FOOD SAFETY AND YOU



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Module 1 Do You Know?



About 85% of our home fridges are not operating at a cold enough temperature to keep food safe.

In a year one pair of house mice and their offspring could produce a total of 2,000 young.





Module 1 What Is Food Hygiene?

Food hygiene is more than just cleanliness. Keeping work places, staff and equipment clean is an important part of food hygiene.

> <u>Clean area</u> reduces the risk of producing harmful food prevents infestations by pests like flies, mice, etc. is more attractive to customers.

Restaurant fined for having dirty kitchen

Cockroach was found in meal A CHINESE take-away in Edmonton has been forced to shut its doors after a

Food firm fined after woman swallows plastic



Module 1 What Is Food Hygiene?

Food hygiene is more than just cleanliness.

An equally important part of food hygiene is the way in which food is handled and stored.

Poor practices in the handling and storage of food could lead to a food poisoning outbreak, even in the cleanest of workplaces.

Where would you rather work??







Module 1 Awareness Of Food Hygiene

Good hygiene habits will protect food against being contaminated by germs.

The benefits of good hygiene : - satisfied customers

good reputation

compliance with the law

increased shelf-life of food

good working conditions, higher staff morale which will increase productivity and contribute to higher profits.



It is estimated that only one in ten people report their food poisoning.



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Module 1 The Law & Food Hygiene

The acts and regulations applicable to the food industry are concerned with : the production or sale of injurious, unsafe, unfit or substandard food

the contamination of food;

the hygiene of food premises, equipment and personnel

hygiene practices, including temperature control and treatment;

the control of food poisoning and food-borne diseases;

the composition and labeling of food.





Module 1 The Law & Food hygiene

Breaking the food safety laws can mean : -





a fine



a prison fine



compensation for customers who have been affected by the food





Module 1 Food Hygiene & Business

Poor food hygiene affects business. Nobody will want to buy food or eat in a place with a bad reputation. People do not want to work in these places, so there is a high turnover of staff.

A bad reputation can lead to : -

less business

low profits

possible redundancies

Don't eat there, I was really sick after eating one of their burgers



They gave me a dirty knife & fork!



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Module 1 Summary

Food hygiene means : -

Storing food safely and keeping premises, staff and equipment clean.

Good food hygiene prevents disease and injury.

Poor food hygiene can lead to food poisoning, business closure, legal action and loss of customers and profits.

Hygiene premises are better, happier places in which to work.





Module 2 Food Poisoning & Disease

An illness through eating contaminated food

Causes of food poisoning : -Bacteria and microbes (virus & moulds)

- Chemicals and metals
- Poisonous plants (eg toadstools, berries)

Symptoms Stomach-ache, diarrhoea, vomiting and fever.

Usually start between one and 36 hours after eating contaminated food and can last for days.





Module 2 Chemical & Metal Contamination

Some of these chemicals and metals are poisonous and can cause food poisoning symptoms.

Metals like lead and mercury stay in our bodies for a long time and some will make people very ill.

How to detect chemicals??

Most chemicals can only be detected by testing the food in a laboratory.







Module 2 Bacteria Contamination

Bacteria contamination can caused food poisoning or a food-borne disease.

What are bacteria? minute living things only visible through a microscope. most bacteria are not harmful. a small number of bacteria can cause food to rot.

Food spoilage rotting by bacteria can lead to food spoilage, as food goes 'bad'. food spoilage bacteria do not usually caused food poisoning, although, if there is enough of them, they can make us feel ill.



Bacteria on a pinpoint



The signs of Food spoilage



Module 2 How Bacteria Multiply

Bacteria multiply by splitting into two, a process called binary fission.

Bacteria grow best in : -

food

warmth

moisture

time



Bacteria need all 4 to multiply



Multiplication of bacteria



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Module 2 High & Low Risk Food

High Risk Food Food that bacteria can grow easily on them and they may be eaten without cooking.

Usually moist and high in protein eg. cooked meats, soups, dairy produce(milk, cream), shellfish etc.

Low Risk Food Usually low in moisture, low in protein and are acidic. eg. dried or pickled food, food with very high content of sugar, food with very high content of salt.



Module 2 Summary

Food poisoning is caused by eating food which is contaminated.

Most contamination is caused by bacteria. Contamination can also be caused by viruses, chemicals or poisonous plants.

Symptoms of food poisoning are abdominal pains, diarrhoea, vomiting, nausea and fever.

