AC 4.1
Food related causes of ill health

Bacteria

Some bacteria have to be **INSIDE** your body to make you ill. These are consumed in the food

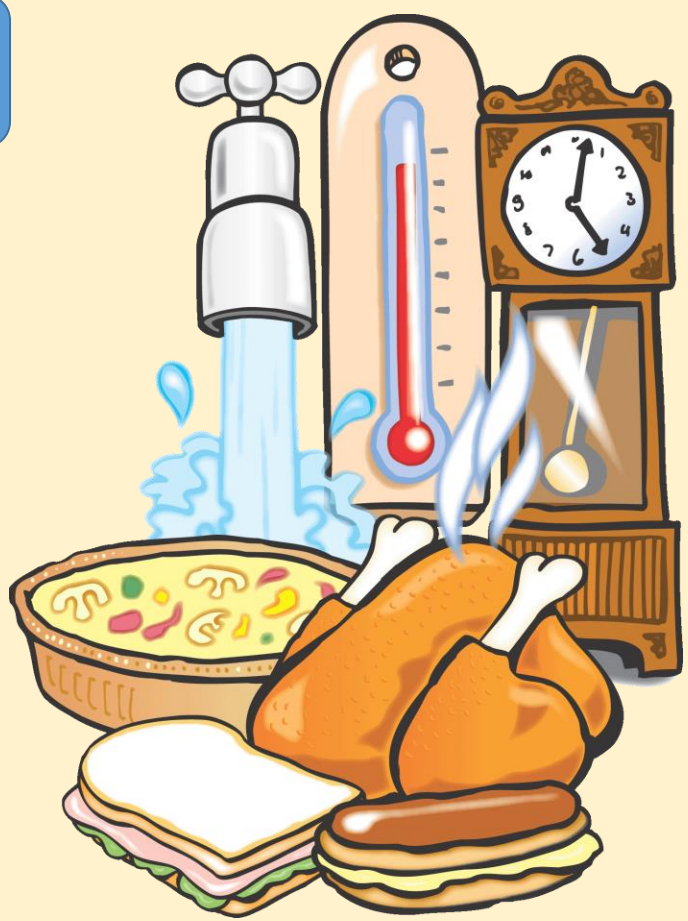
Once inside you, the bacteria attack your body causing illness, some such as Salmonella cling to the gut wall preventing absorbtion of water and nutrients- this type take hours even days to colonise the gut so symptoms may not show for a few days

Some produce a **TOXIN** (poison) on the food which makes you ill when you eat it. Toxins act on the body rapidly so this type make you ill within minutes to hours of eating them

What do bacteria need to multiply?

moisture

Warmth



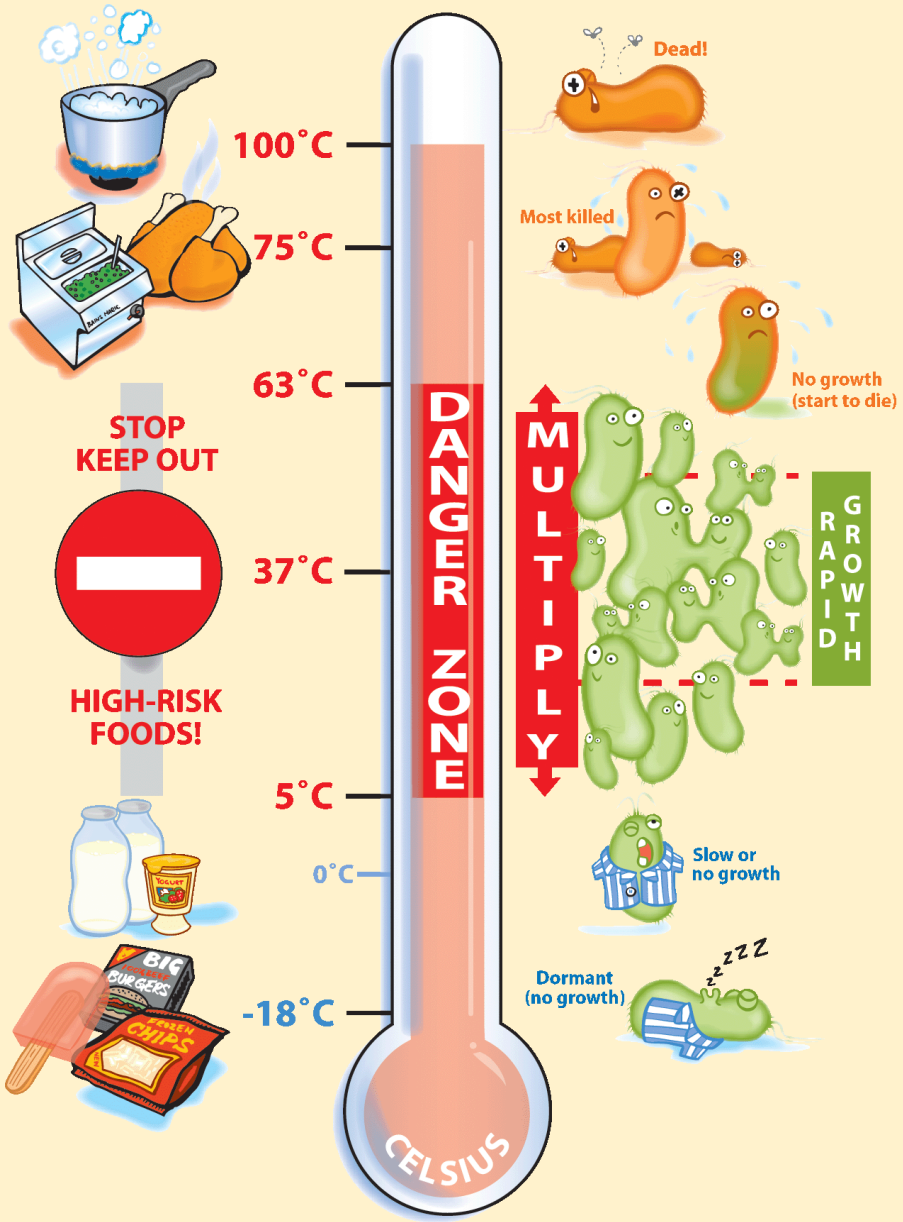
Time

Food

Sources of food poisoning bacteria

- People/sewage
- Raw food
- Insects
- Rodents
- Soil/dust
- Refuse/waste
- Animals/birds
- Contaminated packaging.

Influence of temperature



Dead!.

Destroys most pathogens

Too hot (start to die 63°C)

Multiply rapidly

Spoilage slow growth, most pathogens no growth (<5°C)

Dormant (no growth – spoilage or pathogens).

Food poisoning

Mouth increase in saliva

Head headache

Skin fever, shivering

Gut abdominal pain, nausea vomiting, diarrhoea

Circulation, low blood pressure, weak pulse, fatigue

Non food poisoning illness

Some microorganisms cause food borne illness which is not classified as food poisoning because of other symptoms they cause

