Food Safety

- Everyone who handles food must make sure it's safe to eat.
- You need to understand how food becomes contaminated and how to prevent it.
- The priority is to protect consumers from harm.
- Poor safety can lead to illness or even death.

Get it wrong

- Complaints
- Illness
- Food has to be thrown
- Bad reputation
- Loss of customers
- Close down
- Legal claims/fines

Get it right

- Safe food
- Less wastage
- Happy customers
- Good reputation
- Food hazards

Anything that could cause harm

- Physical – jewellery, plasters, hair, machinery
- Chemical – cleaning products, pesticides, poisonous plants, rat poison
- Microbial – bacteria, viruses, moulds
- Allergenic – nuts, dairy, shellfish
- Microbial contamination
- Bacteria are everywhere
- Most are harmless
- Some used to produce food like yoghurt and cheese
- Pathogenic – cause food poisoning
- Bacteria are very small and you cannot tell if food is contaminated

Where are bacteria found?

- Raw food – esp. meat, fish, shellfish, eggs, fruit& veg.
- People – esp. skin, ears, nose, throat, hair

- Air and dust and soil
- Equipment if not cleaned properly
- Pests – animals, birds, insects
- Untreated water
- Food waste

How do bacteria multiply?

- Binary fission – doubling
- Time – double every 10-20 mins
- Warmth – 5-63C danger zone (quickest growth 37C body temp)
- Moisture - water (so less likely on dried foods)
- Nutrients – quickest growth on high protein food – meat, eggs, fish, milk

Food poisoning

- Most bacteria die when the temperature gets above 63C or they have no moisture or food
- Some can form spores which protect them so they can survive
- Food poisoning caused by large quantities of pathogenic bacteria

Symptoms

Stomach pain, diarrhoea, nausea, vomiting.

Most at risk

Very young, very old, ill people, pregnant mothers

Common bacteria

- Salmonella – chicken, eggs
- Staphylococcus Aureus – human skin, nose, mouth, cuts
- Clostridium Perfringens – animals, soil
- Clostridium Botulinum – soil
- Bacillus Cereus – cooked rice

Food Borne Disease

- Caused by pathogenic bacteria and viruses carried on food
- They don't multiply in food, but in the person who eats it
- Campylobacter enteritis – raw meat
- E Coli – beef
- Listeria – soft cheese, pate
- Norovirus – shellfish, raw veg.
- Typhoid – Untreated water

What is cross contamination?

- Bacteria transferred from one thing to another
- Raw food touching ready to eat food
- Knives/boards used for raw food not washed properly before using on ready to eat food
- Hands and hand contact surfaces like door handles, switches, taps
- These are called vehicles for contamination transferring bacteria from one place to another

How to prevent cross contamination

- Colour coded boards and knives
- Keep raw and cooked food separate
- Keep food covered in storage
- Clean and disinfect surfaces
- Use disposable cloths or paper towels
- Wash hands regularly
- Good personal hygiene
- Good food waste disposal

High risk foods?

- Cooked meat, fish , seafood
- Pies and meals with sauces like curry, stew, casserole
- Egg products like quiche and mayonnaise
- Cooked rice
- Dairy products, cream cakes, cream desserts
- Low Risk foods?
- Pickled in acid e.g onions, gherkins
- High sugar e.g chocolate, biscuits
- Dried e.g pasta, flour, packet mixes
- High salt or fat e.g crisps

Hazard Control

- Businesses have to ensure food is safe by having a safety management system to check the hazards and put things in place to minimise the risk.
- HACCP – Hazard analysis critical control point
- Documents and records must be kept on temperature, training and cleaning
- Register with local authority
- Provide toilet and hand wash facilities
- Provide staff training and supervision
- A food handler must:

- Keep themselves clean
- Keep workplace clean
- Protect food from contamination
- Have good personal hygiene
- Protective clothing
- Inform supervisor of any stomach illness, skin problems, coughs and colds

What is an EHO?

- Environmental health officer
- They can:
- Inspect premises
- Investigate and remove unsafe food
- Give an improvement notice
- Stop business with a prohibition notice
- Close premises
- Take to court leading to fines or even imprisonment

What is due diligence?

- When everything possible is done to make sure that the food prepared was safe to eat
- Why is hand washing so vital?
- To remove bacteria
- To prevent cross contamination
- When is it important?
- Before handling food
- After : touching raw food, going to the toilet, smoking, sneezing, cleaning, handling waste, handling allergens, offering first aid
- There must be hand wash basins, hot/cold water, antibacterial liquid soap and paper towels.
- Wash front, back and between fingers, rinse/dry
- Cleaning
- Detergent – removes dirt and grease
- Disinfectant – reduces bacteria to a safe level
- Sanitiser – combines detergent and disinfectant
- Hand contact surfaces – door handles, fridge handles, taps, light switches, cooker controls, lids on waste bins, telephones, toilet seats & flush handles, pens
- Clean as you go

6 stages of cleaning

- Pre-clean (scrape bits into food waste)

- Main clean
- Rinse
- Disinfect
- Final rinse
- Dry
- Cleaning schedule
- What needs to be cleaned
- How will it be done
- When will it be done
- Who will do it
- Cleaning and waste disposal
- Handle cleaning products with care/store away from food/ follow instructions for use
- Use special cloths for each job
- Remove rubbish regularly
- Use foot operated bins with lids
- Clean and disinfect regularly and use disposable bags
- Pests
- Any living creature capable of contaminating or damaging food
- Rats, mice, pigeons, sparrows, starlings, flies, cockroaches
- Pests contaminate food with:
- Bacteria, droppings, hair, feathers,
- They damage stock and cause food wastage
- How to prevent pests
- Keep food covered
- Keep work areas clean
- Make sure bins have lids
- Empty bins regularly
- Check food deliveries
- Check & rotate stock
- Keep doors and windows closed
- Tell your supervisor if you see signs of pests
- Preservation of food
- Food is preserved to remove conditions microbes need to grow
- Drying (dehydration)

- Freezing
- Pickling
- Vaccum packing
- Sterilising
- UHT (ultra heat treatment)
- Canning
- Irradiation
- Smoking
- Time and temperature control
- Keep high risk food out of danger zone 5-63C
- Keep cold food at 5C or below to slow growth
- Keep frozen food at -18C or below
- Keep hot food at 63C or above as most bacteria will die
- Check temperature of deliveries & reheated food/hot held food
- Core Temperature of food (centre) can be checked with probe thermometer
- Temperature continued
- Defrost thoroughly in the fridge
- Cook food so that core reaches 70C for 2 mins
- Keep hot held food above 63C
- Cool food quickly by:
- Dividing into smaller quantities
- Use an ice bath or cold water and stir
- Reheated food must reach 73C for 30 seconds
- Stock rotation
- Checking dates on food deliveries
- Putting food with shorter shelf life at the front
- Use oldest food first

Date marks:

- Best before – usually on long life things like canned, dried and frozen food
- Use by – found on highly perishable food such as meat, fish, dairy
- It is an offence to sell or use food past its use by date