

FOOD SAFETY

Why we cook food

- Appearance** – heat changes the colour and size of food
- Taste** – makes it taste nicer
- Texture** – heat changes the texture
- Safety** – heat kills bacteria so we don't get food poisoning

PERSONAL HYGIENE

- Avoid touching your face or hair
- Tie your hair back and cover with a hairnet.
- Avoid cooking when your ill.
- Change clothes and use an apron.
- Cover any wounds with a waterproof plaster.
- Remove rings or other jewellery when cooking.
- Always wash hands before and after cooking
- Dry hands with disposable paper towels.

SEPARATE FOODS.

- Use dedicated, colour-coded utensils.
 - Cover prepared food and store in closed containers.
 - Wash dishes straightway in hot water to avoid pests and cross-contamination.
- Separate raw and cooked foods both when preparing and storing food

WORK SURFACES

- Clean thoroughly after dealing with high-risk foods.
- Use soapy hot water or antibacterial spray to clean any spills.
- Use a clean kitchen towel or disposable paper towels.

TEMPERATURE CONTROL

- **Refrigeration** Fridges should run at 4°C or below.

Freezing - Freezing of food at -18°C or below will stop bacteria multiplying.

Cooking - Temperatures of 72 °C or above kills almost all types of bacteria.

Danger Zone -The temperature range where bacteria is most likely to reproduce: 5°C to 63°C

WHAT ARE THE IDEAL CONDITIONS FOR BACTERIA/MICRO ORGANISMS?

Warmth – ideally a temperature between 5°C and 63°C.

Water – microorganisms grown better in moist conditions.

Time – the longer the time, the more time microorganisms have to multiply.

DANGER ZONE – 5°C – 63°C. Bacteria growth above and below these temperatures is slower.

Growth controlled – by storing food in proper conditions, freezing and refrigerating food, cooking food before eating, not refreezing food once it has been defrosted



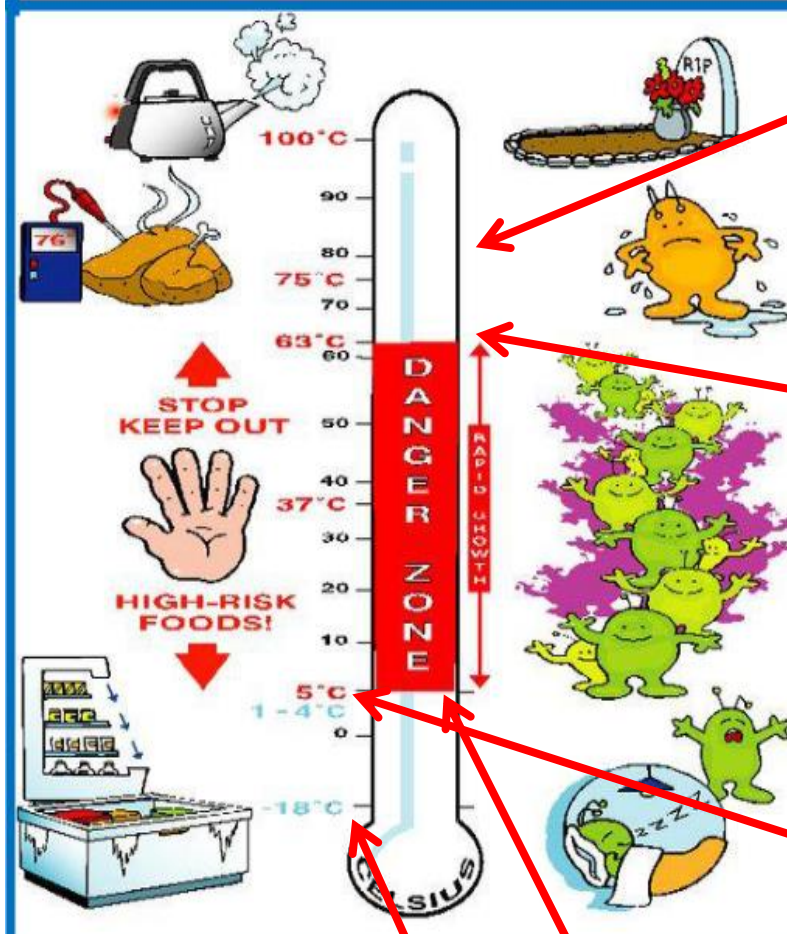
How can we control bacteria multiplying?

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.
- Cross contamination** – keep raw

WHAT IS BACTERIA?

Bacteria are micro organisms that multiply in certain conditions. Bacteria can be found everywhere. Not all bacteria are bad. Some are good and essential for normal bodily function.



SECTION C

Low Risk – lower risk of food poisoning – fats, oils, foods with a high sugar content, high acid foods - chutneys, dried foods – cereals.

High Risk - defined as a food that contains protein and moisture. Higher risk of food poisoning if not handled correctly - meat, fish, eggs, cooked rice, gravies, meaty soups, unpasteurised foods.