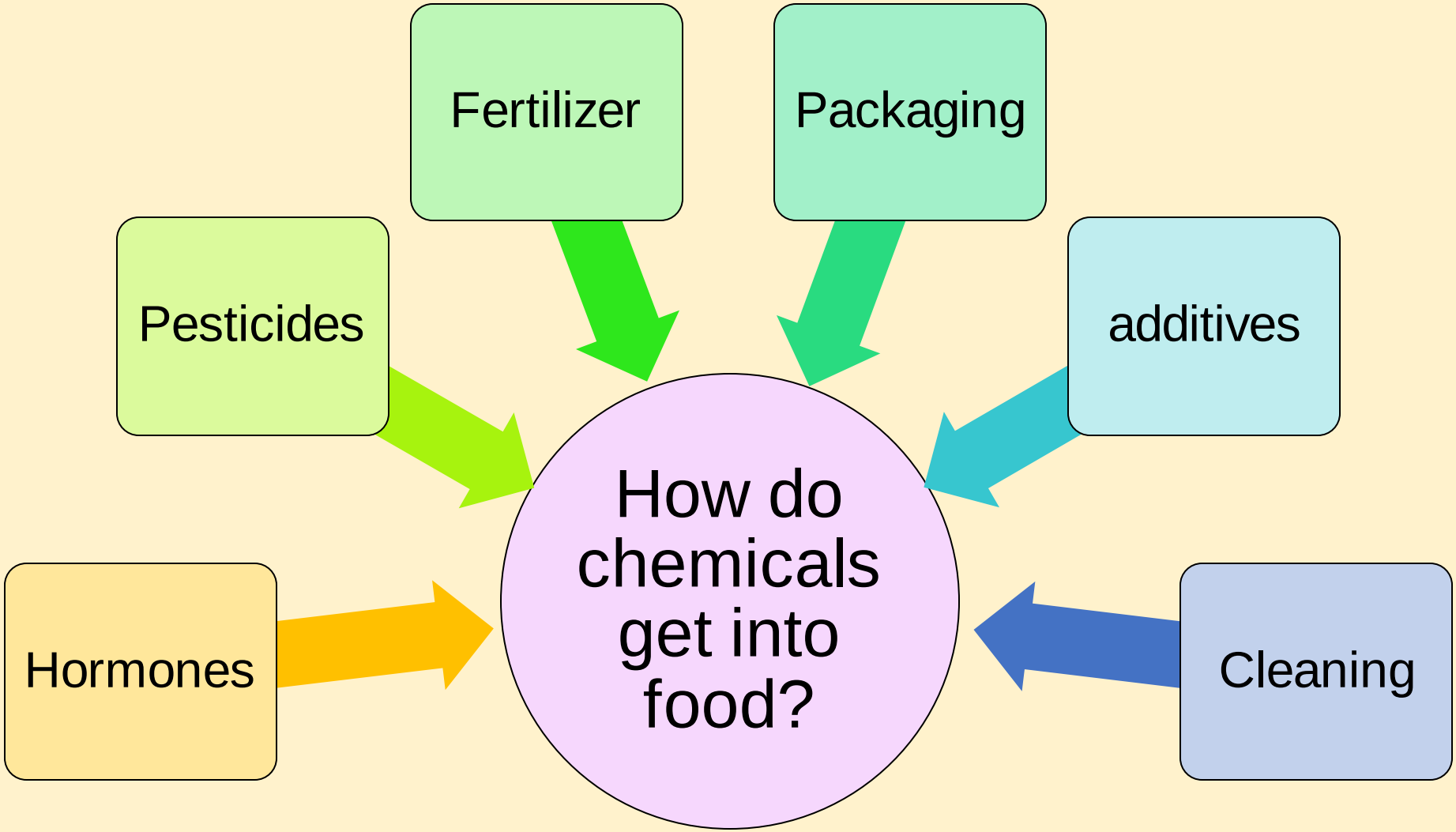
Norovirus

From leafy greens such as lettuce, fresh fruits and foods that are not washed before eating
Causes Diarrhoea, vomiting, fever, body aches, headaches

Toxoplasmosis

From infected meat (also cat poo but you wouldn't eat that)
Causes fever, muscle pain, sore throat, tiredness
Long term the Toxoplasma parasite can invade the eyes causing blindess . Damages unborn baby

Chemicals


Fertilizer
Packaging
Pesticides
additives
How do chemicals get into food?
Hormones
Cleaning

Hormones

Animals can be injected with growth hormones and antibiotics to give larger muscle development and higher milk production

Effect on health

Oestrogens could have effects on reproductive system (male and female) possibly cancers.

BANNED- except for the USA

Antibiotics could be absorbed by the body and increase the antibiotic resistance in humans

Pesticides

Crops are sprayed with herbicides and pesticides to prevent being eaten by insects.

Herbicides kill weeds and unwanted plants in crop

Effects on health

All crops in EU tested for pesticide residues. Higher levels of exposure could cause nerve damage, damage to foetus, dermatitis, possibly cancers. dizziness, headaches, nausea and vomiting in people who are sensitive. NONE IN ORGANIC

Fertilizer

Plants are fertilized to keep the soil fertile and to give a higher yield of crops for the farmer. NOT IN ORGANIC FERTILIZERS

Effects on health

Nitrates, phosphates and potassium are all toxic to humans in higher amounts, pollution of water table, effects on other organisms eg fish that could then be eaten by humans

Packaging

During storage, chemicals can migrate from the packaging into the food if they are stored badly

Effects on health

Under some conditions chemicals such as BPA and Phthlates can leech into foods from packaging. They can affect the endocrine system which produces hormones in the body such as reproductive hormones and insulin

Additives

Additives in food can be chemical or natural. Give food characteristics like long shelf life or colour or flavour. Used to stop crystallization of sugars, to soften foods etc

Effects on health

Not all food additives are harmful chemicals but some are. Long term effects such as cancers and nerve damage Short term effects like allergies and hyperactivity in children

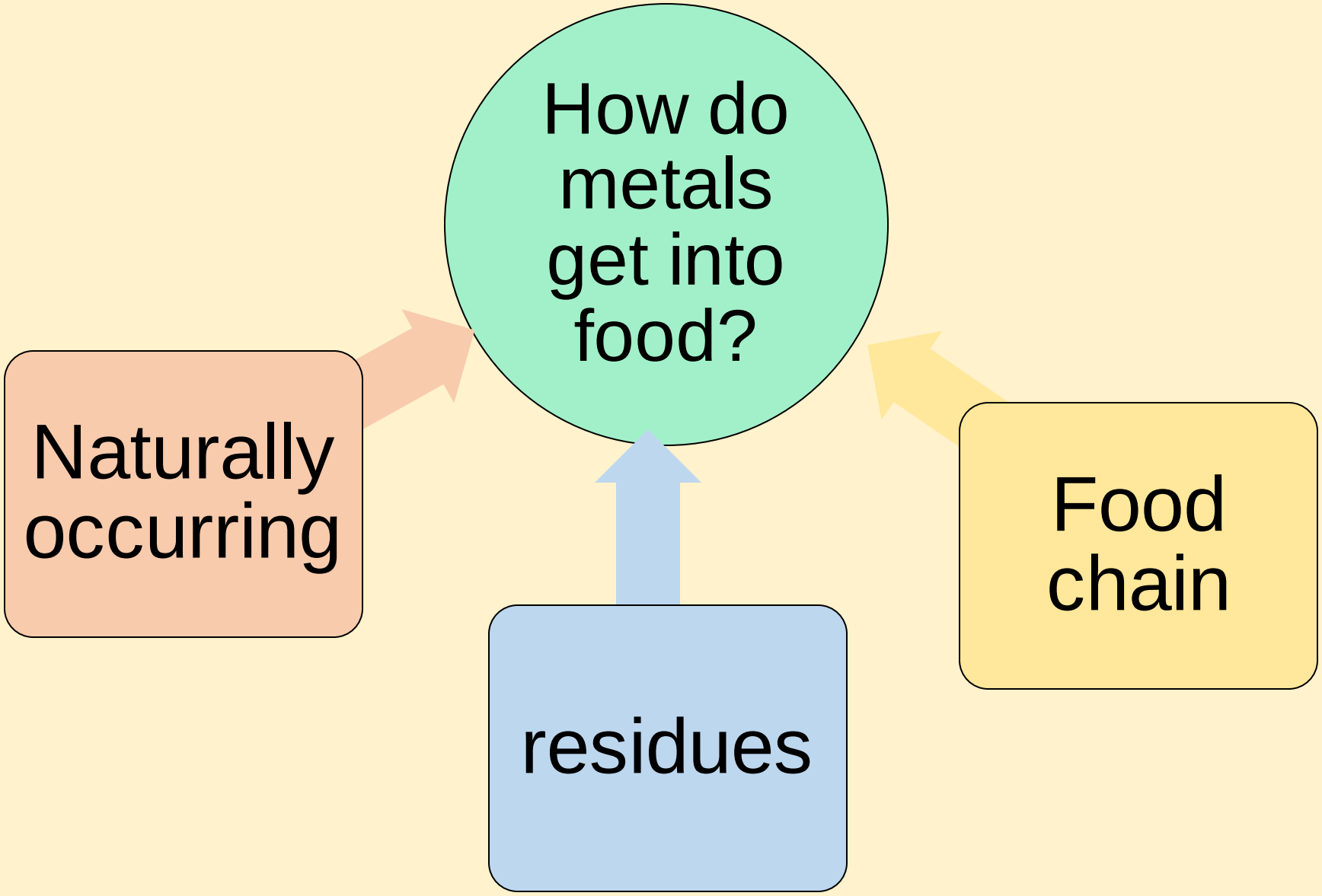
Cleaning

Foods and equipment are cleaned with chemicals which may stay on the food afterwards. some industrial cleaning chemicals are harsh on machines

