storage - Dry storage refers to an environment that is neither refrigerated nor frozen, maintaining an ambient temperature that ideally avoids excessive heat or humidity. It serves as a storage space for products that have a stable shelf life, including shelf-stable foods, packaging materials, plastics, and paper goods.

This area should possess proper ventilation, sufficient lighting, and be free from pests. To manage inventory effectively, items should be rotated, ensuring that newer items are positioned behind older ones, following a 'first in, first out' process.

Refrigeration - A refrigerator stands as a pivotal kitchen appliance for maintaining food safety by retarding bacterial proliferation. Refrigeration effectively slows down the growth of bacteria.

Vital to food safety is the upkeep of a clean refrigerator. Swiftly address spills by meticulously cleansing surfaces with hot, soapy water, followed by rinsing.

For optimal food safety, set the refrigerator temperature within the range of 1°C to 4°C. We will soon delve into the topic of secure food refrigeration.

Freezing - Prior to freezing, ensure foods are adequately cooled down (using a blast chiller or a well-ventilated room). Below are safety guidelines for freezing food:

- Never refreeze food or excessively fill the freezer.
- Properly seal food to prevent freezer burn.

- Remember, freezing does not eliminate bacteria; discard if uncertain (label the food).
- Ideal temperature: -18°C

Food defrosting – Poultry and large masses of meat should be completely defrosted before cooking.

Ensuring Safe Food Storage in the Refrigerator

When it comes to storing food in the refrigerator, specific guidelines should be observed. Appropriate food storage practices serve to minimise the chances of foodborne illness, cross-contamination, and bacterial growth.

Different food sections:

- **Ready-to-Eat Dairy Products** - These items ought to be stored on the upper or middle shelves of the refrigerator.
- **Cooked Meats** - It is recommended to cover these and place them products on distinct shelves.
- **Salads, Fruits, and Vegetables** - These items are best stored in the designated salad drawer. Use sealed bags and be mindful of expiration dates before use.
- **Raw Meat (Fish and Poultry)** - It is advisable to place these items at the bottom of the refrigerator. Ensure a clear separation between raw and cooked meat. Always cover and store in sealed containers.

Understanding Food Expiry Dates

Food labels offer a wealth of information regarding food products. Grasping the entirety of this information is crucial for effective utilisation. For example:

'Use By' Dates for Food Safety – 'Use by' dates are indicators of safety, commonly found on perishable foods like fish, meat items, and pre-packaged salads that have a short shelf life.

'Best Before' Date Explanation - 'Best before' dates pertain to quality, not safety. After this date, the food usually experiences a gradual decline in flavour and texture. 'Best before' dates are present on a variety of dried, canned, and other food products. Exercise caution before discarding food that has passed its 'best before' date. In the UK, approximately 7.2 million tonnes of food and beverages are discarded annually, much of which could still have been consumed.

Cooking, Cooling, and Reheating Food - Accurate cooking, cooling, and reheating processes play a vital role in ensuring food safety. Adhering to essential guidelines is imperative in this regard.

Adhering to safeguarding protocols:

Cooking Protocols - Steer clear of preparing excessively large batches of food (max 6 lbs/2.5 kg) as it becomes more challenging to guarantee uniform temperature throughout. Thoroughly cook all food items, particularly red meat (70°C) and poultry (80°C).

When cooking liquid-based dishes, make sure to stir them frequently to ensure even heat distribution. For precision, utilise a meat thermometer to assess whether the meat is thoroughly cooked.

Efficient Food Cooling - Rapidly cool hot cooked food within ninety minutes of cooking and promptly transfer it to refrigeration. Expedited cooling can be achieved through the following methods:

- Employing a blast chiller
- Regularly stirring liquid foods with a clean utensil while cooling
- Spreading food over broad, shallow trays to facilitate quicker heat dissipation.

Food Reheating – To reheat food,

- Ensure thorough reheating to attain and sustain a core temperature of 70°C for red meat and 80°C for poultry for a minimum of two minutes.
- Boil liquid dishes vigorously and stir them intermittently.
- Serve reheated food promptly.
- Refrain from reheating food more than once; dispose of leftovers.

