## **Bacteria**

A micro organism that multiply in certain conditions. <u>Where can bacteria be found?</u> Everywhere!

Are all bacteria bad? No- some are good and essential for normal bodily function.

#### How can you reduce the risk of bacteria?

 Storing food separately
Storing and cooking foods at the correct temperatures

> The 4 C's Cleaning – wash your hands properly

Cooking – make sure you cook food properly or you could make someone very ill

**Chilling** – keep it chilly silly

Cross contamination – keep raw meat and cooked food apart

<u>What do bacteria need to</u> <u>multiply?</u>			
Temperature: bacteria grows when warm	Time: if food is exposed to these things for a long time they will quickly multiply Ph: Bacteria prefer conditions that are neutral.		
need moisture to grow			
	Aerobic vs Anaerobic Bacteria		
Food: provides the energy for bacteria to grow, multiply and produce toxins	AerobicAnaerobicMustCannot live in the presence of oxygenoxygenoxygentosurvive		

# Food Knowledge Organiser: Food Safety

Key Terms		
Hygiene	Keeping the workplace and food workers clean which ensures food is safe to eat	
Hygiene procedure	The steps you would go through to ensure that a product is produced in a safe and hygienic way	
Contamination	Presence in food of harmful substances or bacteria. To spoil or dirty something	
Physical contamination	The presence of a foreign body in a food product for example a plaster that has fallen off the food workers hand	
Chemical contamination	The presence of unwanted or unsafe chemicals in food	
Biological contamination	The presence of harmful microorganisms in food	
Danger zone	A temperature of between 5°C and 63°C when bacteria will grow most rapidly	
Cross contamination	Safe food being contaminated by unsafe food.	
Food poisoning	Chilled foods should be stored at between 1°C and 5°C to slow the growth of bacteria Illness caused by food being contaminated by microorganisms. Food poisoning occurs if harmful microorganisms contaminate food and are then allowed to grow.	
Symptoms	The physical signs that are shown when someone is unwell	

<u>Pathogens</u>			
Pathogen	Sources	Symptoms	
E coli	Raw meat, untreated milk and water.	Vomiting, blood in diarrhoea, kidney damage or failure	
Listeria	Soft cheese, pate, unpasteurised milk, under cooked meat	Mild flu, meningitis and pneumonia	
Campylobacter	Meat (chicken) shellfish, untreated water.	Diarrhoea, headache, fever, abdominal pain.	
Salmonella	Raw meat , eggs, seafood, dairy products	Diarrhoea, vomiting and fever.	
Bacillus cereus	Cooked rice, pasta, and cereal foods	Nausea, vomiting, diarrhoea	
Staphylococcus Aureus	Anything touched by hand, Dairy product	Nausea, vomiting, diarrhoea	

Common Food Poisoning

## Storing Food Temperature is really important to keep food safe. The following temperatures should be used: **Refrigeration** Fridges should run at **4°C** or below. Freezing of food at **-18°C** or below Freezing will stop bacteria multiplying. Temperatures of **75 °C** or above Cooking kills almost all types of bacteria. The temperature range where bacteria is most likely to reproduce: Danger Zone 5°C-63°C. High risk foods - ready-to-eat food that will support the growth of pathogenic bacteria easily

support the growth of pathogenic bacteria easily and does not require any further heat treatment or cooking". Such foods are usually high in protein and moisture require strict temperature control and protection from contamination and include: cooked meats, cooked shellfish.

### <u>Storage</u>

To prevent cross contamination (the spreading of bacteria), foods must be stored separately. Follow the rules of food storage within a fridge:



Most bacteria grow rapidly at body temperature  $(37^{\circ}C)$ , but can grow between 5°C and 63°C. This is known as the danger zone. The more time food spends in the danger zone the greater the risks of harmful bacteria growing. Therefore it is vitally important that we try to keep food out of the danger zone during the production processes.