Effects on health

Poisoning like symptoms, vomiting, diarrhoea headaches. Could build up with long term exposure such as jobs like cleaners

Metals


How do metals get into food?
Naturally occurring
residues
Food chain

Naturally occurring

Metals such as iron, zinc, sodium are naturally present in foods and we need them as minerals for good health. Others such as Arsenic, cadmium, lead and mercury are naturally in the environment and get into food

Effects on health

Small amounts of mineral metals are needed for GOOD health. Toxic metals such as Arsenic and cadmium could build up in the body Lead and Mercury cause brain damage

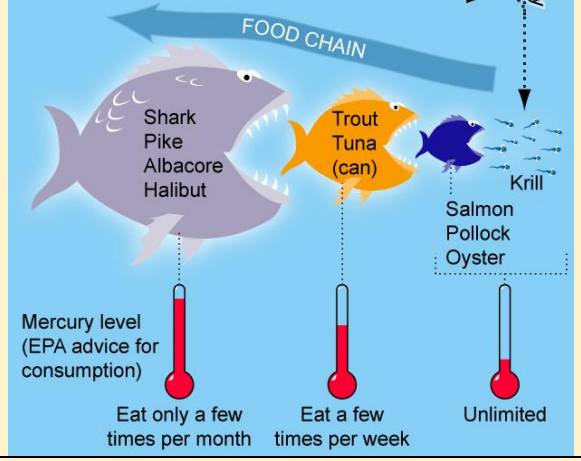
Residues

Human activities such as farming, industry or car exhausts could cause metals to remain in the environment and get into food

Effects on health

Long term effects from build up of residues such as brain damage, nerve damage and problems with digestion and body functions

Food chain

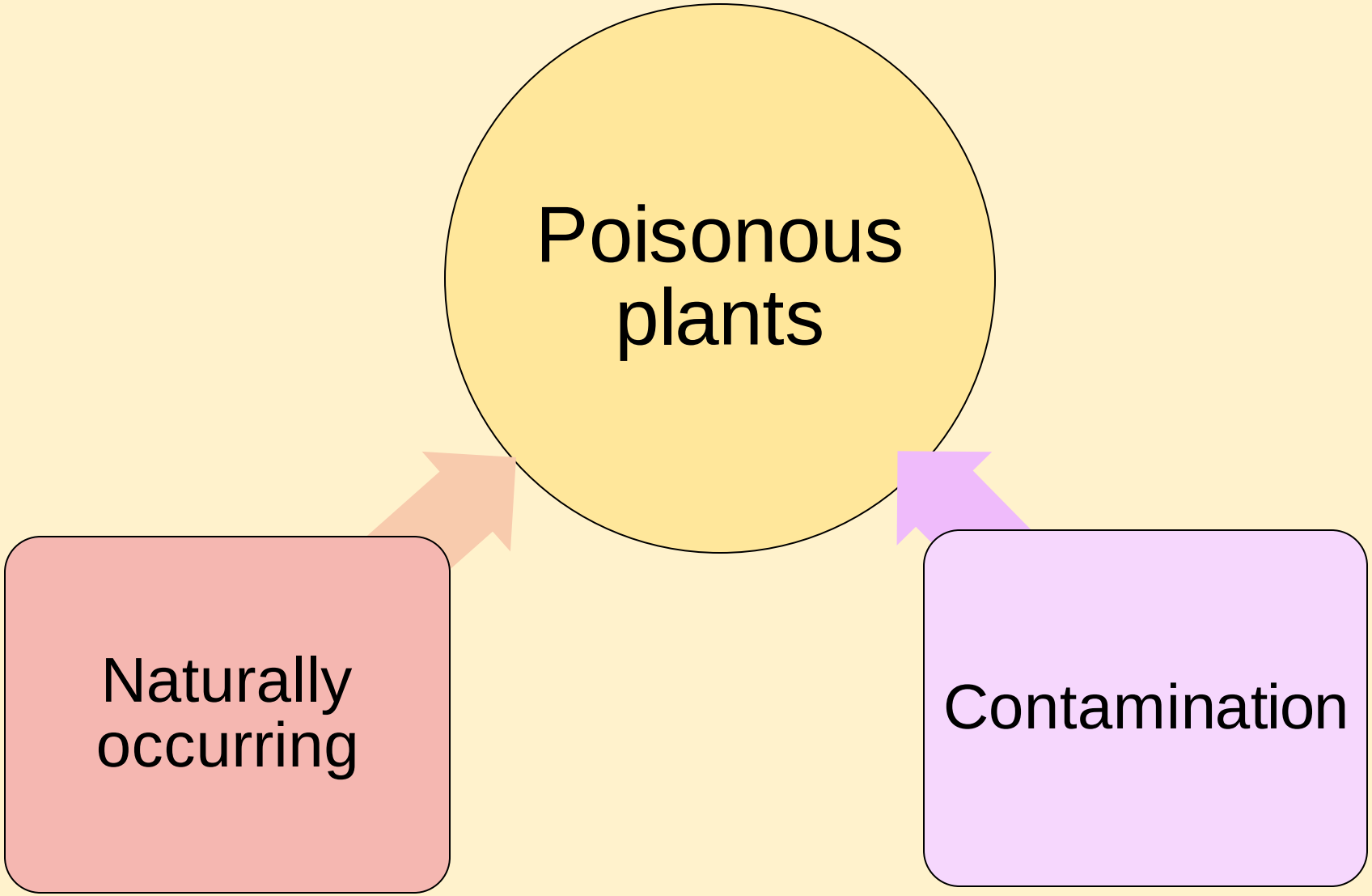


Metals in low concentrations at the bottom of the food chain are concentrated as they go up the chain and can be toxic to the end consumer

Effects on health

Concentrated lead and mercury can cause brain damage and damage to unborn babies. Can cause nerve damage and muscle problemd

Poisonous plants



Contaminants

Poisonous plants such as some weeds could get into food when being harvested or when eaten by animals

Effects on health

Can cause vomiting, diarrhoea and possibly toxic to humans causing death (but not likely)

Naturally occurring

Some plants we eat are naturally poisonous and have to be treated or have the poisonous part removed before we eat them.

Rhubarb leaves

Solanine on potatoes

Kidney beans

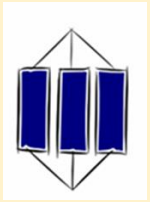
Effects on health

Can cause vomiting, diarrhoea and possibly toxic to humans causing death (but not likely)

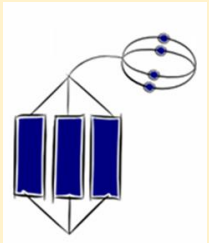
AC 4.1
Food related causes of ill health – allergies and intolerances

What are allergies and intolerances to food ?

Be able to state the major allergens and intolerances



Explain the top 10 food allergens and 4 intolerances



Be able to identify potential allergens in food and suggest alternatives

The difference between intolerances and allergies

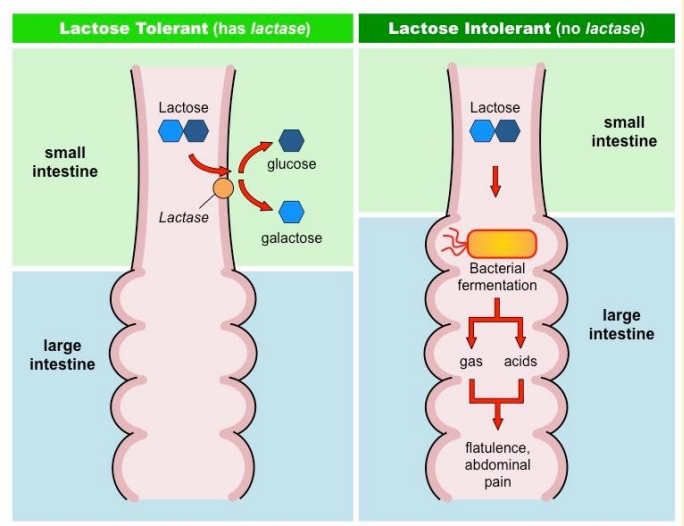
- Food intolerances are more common than food allergies. The symptoms of food intolerance tend to come on more slowly, often many hours after eating the problem food. Typical symptoms include bloating and stomach cramps.