Transmission of Bacteria

Personal hygiene holds immense significance during your work hours. Bacteria can spread via:

- Skin
- Mouth
- Nose
- Ears

The paramount goal of maintaining excellent personal hygiene is to uphold a superior standard of food safety, safeguarding both patrons and the establishment. It is essential to wear clean attire, and changing should occur from the top downwards.

Bacteria Prevention and the Human Body

It is crucial to prepare and handle food items with utmost care. This is essential to ensure the safety and well-being of the consumers. Here are a few ways to ensure personal hygiene:

Skin - While handling food, the skin should be suitably covered. Possible hygiene concerns include:

- Acne, boils, or skin infections
- Cuts and abrasions
- Direct contact of hands with skin, hair, or mouth

The entirety of a scratch should be covered with a blue plaster. This helps with acute detection should the plaster detach during your work shift. The premises' first aid kit should always be stocked up with a fresh supply of waterproof blue dressings.

Mouth care - When engaging in food preparation and handling, it's essential to keep the mouth closed. Potential hygiene issues include:

- Continuous coughing near the food
- Sneezing onto the food
- Consuming or chewing while working with food

Nasal care hygiene - Engaging in nose-picking while handling or preparing food is strongly discouraged. Potential hygiene concerns encompass:

- Sneezing or nose blowing over food
- Particles or debris from the nose falling onto food.

Ear Hygiene - For optimal hygiene, it is recommended to refrain from wearing earrings, piercings, or rings while engaged in food handling or preparation. Possible hygiene issues include:

- Accidental dropping of jewellery into the food
- Touching or picking ears while handling food

Hands hygiene

Hands play a central role in the bustling kitchen or food station, performing a multitude of tasks. However, they also serve as an efficient medium for transmitting germs and bacteria, especially through:

- Nails

- Fingertips

Licking fingers for tasting and testing food, which significantly heightens the risk of bacterial spread. Similarly, false nails and rings can be especially problematic if they fall into food.

To mitigate the risks of contamination, it's essential to limit contact with ready-to-eat foods and surfaces that come in contact with food.

Handwashing Practices

Your hands can also encounter bacteria and viruses from various sources, including others, raw foods, or even yourself. You should wash your hands after:

Handling Raw Food, Such as Meat - After dealing with raw meat, handwashing is of utmost importance. The risk of cross-contamination is high. In a busy kitchen where you might be handling diverse foods throughout the day, it's crucial to wash your hands after each task.

Changing Dressings and Handling Open Wounds - It's evident that this procedure can easily disseminate germs and bacteria.

Managing Waste and Interacting with Bins - After engaging in tasks involving waste or handling bins, it's essential to wash your hands. If you're wearing disposable plastic gloves, discard them promptly and follow up with thorough handwashing.

Toilet Breaks - Failing to do so can have severe repercussions for both your well-being and the food's safety. It's imperative to always wash your hands after using the restroom and before commencing your shift.

Legal Aspects and Your Duties

Having a comprehensive understanding of the law and your obligations when dealing with food is of utmost importance.

According to the law:

- Food handlers must uphold a superior level of personal hygiene.
- Food handlers are required to wear protective attire consistently.
- Any illnesses should be promptly reported to the supervisor or manager.

- Proper facilities must be provided.
- Training must align with job responsibilities and be ongoing.

Training should be continuous and include:

Level 1: Low risk food handlers

Level 2: high risks food handlers

All food handlers must be trained to acknowledge food hygiene matters, and the training for each should be completed in roughly 3 months.

As a food handler, you carry specific responsibilities, these include:

- Wearing clean protective attire consistently.
- Maintaining clean hands.
- Reporting possible cases of foodborne illnesses.
- Reporting subpar cleaning facilities.
- Enforcing food hygiene training measures.

Food premises and utilities:

The fundamental necessities apply universally to all types of businesses, be it home-based catering, extensive manufacturing, a mobile food van, or a compact eatery.