Food poisoning can last for days, and can kill.

Food poisoning bacteria become dangerous when they are allowed to multiply.

Food spoilage bacteria cause food to rot.





Module 3 How Food Is Contaminated

Food can be contaminated through : -

Bacterial contamination

Usually occurs within food premises due to ignorance,

inadequate space, poor design etc.

Physical contamination

By foreign bodies which may be dangerous, eg.glass or nails.

Chemical contamination

From pesticides, waste or cleaning chemicals.

SLOPPY HYGIENE STANDARDS LEAVE DANGEROUS BACTERIA IN AIRLINE MEALS. Flying fears? It's the food you should worry about Airline food can seriously damage your health, a new investigation reveals today. Passengers are being exposed to the risk of food poisoning because of food hygiene. Poison in baby's food. POLICE alerted mothers last night after poison and drawing pins.



Module 3 Where Do Bacteria Come From?

Bacteria can get onto food from many things during production and preparation through : -

Air Raw foods Animals Insects Refuse (rubbish) Dust & Dirt Water People







Module 3 People

Bacteria are often passed from people to food.

Ears, noses and throats often contain food poisoning bacteria.

Coughs and sneezes do spread diseases!

Smokers can pass bacteria from mouth and nose onto their hands.

Hands especially nails can carry bacteria which will be passed on when you touch food.





Hair, dandruff or bacteria may get on the food from your hair.











Your intestines contain harmful bacteria which can get on to your hands when toilet. Bacteria can then get on to food from your hands. Remember that toilet paper is porous (bacteria can pass through).



Module 3 Insects

Insects can carry bacteria on their bodies.

Flies present the greatest hazard because of their feeding habits. They land on animal faeces and may pick up large numbers of bacteria on their bodies.

Cockroaches live in sewers and feed on infected waste. They may carry food poisoning organisms on their legs and bodies to food.





Module 3 How Do Bacteria Get on To Food?

Direct Contact Bacteria can be carried from one food to another when the two come into contact.

Indirect Contact & Cross contamination Bacteria can be moved from one food to another, through kitchen objects called vehicles. Examples of vehicles on contamination are : containers, cutlery, hands, work surfaces, cloths, chopping boards and equipment.







Module 3 Physical & Chemical Contamination

Physical contamination may caused internal bleeding, especially if objects are sharp, like pieces of glass, stones and twigs found in vegetables and fruits, nuts and bolts dropping off from machines during production.

Pesticides are sprayed on fruit and vegetables as they are growing and may still be present when harvested.

If cleaning fluids are stored in food cupboards, the food may be contaminated, or become tainted.

Some plastic containers may release chemicals into food.







Module 3 Summary



Sources of bacteria are people, air, raw foods, animals, insects, refuse, dust and dirt and water that are unfit for drinking.

People carry bacteria in their hair, ears, nose, throat, intestines and skin, particularly hands.

Bacteria from any source can be passed on to food by direct contact.

Knives, work surfaces, cloths and unwashed hands are vehicles for passing bacteria onto food.

Objects can contaminate food during any stage of its production.

Chemicals, including pesticides and other cleaning materials. Food safety program by can contaminate food if not used carefully.







Module 4 **Preventing Food Poisoning**

Three ways to stop food poisoning are : stop bacteria from getting into food.

stop the bacteria on food from multiplying at

destroy the bacteria on the food.









Making sure raw



Module 4 Preventing Bacteria From Multiplying

Bacteria needs food, warmth, moisture and time to multiply. By taking away any one of these four, you can slow down or even stop bacteria from growing.

Cooling bacteria slows down the multiplication.

Heating above 70°C for sufficient time will kill most bacteria.

Foods are at their danger zone when at **5-60°C**.





Module 4 Moisture & Time

Bacteria need moisture (water) to multiply.

When water is added to food, bacteria could multiply.

The longer food is left at dangerous temperatures, the more time the bacteria will have to multiply.

If frozen food is allowed to thaw, the bacteria in the food will start to multiply.

Preservation process(salting, picking and jam-making) will stop the bacteria from multiplying.







Module 4 Destroying The Bacteria in Food

The best way to destroy bacteria is by heating.

Sterilization

Food is heated to a high temperature(100°C) for a long time.

Pasteurization

Food is heated to 72°C for 15 seconds, which kills pathogenic bacteria, but not all spoilage bacteria.