- A food allergy is a rapid and potentially serious response to a food by your immune system. It can trigger classic allergy symptoms such as a rash, wheezing and itching.

- Genuine food allergy is rare. About 2% of the population and 8% of children under the age of three are affected. (www.nhs.uk)

Reasons for food intolerance

- some people react to certain foods and eating them may cause uncomfortable symptoms or, in rare cases, a severe illness.
- Food intolerance is more common in children than in adults. Children often grow out of the intolerance before they go to school.



Lactose intolerance

- Avoid milk and milk products
- Experience nausea, bloating, pain in the abdomen and diarrhoea
- Eat lactose-reduced products
- Eat goats cheese, soya milk, feta cheese, rice milk
- In the UK, Ireland, 5% of the population is affected,


Longley Farm
EXTRA


DANONE
ACTIVIA
DANONE
ACTIVIA


Häagen-Dazs

Lactose intolerance

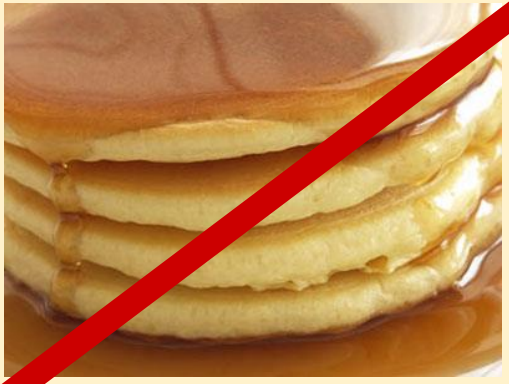
- When planning dishes, read ingredients carefully,
- even foods like margarine can contain milk derivatives which could make the customer ill
- Soya and vegetable products replace milk in a number of foods, milk, cream, cheese, yoghurt can all be made from soya

Coeliac/gluten intolerance

- Intolerant to the protein gluten
- Causes diarrhoea, anaemia, weight loss
- Gluten is found in many cereals plants primarily wheat, rye, barley and some oats
- Avoid pasta, bread, cereals flour based foods
- Gluten free products are available





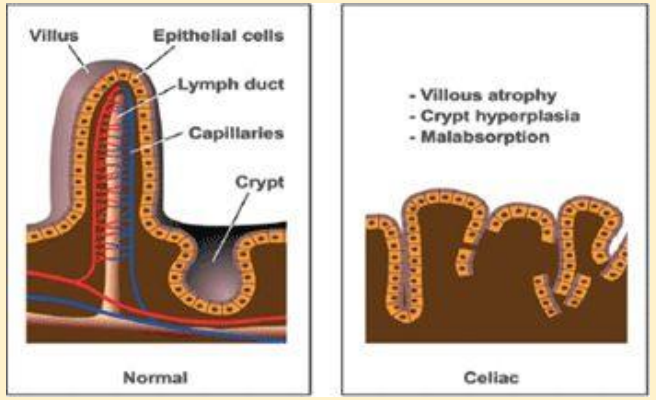



Coeliac disease

- People with coeliac disease must avoid foods that contain gluten, for example, bread cakes, and biscuits. Many foods have small amounts of wheat, barley or rye added, so people with coeliac disease must check food labels carefully.

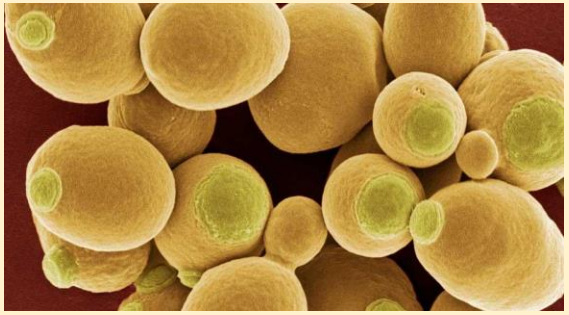
- Rice, maize and potatoes do not contain gluten so are good sources of starchy carbohydrate , and gluten-free versions of foods such as bread and pasta are available.

Coeliac disease may affect as many as 1 in 100 people in the UK;



Yeast intolerance

- Yeast is present in a variety of foods, commonly bread, baked products and alcoholic beverages.
- Yeast intolerance has a wide range of symptoms including flatulence, bad breath, fatigue, irritability, cravings for sugary foods, stomach cramps, bad skin and indigestion.
- Fermented foods contain yeasts eg vinegar, wine, salad dressing
- Very ripe fruits contain natural yeasts




1794
SARSON'S
Malt
VINEGAR


MARMITE
YEAST EXTRACT
MARMITE
RICH IN B VITAMINS • 100% VEGETARIAN

Food allergies

- A food allergy is one particular type of food intolerance that involves the body's immune system. only true allergies involve the immune system.

- In the UK, the most common food allergies are to eggs, milk, fish, peanuts and tree nuts (such as walnuts, Brazil nuts and almonds). * In the UK, kiwi fruit allergy among children is becoming more common.*

- There are up to 10 recognised deaths from food allergies in the UK every year. *

Symptoms of food allergies

A food allergy usually occurs between a few minutes and a few hours after eating a particular food.

The symptoms of food allergies vary

- coughing;
- dry, itchy throat and tongue;
- nausea and feeling bloated;
- wheezing and shortness of breath;
- swelling of the lips and throat;
- runny or blocked nose;
- sore, red and itchy eyes.

Anaphylaxis

- Anaphylaxis is most commonly caused by food allergies, but can also be caused by other things, such as insect bites and drug allergies.
- Peanuts, milk, eggs and fish are the most common foods to cause anaphylaxis in the UK.

- *Feeling lightheaded or faint.*
- *fast, shallow breathing,wheezing*
- *a fast heartbeat*
- *clammy skin*
- *Confusion and anxiety*
- *collapsing or losing consciousness*

In an Emergency:
999

Peanut allergy

- severe allergic reaction called anaphylaxis can cause death.
- An example of this is a serious allergy to peanuts or other nuts.

- Peanut allergy has become more common, especially in children. Until recently, the UK government recommends that, where there is a family history of allergy, pregnant mothers should not eat peanuts, and that peanuts are not given to infants.