Food should be cooked to at least 72 °C at the centre to ensure it is safe to eat

The holding temperature (for keeping hot food hot) is above 63°C

Chilled foods should be stored at between 1°C and 5°C to slow the growth of bacteria

Bacteria grows very easily in HIGH RISK foods. High risk foods have lots of: MOISTURE and NUTRIENTS especially PROTEIN. Examples are:

- Foods high in protein and water
- Stocks, sauces, gravies and soups
- Eggs
- Meat and meat products
- Milk and milk products pasteurised
- Cooked rice
- Foods which are handled and those which are reheated

When food is frozen (below 0 °C) bacteria are dormant

The bacteria in high risk foods can be controlled in Preserved foods or those with high concentrations of vinegar, salt or sugar. These are called low-risk. Examples are:

- Foods with a high sugar content eg. Sweets and jams
- High acid content eg. Chutneys and pickles
- Foods that are cooked before you eat them
- Fats and oils

SECTION E

Most bacteria grow rapidly at body temperature (37°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.

Pathogen	Foods Affected	SECTION F	Symptoms	Onset Time
E-coli	Raw meat, untreated milk and water		Abdominal pain, fever, diarrhoea, vomiting, kidney damage/failure.	12-24 hours
Listeria	Soft Cheeses, pate, shellfish		Pregnant women are at a higher risk of infection and can lead to miscarriage.	70 days
Campylobacter	Raw poultry, meat, milk, sewage		Abdominal pain, diarrhoea, nausea, fever.	48-60 hours
Salmonella	Intestines of humans & animals. Raw poultry & meat, eggs and milk		Abdominal pain, fever, diarrhoea, vomiting, kidney damage/failure.	1-6 hours
Norovirus	Shellfish, raw vegetables, salads		Nausea, vomiting, diarrhoea, abdominal pain, fever.	12-48 hours
Bacillus Cereus	Cooked rice, pasta, & cereal foods		Nausea, vomiting, diarrhoea.	Less 1 hour - 6 hours
Staphylococcus Aureus	Humans- skin, hair, nose, mouth, throat, cuts, spots		Abdominal pain, fever, diarrhoea, vomiting, chills.	1-6 hours

KNIFE SKILLS -HEALTH AND SAFETY

SECTION G

The correct knife should be used for the appropriate job.

Knives must be kept sharp and clean; a blunt knife is more likely to cause a cut because more pressure needs to be applied to use it to cut.

Knife handles must be grease-free.

The point must always be downwards when carrying a knife.

Knives should not be put in the washing-up bowl.

A knife must not be left on the edge of a table or chopping board.

SECTION H

Temperature is most important to keep food safe

Refrigeration	Fridges should run at 4 C or below.
Freezing	Freezing of food at -18 C or below will stop bacteria multiplying.
Cooking	Temperatures of above
Danger Zone	The temperature range where bacteria is most likely to reproduce 5 C – 63 C

To prevent cross contamination foods must be stored separately. Follow the rules of storage



Chiffonade
Fine shreds of leafy green vegetables



Paysanne
Square-shaped vegetables



Macedoine
Medium-sized dice



Julienne
Matchstick-sized strips



Brunoise
Finely diced vegetables



Baton
Square-shaped lengths

Paring Knife



Small knife- fruit and vegetable preparation

Serrated knife



Long serrated edge – slicing loaves, cakes

Chef's knife



Strong, blade – dicing, chopping, trimming meat and vegetables

Key Terms	Definition
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.
SECTION J	
Symptoms	The physical signs that are shown when someone is unwell

SECTION AND TOPICS	YEAR 10 FOOD QUESTIONS
SECTION A BACTERIA	1. What are micro organisms? 2. Is all bacteria bad? 3. Why do we need some bacteria? 4. Where can bacteria be found?
SECTION C	1. What is the ideal temperature for bacterial growth? 2. What is the recommended temperature for chilled foods? 3. What temperature control and time during cooking kills most bacteria 4. What should the temperature of a freezer be?
SECTION E HIGH RISK FOODS	1. Name three foods that spoil easily 2. Bacteria in food can cause food poisoning. 3. Name two high-risk foods. 4. Name two foods that can be preserved 5. Which three ingredients are ideal for controlling bacteria in high risk foods?
SECTION D IDEAL CONDITIONS	1. How can we control bacterial growth? 2. What happens during the ‘danger zone’? 3. What should you not do once food has been defrosted? 4. What happens to bacteria if it is found in food with lots of moisture? 5. Does bacteria grow fast or slow in moist conditions?
SECTION G CUTTING SKILLS	1. How would you carry a knife? 2. Is a blunt knife safer to use than a sharp knife? 3. Why is a flat surface needed to prepare food? 4. Name and describe two vegetable cuts 5. Which knife is suitable for preparing meat and vegetables? 6. Name three vegetable cuts that require you to cut the ingredient into vertical strips 7. Which knife is ideal for cutting bread and cakes? 8. Is a paring knife small or large?
SECTION B CLEANING	1. What must you always do before and after cooking? 2. What must you do after dealing with high risk foods? 3. How can you prevent pests and cross contamination? 4. Personal hygiene is important during preparing and cooking food. Describe how you could ensure you are ready to prepare and cook food safely and hygienically