Ultra Heat Treatment (UHT)

Food is heated to a very high temperature for a short time and nearly all bacteria are killed.





Module 4 Ten Main reasons For Food Poisoning

- 1. Food is prepared too far in advance, and stored at a warm (dangerous) temperature.
- 2. Food is cooled too slowly before being refrigerated.
- 3. Food is not reheated enough to kill all the bacteria in it.
- 4. People eat cooked food which has been contaminated by food poisoning bacteria.
- 5. Food is undercooked.
- 6. Poultry is not thawed properly.
- 7. Cooked food is cross-contaminated by raw food.
- 8. Hot food is kept warm at a temperature of less than 60°C.
- 9. Food handlers pass on infections when handling the food.
 10. Left-overs are used.





Module 4 Summary

Prevent food from contamination : -Handle food as little as possible. Cover food Keep raw and cooked foods separate. Keep all bibs covered. Keep animals and insects away from food places.

Stop bacteria on food from multiplying
Prevent food from becoming moist.
Keep cold food below 5°C. Keep hot food above 60°C.
Cook food thoroughly.
Do not keep food between 5-60°C.
Avoid re-heating food.









Module 5 Cleaning The Workplace

Food places must be kept clean and tidy, and they must be disinfected regularly.

Effective cleaning requires : -

Detergent

a chemical used to remove grease, dirt and food particles.

Disinfection

the reduction of micro organisms to a level that is safe and which will not cause premature food spoilage.

Disinfectant

a chemical used for disinfection





Module 5 Washing Up

Effective washing up in sink needs :

hot water ,detergent, disinfectant, drying facilities.

sinks for washing food/equipment should be provided and kept clean.

hot water at a suitable temperature or hot/cold water must be supplied.



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Module 5 **Clean As You Go**

food contact surfaces, eg. chopping boards

Always follow the manufacturers instructions on how to use :too much may be difficult to rinse off and wasteful. 31 Food safety program by





Module 5 Food Handling Equipment

Equipment should be designed for easy cleaning. It should be resistant to rusting, non-toxic, non-absorbent, durable eg. Stainless steel

Sufficient equipment is necessary as this would reduce the risk of contamination.

Ideally, cutting boards should be made of polypropylene and be washed and disinfected straight after they have been used.







Module 5 Summary

After anything has been cleaned, it must be disinfected.

Things should be left to dry on their own if possible.

Follow manufacturers instructions when using chemicals.

All equipment should be made of suitable material which are easy to clean and disinfect.

Tongs should be provided to avoid unnecessary food handling.



Module 6 Personal Hygiene

It is essential to keep yourself clean and wear clean protective clothing.

Food handlers should wear suitable head covering which completely encloses the hair.

Combing of hair should only be carried out in changing rooms.

Food handlers should not wear watches, rings or bangles as they harbour dirt and bacteria.

Nail polish should not be worn as they may tend to come off whilst preparing food.







Module 6 Do's and Don't's



Don't pick your nose



Don't cough or sneeze over food

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Don't taste food with your fingers



Don't bite your nails or lick your fingers



Don't eat or chew gum



Don't smoke





Don't spit

Module 6 Skin, Cuts and Grazes

Never scratch skin, especially spots, as this will leave bacteria on your hands which can then be passed on to food.

Cuts and wounds should be covered with a waterproof dressing before starting to work with food.

easily if it falls off.





Module 6 Hands

Hands should be washed after :

visiting the toilet

touching your face-especially nose, mouth and ears.

handling raw food

handling rubbish

breaks, and any time you come back into a food preparation area

cleaning and disinfecting the workplace.





Module 6 Clothing

Food handlers must wear suitable protective clothing.

Protective clothing should be : -

well fitting

clean

light weight and

light coloured so that dirt can be seen.





Module 6 Illness

Food handlers must report to their supervisor if they are suffering from : -

food poisoning a cold a sore throat boils or spots a septic wound diarrhea an upset stomach sickness





Food handlers who are ill must not handle food



Avoid sneezing over food



Module 6 Summary

Cover hair, and don't touch or comb hair when in a food area.

Don't touch skin, especially your mouth, nose and ears.

Cover all cuts and grazes with a clean waterproof dressing.

Don't wear jewelry, watches and rings.

- Wash your hands often.
- Wear protective clothing.
- Report any illness to your supervisor.
- Never smoke in food rooms.