Preventing allergic reactions

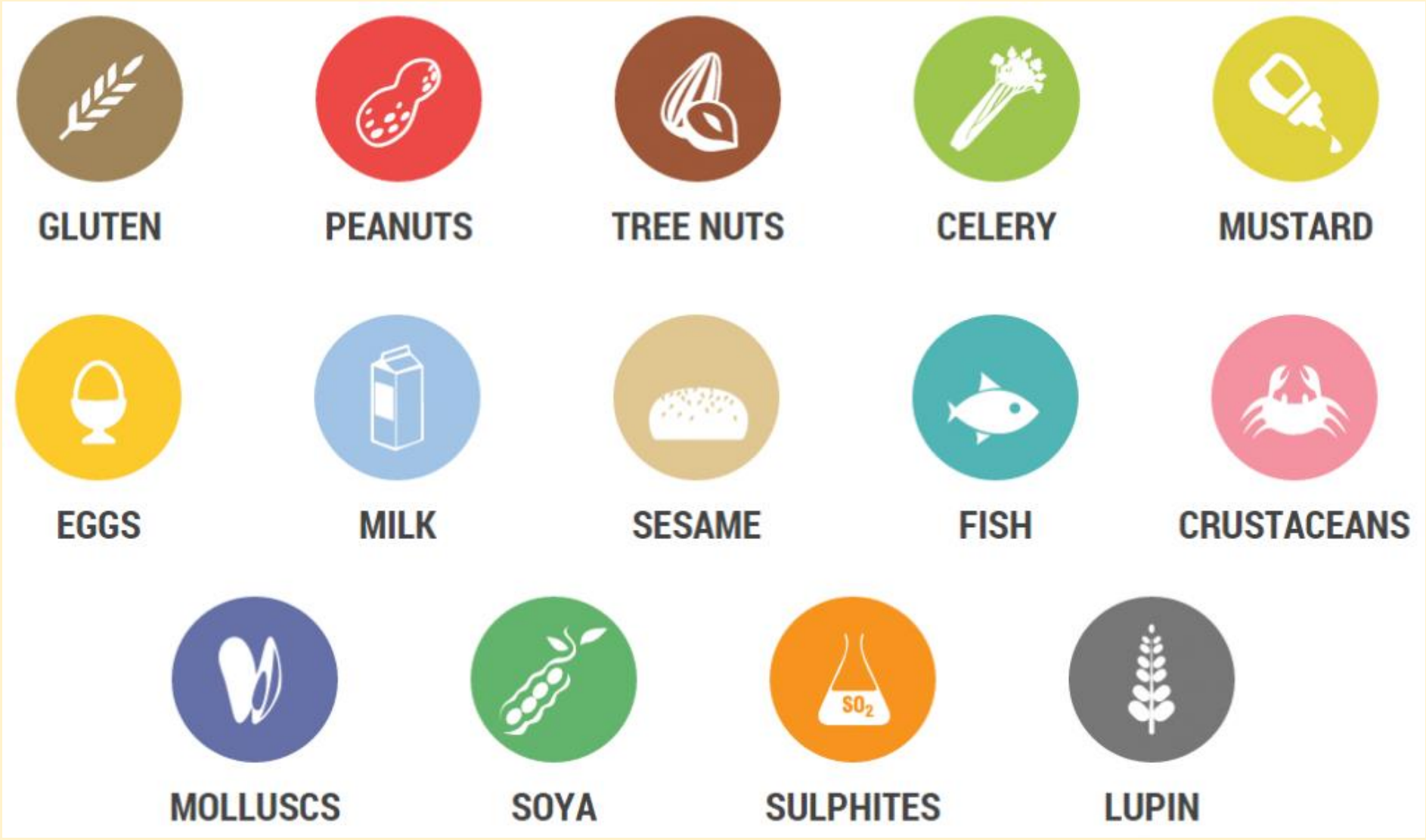
People who have an allergic reaction to foods or ingredients must be particularly careful about what they eat and reading labels and menus carefully is especially important.

New rules that came into effect from December 2014 include the way allergen information appears on labels and on food that is pre-packed, sold loose or served in a restaurant, café or take-away.

Allergens in Hospitality and Catering

- All menu items must be marked with any of the 14 major allergens they contain
- Wait staff should have a good knowledge of which allergens are present
- Complete allergen check sheet for new menu items
- When using pre prepared ingredients, kitchen staff should check the labels carefully to identify any allergens eg
- Peanut flour used to thicken the sauce in a takeaway curry;
- Milk present in a minor ingredient in a pre-packed or catered food.

Major allergens



These ingredients must be labelled on menus and packaging

DISHES AND THEIR ALLERGEN CONTENT

(Note – Please state the name of the cereal(s) containing gluten** in that column AND/OR the name of the nut(s)* in that column)

DISHES	Celery	Cereals containing gluten**	Crustaceans	Eggs	Fish	Lupin	Milk	Molluscs	Mustard	Nuts*	Peanuts	Sesame seeds	Soya	Sulphur dioxide
Tuna Salad [example]	✓			✓	✓		✓		✓					

Review date: Reviewed by:

You can find this template, including more information at www.food.gov.uk/allergy

Complete an allergy check list for the following

1. Special fried rice
2. Sweet and sour prawn balls
3. Chicken korma
4. Prawn samosas
5. Lasagne
6. Paella
7. Four seasons pizza
8. Crumbed ham
9. Scotch egg

The allergenic ingredients in special fried rice are:

- Crustacea – prawns
- Soya – in the light soy sauce and in the Chinese roast pork
- Wheat – in the light soy sauce and in the Chinese roast pork
- Eggs
- Molluscs – in the oyster sauce
- Sesame – in the sesame oil

The allergenic ingredients in sweet and sour prawn balls are:

- Crustacea – prawns
- Wheat – in the flour and soy sauce
- Soya – in the soy sauce
- Cooking oil can contain a blend of several ingredients, including nuts, peanuts and soya

The allergenic ingredients in chicken korma are:

- Milk – in the yoghurt
- Sesame – in the garam masala
- Mustard – in the garam masala
- Almonds
- Cooking oil can contain a blend of several ingredients, including peanuts, nuts and soya

The allergenic ingredients in prawn samosas are:

- Crustacea – prawns
- Wheat – flour
- Milk – in the ghee
- Sesame – in the garam masala
- Mustard – in the garam masala
- Cooking oil can contain a blend of several ingredients,

The allergenic ingredients in lasagne are:

- Milk – as milk, cheese, butter and cream
- Sulphites – in the white wine
- Wheat – in the lasagne sheets, stock cube and flour
- Some stock cubes contain mustard and celery

The allergenic ingredients in paella are:

Milk – in the chorizo

Wheat (gluten) – from the rusk in the chorizo sausage

Molluscs – squid, clams

Crustacea – prawns

Sulphites – in the wine, chorizo sausage and the pancetta

Some stock cubes contain mustard and celery

The allergenic ingredients in four seasons pizza are:

- Milk – in the mozzarella cheese
- Sulphites – in the Parma ham
- Wheat – in the flour
- Fish – anchovy

The allergenic ingredients in crumbed ham are:

- Sulphites – in the ham
- Wheat – in the breadcrumbs
- Eggs – in the wash which binds the breadcrumbs to the ham

The allergenic ingredients in Scotch eggs are:

- Eggs
- Wheat (gluten) – in the flour and from the rusk in the sausage meat
- Sulphites – in the sausage meat
- Cooking oil can be a blend of several different ingredients, including nuts, peanuts and soya

GLUTEN

PEANUTS

TREE NUTS

CELERY

MUSTARD

EGGS

MILK

SESAME

FISH

CRUSTACEANS

MOLLUSCS

SOYA

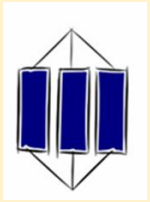
SULPHITES

LUPIN

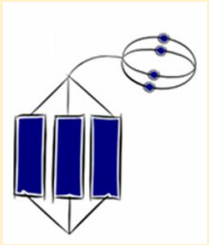
AC 4.2
Environmental Health Officer
– roles and responsibilities

What are the roles and responsibilities of an EHO?

Be able to state several of the roles of an EHO in basic form



Explain the main features of each role



Be able to relate the role of an EHO to the wider industry

What is an Environmental Health Officer?

EHOs are personnel qualified in Environmental Health laws, enforcement and inspection methods. They have a 3 year degree in Environmental Health

Many organisations employ EHOs including

- Local councils
- Private companies
- NHS
- Military
- Food Standards agency

What do EHOs do?

- EHOs deal with a variety of different legislation and enforcement not just related to food.
- EHOs tend to specialise in an particular area of work once qualified- ask Mrs Walker about her MSc

- food safety
- Infectious diseases
- environmental protection
- noise, radiation & pollution control
- water standards
- health and safety at work
- animal welfare
- waste management
- housing standards

Legislation enforced by EHOs

The Food Safety Act.

Food safety from the manufacturer or producer to the point of sale. Might involve different companies or premises e.g. suppliers, manufacturers or kitchens, shops or restaurants.

The Food Safety Act (General Food Hygiene) Regulations.

Ensures food producers **HANDLE** all food hygienically.

Legislation enforced by EHOs

The Food Safety Act (Temperature Control) Regulations.