- Food establishments, along with their fixtures, fittings, appliances, and tools, need to be kept at an acceptable level of cleanliness and maintained in good condition, fully functional.
- Kitchen layouts should primarily prioritise the prevention of contamination risks.
- Particular attention should be given to thoroughly cleaning doors, especially their handles, knobs, or plates that might be touched by those handling food.

The premise design:

Every kitchen should adopt a linear layout, ensuring that each designated section is easily reachable and serves a distinct purpose. In a bustling kitchen, the workflow should be smooth; the utilisation of clear signage contributes to achieving this goal:

Sanitary Facilities for Cleaning - These spaces must be positioned far from the cooking zones within the kitchen area. They should be well illuminated and feature conspicuous signage. The washbasins must be unsoiled, furnished with ample supplies of hot and cold water, and equipped with liquid soap and suitable drying means. Washbasins should only be employed for the explicit purpose of cleansing hands, forearms, and faces.

Additional Signs - As indicated by the signage, it is unsanitary to consume food or beverages while engaged in handling or getting ready to cook food. What types of signs are present in your workplace? Are you familiar with their meanings? If uncertain, consult your supervisor for clarification. It's self-evident that the preparation of raw and high-risk foods and the procedures for cleanliness and contamination must always remain separate.

Waste Storage and Disposal

The safe and secure disposal of waste holds significant importance. Within commercial kitchens, there are typically waste bins and designated zones both inside and outside the premises.

Disposal of Waste - A kitchen will inevitably generate a substantial amount of waste, encompassing cardboard and packaging, expired food items, food scraps like bones and peelings + greases and oils (retain residues in containers - refrain from pouring them into drains.)

Internal - Internal containers must possess the following characteristics:

- Simple to clean
- Equipped with foot-operated mechanisms and disposable liners.
- Emptied on a regular basis and promptly cleaned thereafter.

External - External receptacles should exhibit the following traits:

- Secure with well-fitting lids that close tightly
- Waterproof and sturdy
- Long-lasting
- The surrounding area should be thoroughly rinsed to prevent pests and potential risks.

Recycle - Recycling involves the collection and treatment of materials that would otherwise be discarded as waste, transforming them into fresh items. Recycling holds the potential to positively impact both your local community and the environment.

Utensils and Tools

Inadequate maintenance of equipment stands as a primary cause of food contamination. An efficient upkeep plan aids in the pre-emptive identification of issues and helps steer clear of costly repairs. Regulations mandate that all equipment, functional surfaces, and additional utensils must be designed and constructed to minimise the accumulation of bacteria or pests, while remaining easy to clean.

Deteriorated small equipment, like dishes, glassware, serving tools, and utensils, should be appropriately discarded. Items with chips, cracks, or breakages pose hygiene and occupational health and safety concerns.

Pests

The existence of pests within spaces dedicated to food production and preparation has consistently been deemed unacceptable. The potential dangers arising from pests encompass:

- Transmission of illnesses
- Harm to property
- Tainting of work surfaces and food items
- Reputation deterioration
- Legal action and cessation of operations
- Strained staff relationships

At the very least, all staff members must possess knowledge of the types of pests they may come across and recognise the significance of preventing pest presence.

Common workplace pests

Ideally, all establishments should be entirely devoid of pests. Being familiar with the most frequently encountered offenders is crucial.

1. Rodents - Rodents can inflict harm on food designated for human consumption through consumption itself, pollution from faeces and urine, along with the introduction of physical and microbial impurities. They stand as the most prevalent pests and possess the ability to:

- Propagate illnesses
- Pollute items
- Wreak havoc on food supplies and property

2. Pigeons and Avian Pests - Certain avian species have the potential to inflict structural harm to structures and residences, while others carry health risks due to their excrement. Droppings and feathers from sparrows and pigeons can taint food, both during the manufacturing process and while awaiting distribution.