Module 7 Food Storage

All food must be stored safely and at the right temperature to avoid contamination and waste.
Look for the label that tells you how long you can keep food safely, eg. 'Use By' and 'Best Before' dates.

Ensure stocks are rotated. This means that the old supplies of food are used before new stocks are used.









Module 7 Dry Food Storage

Dry, bottled and canned foods like flour, rice should be kept in rooms or cupboards which are dry, cool, well lit and well ventilated.

Foods should be stored off the floor and in air-tight containers.

Cans that are dented, rusty, damaged in any way, 'blown' and past their 'Use By Date' should be thrown away.



Do not use dented or blown cans





Module 7 Vegetables And Fruits

Fresh fruits and vegetables should be used as soon as possible.

They should be checked regularly and kept in a cool room off the floor.

Root vegetables like potatoes and carrots should be stored away from other vegetables and kept in a dark place.





Green potatoes can be poisonous



Module 7 **Perishable Foods**

Perishable foods such as fish, meat and dairy products should be refrigerated.	*C 110	
	100	
Dow foods, cooked foods and doin, products should be	90	
Raw loods, cooked loods and dairy products should be	80	
stored away from each other.	70	
	60	
All foods should be covered and stored away from each		
other to prevent contamination	40	
other to prevent containination.	30	
	20	
Room temperature (10-36°C)	16	
	C	
Refrigerator (1-4°C)	-10	
Ereezer (-18°C)	-20	
	-30	
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Module 7 Fridges

Site fridge in an area that is well ventilated and away from sun.

Fridge temperature must be checked every day. It must be between 1-4°C.

Fridge must be regularly defrosted and cleaned.

Air must be able to circulate freely inside with no overloading.

Door seals should be tight fitting and clean, and door should be close at all times to maintain the right temperature.

Hot food should not be kept in the fridge as it increases the temperature in fridge and causes condensation.





Module 7 Frozen Foods

Temperature of frozen food should be around -18°C before they are transferred to the freezer.

Do not accept delivery of food that are warmer than -12°C.

Never refreeze frozen food once it is thawed.

The safe temperature for freezers is between -18°C and -23°C.

Checked any date marks before using the food.

Star rating in freezer tells you how long the food can be safely kept.





Module 7 Summary

It is important to rotate stock so that the oldest food is used first.

Follow the manufacturer's instructions when storing all foods. Look for 'Use by' and 'Best before' dates.

Dry, bottled and canned foods should be stored in a dry, well ventilated room, off the floor and airtight containers where necessary.

Perishable foods should be refrigerated, kept in covered sealed containers to avoid contamination.

Refrigerators should be kept at a temperature of 1 to 4°C.

Freezers should be kept at a temperature of -18 to -23°C.



Refrigerators must not be overloaded





Module 8 Safe Food Preparation

Safe food preparation helps to stop cross contamination.

- Care planning of food preparation can save time, energy and food.
- It is important to plan time carefully, so that the shortest possible time is achieved for food preparation.
- Poultry and large meat joints must be thoroughly defrosted before they are cooked. If food is still frozen, the inside temperature remains in the danger zone.





Module 8 Thawing Times For Frozen Products

It is recommended that thawing of larger frozen poultry is out at 10-15°C and to be separated from other foods.

Weight	Approx. thawing time in a cool room
2.25kg (51b)	15 hours
4.5kg (10lb)	24 hours
6.75kg (15lb)	36 hours
9.0kg (201b)	48 hours

Thawing Times For Frozen Poultry



Cut of meat	Defrosting time in fridge (per0.5kg (11b))
Chops, steaks	5-6 hours
Small joints of meat (less than 1.5kg (3lb)	3-4 hours
Large joints of meat	6-7 hours

Thawing Times For Meat



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Module 8 Food Preparation

Wash your hands regularly during food preparation

Always wash your hands after : touching raw food handling waste cleaning

Use separate equipment when preparing raw and cooked meats.

Ensure all food are cooked through before they are served.





Module 8 Cooling And Food Tasting

Food must be cooled quickly and refrigerated within 1½ hours.

- Do not put hot food straight into the fridge, as this raises the temperature in the fridge and causes condensation.
- Use a clean spoon every time you taste food.





Module 8 Displaying Hot & Cold Food

Food displayed for sale should be covered so that it cannot be contaminated by customers or staff.

Hot food must be kept at temperatures above 63°C.

Cold food must be stored at a temperature of 8°C or below.