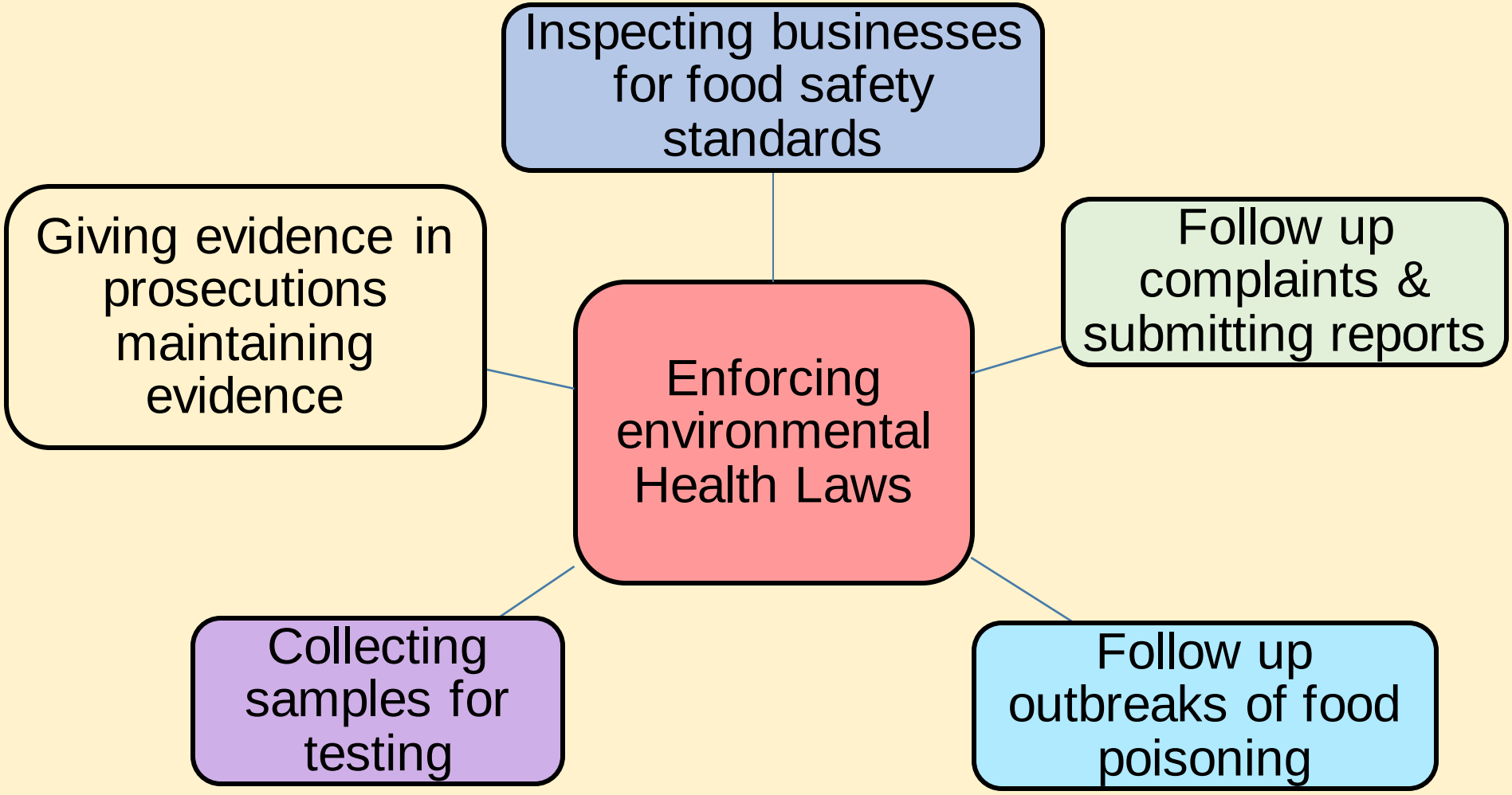
Temperatures at which to store or hold food.

- Freezers from –18°C to –24°C
- Chillers from 3°C to 8°C
- Fridges from 1°C to 5°C
- Cooked core temperature at 75°C or above
- Hot holding above 63°C

The Food Composition Regulations.

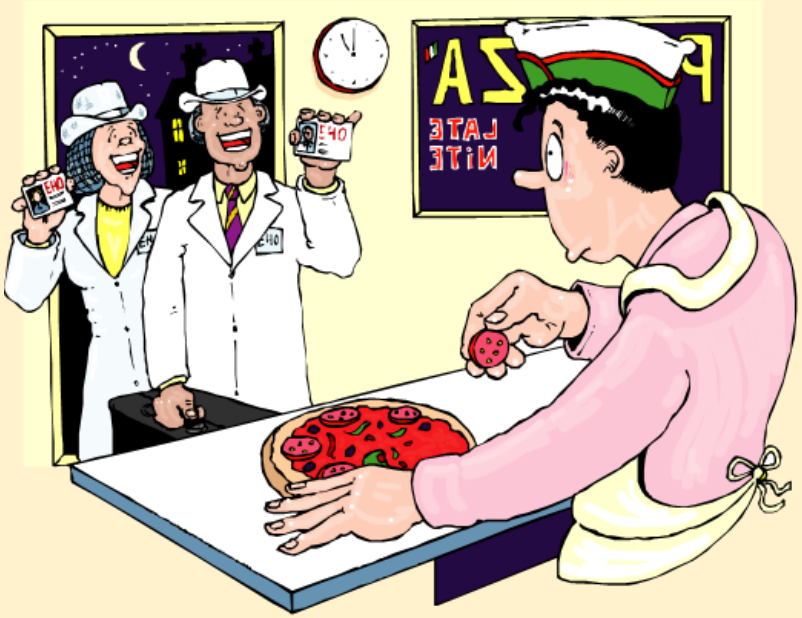
Specifies what ingredients **CAN** or **CANNOT** be used in the manufacture of foods e.g. bread, breakfast cereals and use of additives

EHO roles in the Hospitality and Catering industry



Inspecting businesses for food safety standards

- Powers of entry at any reasonable time
- Inspect food and premises
- Power to seize and detain food
- Serve notices
- Power to close
- Prosecute



The 3 main areas EHOs inspect are

Food premises

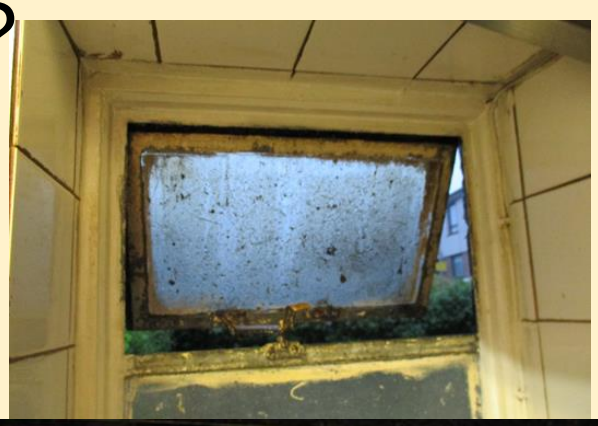
Food handlers

Food hygiene practices

Food premises must

- Be well maintained
- Be regularly checked
- Have lockers for employees
- Have hand wash facilities
- Have clean cloakroom and toilet facilities
- Have first aid available
- Have clean storage areas
- Have temperature controlled fridges and freezers
- Have equipment that is clean and in good working order
- Be free from pets and pests etc

Part of the EHO role is to look at hygiene in the kitchen – what problems can you see and why might they cause illness?



Food handlers must

- Have regular training in food safety
- Be dressed in clean ‘whites’ or other uniform
- Have hair tied back (and ideally wear a hat)
- Have short, clean nails – no nail varnish or jewellery
- Be in good health (no upset stomachs)
- Have ‘good 'habits, e.g. no coughing or sneezing over food
- Wash their hands after handling raw meat, after blowing nose, after going to the toilet etc
- Cuts should be covered with a blue plaster

Food hygiene practices

- Food deliveries should be checked thoroughly
- Food should be labelled and stored correctly (in freezers, chillers, fridges and dry stores)
- Food should be rotated (first in first out)
- Care should be taken with temperature control in the kitchen (i.e. food kept out of the danger zone of 5-63oc)
- Food should be prepared quickly and as close to cooking time as possible
- Hot food should be maintained at above 63oc
- The core temperature of cooked food needs to be at least 75oc
- Chilled food should be stored below 5oc
- Washing up should be done in hot soapy water if there is no dishwasher available
- Waste should be disposed of safely.