3. Insects and Flying Insects - Insects manifest in a multitude of species. The fly stands as a remarkably mobile pest, capable of moving from unsanitary environments to food sources, transporting a diverse array of disease-causing organisms on its body. Ants also infiltrate kitchens and production spaces, potentially contaminating food with their bodies and hatching larvae (eggs).

Cockroaches contaminate their surroundings through excrement, regurgitation of food, and the diffusion of their distinctive odour. Should these insects be discovered in proximity to food, immediate disposal of the food is imperative, followed by thorough cleaning of the area.

Indicators of Pest Infestation

Dealing with a pest infestation is undoubtedly undesirable. Sometimes, pests can infiltrate your premises despite your best efforts. It's crucial to promptly inform your supervisor about any indications of pest presence.

Indicators of Pigeon and Bird Infestation include:

- Feathers
- Excrement
- Nests and eggs
- An odor

Evidence of Insect Infestation:

- Deceased bodies
- Larvae or eggs
- Excrement or noticeable odour and sounds
- Blemishes in food or the presence of webs

Indicators of Rodent Infestation:

- Deceased bodies, nests, and fur
- Openings or holes
- Damaged boxes and paper due to chewing
- Odors and sounds of scratching

Pest Preferences

Pests tend to seek out environments that offer safety, security, and favourable conditions. Regular inspections of food establishments are imperative. Pests often inhabit susceptible spots such as:

- Food storage spaces
- Areas behind equipment
- General storage regions (cleaning rooms, etc.)
- Locations designated for waste storage

Preventing pests from accessing such secure habitats will thwart their ability to thrive.

Pests are recognised carriers of diverse pathogens that can be transmitted to humans, either via contaminated food or their mere presence in the surroundings. Always report any instances of pest activity.

Pest Control

Mitigating pest-related risks and implementing preventive measures can often be accomplished quickly and affordably. The appropriate actions will vary based on the specific pest. Sightings of pests should be documented and communicated to your supervisor or the pest control management company. Types of pest control include:

Environmental - This goal can be accomplished by preventing entry to buildings or premises through the implementation of sturdy building maintenance steps, including:

- Installing metal door plates
- Erecting mesh screen coverings
- Sealing off entry points
- Preventing access to food through the adoption of fundamental housekeeping procedures.

Physical interventions – such as:

- Fly traps (such as electric fly killers)
- Mouse traps
- Rat bait devices
- Systems for controlling temperature (managing humidity and heat)

Chemical approaches – It's vital to exercise extreme caution whenever employing these methods. The potential for contaminating work surfaces and food is high. Always ensure thorough cleaning of the areas after application. This approach involves:

- Utilising poisons designed for rats and mice
- Applying insecticide sprays to eliminate insects

As a food handler, you hold a crucial responsibility in pest management

You must:

- Promptly inform the manager about any pest indications.
- Maintain cleanliness and order in all waste zones.
- Dispose of and eliminate contaminated stock.
- Guarantee pest-free deliveries.
- Prevent food from touching the floor. Store food securely and covered.
- Utilise containers that are resistant to pests.

- Regularly inspect and maintain the operational status of electric fly killers and other pest deterrent equipment.
- Arrange for regular servicing by the manufacturer.

The Purpose of Cleaning

Bacteria that can lead to illnesses have the ability to persist in numerous areas within the kitchen, such as your hands, tools, and cutting boards.

Failing to promptly clean your hands, tools, and surfaces can potentially result in the transmission of bacteria to your food, as well as to your coworkers and patrons. Implementing effective cleaning procedures will:

- Minimise the proliferation of pests
- Adhere to legal requirements
- Diminish the likelihood of contamination
- Promote staff and clientele wellbeing

Legal Regulations:

- Food establishments must maintain cleanliness.
- All equipment must be regularly cleaned and disinfected as needed.

Always employ hot water and detergent, and make sure to follow the manufacturer's instructions. Practice ongoing cleaning.