Specified foods like meat, fish, eggs, cheese etc. must be kept at a temperature below 5°C.







Module 8 Avoiding Contamination

Food handlers should use tongs or spoons to pick up food.

There should be sufficient equipment and utensils to ensure that the food cannot be contaminated.

Do not put food directly on a weighing scale. Place it on a grease proof paper or in a container.

Never handle food and money at the same time.

Animals and smoking are not allowed in food shops.









Module 8 Summary

Planning food preparation can save time, energy and food.

Keep foods out of the danger zone(5-63°C) for as long as possible.

Defrost food thoroughly in a cool area away from other foods. Do not refreeze.

Wash your hands after handling raw and cooked poultry.

Use separate equipment when handling raw and cooked meats.

Ensure all food are thoroughly cooked before serving.

Food on display must be covered to avoid contamination.



Module 8 Summary

Hot food must be kept at a temperature of above 63°C.

Cold food must be stored at a temperature of below 8°C and in some cases below 5°C.

Do not serve food with your hands. Tongs and spoons should be used.

Never put food directly on the weighing scale.

Never handle food and money at the same time.

Animals and smoking are not allowed in food shops.



Module 9 Design Of Food Premises

Well designed food premises can help prevent food poisoning.

Food premises should be easy to clean and built.

All equipment used for food handling should be made from suitable and should be used properly.

When designing food premises, the following areas should be taken into consideration : lighting and ventilation walls and ceilings storage facilities layout work surfaces









Module 9 Equipment

There should be enough fridges and freezers so that food can be stored safely.

Ideally, raw, cooked foods and dairy products are to be stored separately.

Cookers should be large enough to cook the required amount. They should be cleaned and serviced regularly.





Module 9 Summary

Food premises should be well lit and well ventilated.

There should be plenty of hot and cold water with good drainage.

There should be sufficient storage space.

Ceilings and floors should be smooth and floors non-slip.

First aid boxes must be provided and regularly maintained.

Staff toilets with wash basins must be provided.

Separate food areas for raw and cooked foods.





Module 10 Waste

The safe disposal of waste is important in food safety as waste attracts pests.

- Waste should be disposed into polythene bin liners inside bins with a well fitted lid.
- Bins should be located well away from food preparation areas.
- Empty and clean waste bins regularly.
- Always wash hands after handling rubbish.
- Recycled items should be cleaned before storing.







Module 10 Pest Control

The structure of food rooms should be kept clean and in good repair to prevent infestations by rats, mice, insects or birds.

Food handlers should be able to recognize signs of food pests and know how to control them.

The best way to stop food pests are to make sure that they can not get in.

Stock rotation will as it stops old stock from being forgotten.

All loose food should be kept in air-tight, pest-proof containers.





Module 10 **Rodents**

Rats and mice can gnaw through wood and get in through

Signs of infestations by rats and mice are droppings which

Make sure that there are not any holes leading into workplace from outside.

Cut down all plants near the workplace, as rats and mice can

Rats and mice can be controlled by trapping them or by using rat poison. 61





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Module 10 Flying Insects

Flying insects can get into food places through windows, doors and air bricks.

Keep all rubbish bins covered.

Put fly screens over air grills, and door and windows which are often opened.

Signs of infestations by flying insects are eggs and maggots in food.

Flying insects can be controlled by using electric fly killers or insecticides.

Housefly





Fly eggs and maggots





Module 10 Crawling Insects

Cockroaches, book lice, ants and silverfish are crawling insects.

Crawling insects live off food waste. Ensure spills are wipe off immediately and keep all loose foods in airtight containers.

Signs of infestations are dead bodies, egg cases and droppings.

Crawling insects can be controlled by using insecticides.



Booklice



Silverfish



Cockroaches



Module 10 Summary

Dispose of food waste in waste disposal unit or in polythene bin liners in covered bins.

Clean things you want to recycle and store them in clean dry places off the floor.

Clean and disinfect bins regularly.

Signs of rodents are droppings and gnaw marks.

Signs of insects are dead bodies, insect cases and droppings.

Make premises as pest resistant as possible. Put fly screens on windows, doors and air grills.

Control pests with insecticides.



"Mice gnawed through your electrics? Look what they did to my hose!"



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GENTLE REMINDER

Remember, YOUR CARELESSNESS MIGHT BE THE CAUSE OF AN OUTBREAK OF FOOD POSIONING!!

Dirty food handlers will be prosecuted.





For all your cleaning products