What problems can you see here and why might they cause illness?

What powers does the EHO have if they see unsafe practice like above?

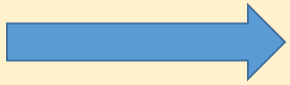
For the bottom photographs – why are these good examples?

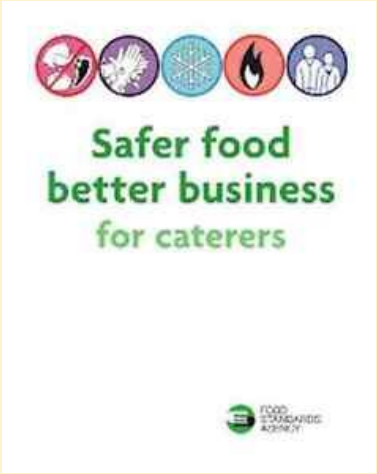
Documentation

The EHO has to make staff know and carry out food preparation safely and hygienically. How might they do this?

All food businesses must have a food safety management system
Includes safe working methods, critical control points and monitoring

The Food Standards Agency publishes a file which contains check lists and guides for food businesses. If the business completes all parts of it they comply with the law





Safe method:

Opening and closing checks

It is essential that you and your staff do certain checks every time you open and close. This helps you maintain the basic standards you need to make sure that your business makes food safely.

Opening checks

You should do these checks at the beginning of the day. You can also add your own checks to the list.

Your fridges, chilled display equipment and freezers are working properly.
Your other equipment (e.g. oven) is working properly.
Staff are fit for work and wearing clean work clothes.
Food preparation areas are clean and disinfected, where appropriate (work surfaces, equipment, utensils etc.)
There are plenty of handwashing and cleaning materials (soap, paper towels, cloths etc.)

Closing checks

You should do these checks at the end of the day. You can also add your own checks to the list.

No food is left out.
Food past its 'use by' date has been thrown away.
Dirty cloths have been removed for cleaning and replaced with clean ones.
Waste has been removed and new bags put into the bins.

The opening and closing checks are also listed in the diary.

Safe method:

Product withdrawal and recall

Responding quickly to any problems with food products you use or sell is an important part of managing food safety in your business.

Sometimes there will be a problem with a food product that means you will need to 'withdraw' it (when you should stop using/selling it) and/or 'recall' it (when customers are asked to return/destroy a product).

You may find out about a problem with a product from:

- a manufacturer of the product
- a supplier or wholesaler
- a notice in newspapers
- your local authority
- a trade association
- the Food Standards Agency

If you hear about a problem with a product, you should stop using/selling it straight away. You might also need to tell your customers.

There are a number of reasons that a product might be withdrawn or recalled. For example, it could have been found to:

- contain harmful bacteria
- be physically contaminated, e.g. with pieces of glass or metal
- be wrongly labelled, which could be a problem for people with food allergies

You or your staff may also notice a problem with a food product that means it may not be safe to eat. If this happens, you should stop using/selling it straight away and tell your local authority and the Food Standards Agency.

What to do	How?
Make sure you know the details of the problem.	If a manufacturer or supplier has issued a product withdrawal or recall, make sure you know which product and which batches are affected.
As soon as you find out about a problem with a product, stop using/selling it.	Remove the affected product from anywhere you use, store or sell it and label it clearly to show it should not be used/sold. Remember to check if you have used the product as an ingredient in any food you have prepared and stored, e.g. in the freezer – if you have, ask your local authority for advice.
Make sure your staff know about the problem.	This is so your staff know what to do and do not use/sell the product.
Tell your customers if you need to.	If the problem is with a product that your customers might not eat or drink straight away, you may need to let them know that the product is being recalled and why. If the manufacturer or supplier asks you to put up a recall notice, you should do this. If you are not sure what to do, contact your local authority.

Think twice!

It is a legal requirement to keep a record of what food products you have bought, who you bought them from, the quantity and the date. Usually the easiest way to do this is to keep all your invoices and receipts. You should keep this information in a way that makes it easy for you or an enforcement officer to check back to see where a product came from.

Safe method:

Suppliers and contractors

How you handle suppliers and contractors is important to food safety.

What to do	Why?	How do you do this?
Choose suppliers carefully.	It is important to have suppliers that you can trust to handle food safely, as well as delivering on time etc.	• Make sure you choose suppliers you can trust. • Ask the following questions: – Does the supplier store, transport and pack their goods in a hygienic way? – Does the supplier/contractor supply fully referenced invoices? – Do they have any certification or quality assurance? • Ask other businesses for recommendations.
Choose contractors carefully.	Services such as pest control can be valuable in helping you to make food safely. It is important to have contractors you can trust to deliver these services effectively.	
Make sure that your raw ingredients have been handled safely.	The starting point for making food safely is to be confident about the safety of your raw ingredients and any ready-made products you buy in.	• Check that the supplier has a food safety management system. • Carry out regular delivery time, temperature and quality spot checks. • If you buy goods from a cash and carry, make sure that the vehicle you use to transport them is clean and that you bring chilled and frozen food back as soon as possible and put it straight into a fridge or freezer.
Keep a record of what food products you have bought, who you bought them from, the quantity and the date.	This is a legal requirement and is so that you or an enforcement officer can check back to see where a food came from. Ideally, you should keep these records until you are reasonably sure that the food they refer to has been consumed.	• Usually the easiest way to do this is to keep all your invoices and receipts. Or you might want to record the information in a different way, for example keeping a record of the batch number and other details. • Keep these records in a way that makes it easy for you or an enforcement officer to check them.
Choose equipment carefully.	To allow you to make food safely, it is very important for equipment to work effectively.	• Buy equipment from reputable dealers. • Make sure it has a guarantee/warranty.

What to do if things go wrong

If you do not think that the food a supplier delivers has been handled safely (for example, if you think it has not been kept cold enough) reject the delivery, contact your supplier immediately and write the details in the diary. If you have repeated problems, you can do the following things:

1. Contact the supplier/contractor by phone.
2. Write a formal letter of complaint.
3. Change supplier/contractor.
4. Contact your local authority.

Suppliers' list

Business name:		Delivery day(s):	M	T	W	T	F	S	S
Contact name:		Lead time for placing an order e.g. Mon for Wed							
Telephone:		Goods supplied:							
Address:									

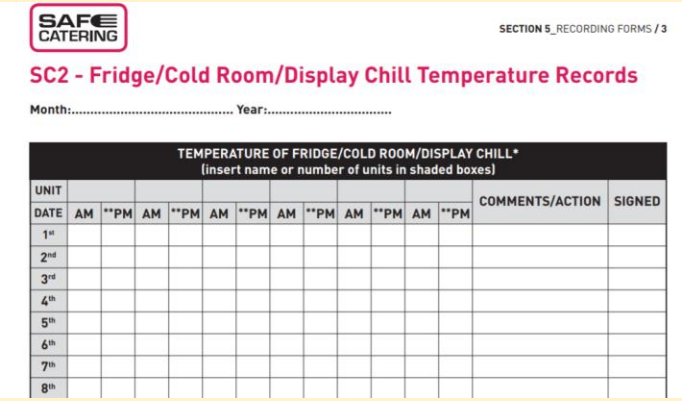
Business name:		Delivery day(s):	M	T	W	T	F	S	S
Contact name:		Lead time for placing an order e.g. Mon for Wed							
Telephone:		Goods supplied:							
Address:									

Business name:		Delivery day(s):	M	T	W	T	F	S	S
Contact name:		Lead time for placing an order e.g. Mon for Wed							
Telephone:		Goods supplied:							
Address:									

Record Keeping

Legal requirement that certain records are kept as part of the HACCP-based food safety management system, eg:

- Fridge/freezer records
- Cooking/hot-holding temperatures
- Cleaning records
- Training records
- Pest control checks



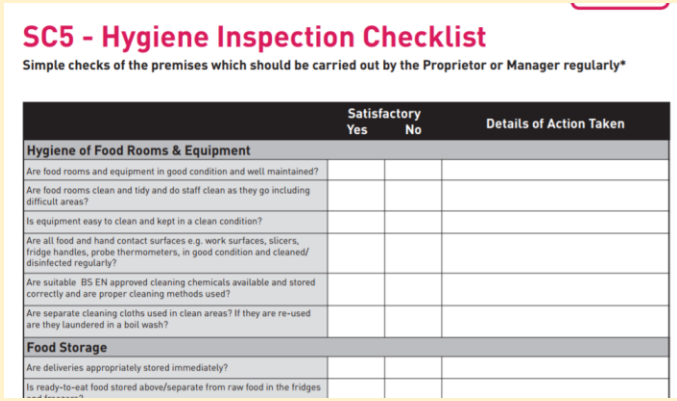
SAFE CATERING

SECTION 5_RECORDING FORMS / 3

SC2 - Fridge/Cold Room/Display Chill Temperature Records

Month:..... Year:.....