Risks Arising from Improper Cleaning

Various terms can be used to illustrate risks, contingent on whether they are microbiological, chemical, or physical in nature. Certain risks linked to cleaning are detailed below:

Microbiological Risks

Inadequate cleaning can lead to contamination, resulting in microbiological hazards. This can transpire due to cross-contamination from cloths and the neglect of cleaning mop buckets and mops after use. Employ color-coded cloths for cleaning different areas (floor, work surfaces, tiles, etc.) as a preventive measure.

Chemical Risks

Chemical hazards can emerge due to:

- Incorrect storage (always follow the manufacturer's guidelines). Neglecting proper rinsing of surfaces.
- Applying chemicals onto exposed food, which may result in chemical contamination.

Physical Risks

Physical hazards can materialise under the following circumstances:

- Utilising faulty equipment
- Employing equipment that is fractured or impaired.

It is of utmost importance to either repair faulty equipment or remove it from use. For instance, a brush that sheds its bristles should be discarded.

Equipment and Storage

The equipment employed during cleaning must be suitable for its intended purpose and used in the appropriate manner. Employing them effectively helps to mitigate potential hazards and potential health and safety risks. Similarly, the cleaning substances you utilise should be stored in a safe and secure manner. Always practice cleaning as you go and promptly address any spills.

Equipment - The equipment utilised during cleaning should be appropriate for its intended function and employed in the proper manner.

Upon completing each task, ensure that the equipment you used is thoroughly cleaned and inspect it for any signs of damage. Should you identify any damage, label the item as defective and arrange for either repairs or a replacement.

Cleaning agents – These ought to be:

- Safely stored, away from food supplies
- Clearly labelled with usage instructions
- Procured from a reputable manufacturer.

Never combine chemicals, as doing so can result in the release of hazardous fumes or even lead to an explosion.

Well-being - While utilising cleaning and operating equipment, it's crucial to observe necessary precautions. For instance:

- Don the suitable protective attire (such as rubber gloves).
- Obtain proper training when required.
- Familiarise yourself with the manufacturers' guidelines (always dilute chemicals as directed).

The mishandling of chemicals can have severe consequences, even resulting in fatalities.

Cleaning Schedule

For optimum efficiency, it's essential to establish a cleaning rota or schedule within the workspace. This schedule serves as an effective method for overseeing tasks and procedures.

This record will indicate:

- The individual responsible for completing the task.
- Any required authorisations and clearances (if applicable)
- The date when the task was accomplished.
- Any problems or issues that were encountered, noted, or resolved.
- Record the Duration of Task Completion
- Provide Recommendations for Enhanced Efficiency
- Indicate any specialised tools, equipment, or cleaning agents that were utilised for the task.
- Detail the specific health and safety measures that were followed during the task, ensuring the wellbeing of personnel and the environment.
- Verify that the task was carried out accurately and in accordance with established standards.
- Specify who inspected the completed task and the date of the review.
- Highlight any potential areas for improvement or weaknesses that were observed during or after the task.
- Outline the step-by-step procedures required to successfully accomplish the particular task.
- Explain the application of specialised equipment and kit essential for the task.
- Enumerate the safety precautions taken during the task and identify any necessary training that needs to be provided.

This data should then be:

- Safely stored to prevent unauthorised access or loss.
- Periodically reviewed to ensure accuracy and relevance.
- Continuously assessed to identify opportunities for enhancement.

Cleaning Work Surfaces

Kitchen countertops can serve as a thriving environment for germs. It's crucial to maintain clean work surfaces that are devoid of dirt, grime, and bacteria. We can do this by:

Pre-Cleaning

Here, you ought to:

- Clear away debris and food particles from the surface
- Employ a disposable cloth or a paper towel

Sanitising

You should:

- Apply a cleaning solution or sanitiser onto the work surface
- Allow ample time for the sanitiser to effectively eliminate harmful bacteria

Rinsing

You should:

- Wipe the surface using a disposable paper towel dampened with clean water to eliminate any remaining cleaning solution.
- Thoroughly cleanse the surface to prevent chemical residues and contamination.

Air Drying

You should:

- Permit the surface to naturally air dry, ensuring thorough drying.