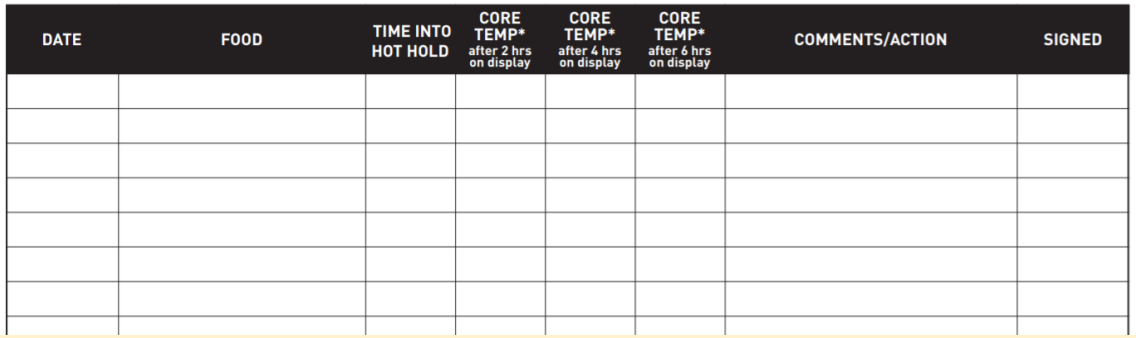
TEMPERATURE OF FRIDGE/COLD ROOM/DISPLAY CHILL* (insert name or number of units in shaded boxes)														
UNIT													COMMENTS/ACTION	SIGNED
DATE	AM	**PM	AM	**PM	AM	**PM	AM	**PM	AM	**PM	AM	**PM		
1st														
2nd														
3rd														
4th														
5th														
6th														
7th														
8th														



SC5 - Hygiene Inspection Checklist

Simple checks of the premises which should be carried out by the Proprietor or Manager regularly*

	Satisfactory Yes	No	Details of Action Taken
Hygiene of Food Rooms & Equipment			
Are food rooms and equipment in good condition and well maintained?			
Are food rooms clean and tidy and do staff clean as they go including difficult areas?			
Is equipment easy to clean and kept in a clean condition?			
Are all food and hand contact surfaces e.g. work surfaces, slicers, fridge handles, probe thermometers, in good condition and cleaned/ disinfected regularly?			
Are suitable BS EN approved cleaning chemicals available and stored correctly and are proper cleaning methods used?			
Are separate cleaning cloths used in clean areas? If they are re-used are they laundered in a boil wash?			
Food Storage			
Are deliveries appropriately stored immediately?			
Is ready-to-eat food stored above/separate from raw food in the fridges			



DATE	FOOD	TIME INTO HOT HOLD	CORE TEMP* after 2 hrs on display	CORE TEMP* after 4 hrs on display	CORE TEMP* after 6 hrs on display	COMMENTS/ACTION	SIGNED

Training

Dependant on the type of business and risk involved.

- All food handlers must receive food hygiene training by law and the business must keep records of the training.
- EHOs check the records of training to make sure they are complete
- EHOs can also provide food Hygiene training to businesses either as part of their job or for a small fee

Levels 1 – 4 are available. Recommended it is updated every 3 years

Consequences of poor inspection results

- Can close dirty premises at no notice
- Notice to improve and re inspection
- Can impose fines of £20,000 or six months imprisonment
- Can take legal action for manslaughter

All premises must be registered with the local authority and can be inspected at any time by an EHO.

A Hygiene Improvement Notice is used to require food businesses to improve something sub-standard

Food Hygiene Rating Scheme

- EHOs issue a rating between 0 and 5 when conducting inspections
- Issued to restaurants, pubs, cafes, mobile catering etc
- Displaying them isn't a requirement yet

Although its not compulsory to display the ratings in England YET do you think it is a good idea for businesses to display them?

Follow up complaints & submitting reports

The EHO investigates complaints from the public about problems when with food/drink. These can be

Physical
Chemical
Biological

The EHO reports back to the customer and the provider – can prosecute supplier if negligent

Follow up outbreaks of food poisoning

- The EHO coordinates with doctors, hospitals, victims and food suppliers to trace and identify sources of food poisoning outbreaks (and single cases)
- They take samples of food, faecal samples, swabs of kitchens and production areas and these are analysed by the Public Health laboratory service to identify the species and likely causes
- EHOs publish a report on the outbreak that gives the timeline and how the outbreak could have happened – publicly available

Collecting samples for testing

EHOs collect samples for testing using *aseptic* methods so no bacteria contaminate the sample

- Foods
- Faecal
- Swabs of surfaces or workers
- Foods (for composition testing)
- ATP swab testing

In cases where there could be a prosecution the sample is divided so that there is a reference to use if it goes to court

Giving evidence in prosecutions maintaining evidence

- Prosecutions under food safety laws are serious, people can get injured or even die .
- The EHO writes a report for the prosecution service who decide if it is serious enough to take to trial
- The EHO who conducted the investigation gives evidence as an expert witness and explains where the defending party has broken the law
- Evidence is submitted in the form of photos, lab results, and the EHO notes from the investigation

Doctors notify environmental health of suspected cases of **infectious disease.**

- EHO then visits the person to complete a questionnaire.sent to PHE who analyse the data
- EHO would investigate any source of infection locally

Campylobacter – Most common cause of food poisoning in the UK

Cryptosporidium – Is a microscopic parasite that causes Cryptosporidiosis

Ecoli 0157 - Is found in the gut of animals; it is a bacterial infection that causes severe stomach pain that can lead to kidney failure

Accident Investigation

Accidents must be reported to the Health and Safety Executive via reporting system (RIDDOR).

- Deaths caused by workplace accidents
- Occupational diseases
- fractures, amputations, loss of sight etc
- Over 7 day incapacitation of a worker
- Dangerous occurrences
- Accidents to members of the public where they are taken to hospital.

The EHO receives ALL RIDDOR information in their area.How can the EHO use the information to improve food premises?

ATP Swabs

What is ATP and how is it measured?

All organic matter contains ATP including food, bacteria, mould and microorganisms. The detection of ATP indicates the presence of biological matter.

A sterile swab is used to take approximately a 10cm² sample. ATP uses bioluminescence to take a reflective light unit reading (RLU) from the swab.

. Measuring the amount of bioluminescence from an ATP reaction provides a good indication of surface cleanliness

Unclean surface → large amount ATP → more light produced → high reading

	Sample location (abbreviation)	Lower limit (Pass)	Upper Limit (Fail)
0	Random test site	50	100
1	Food Contact surface (Food Contact)	20	50
2	Chopping board	20	50
3	Food Preparation surface (Food Prep Surface)	20	50
4	Utensils	20	50
5	Slicing Equipment	20	50
6	Packaging equipment e.g. vacuum packing machines (Packing Equipment)	20	50
7	Hands	100	200
8	Taps	50	100
9	Fridge handle	50	100
10	Microwave door handle / key pad	50	100
11	Door push plate	50	100
12	Cleaning Cloths / Sponges (Cleaning cloths)	100	200

Mr Smith's cafewas closed by food officers with an emergency hygiene order following severe rodent infestation. The officers found rodent droppings on food preparation surfaces, on food items and in containers.
Mr Smith failed to have systems to control pests and has failed to protect food from foreign bodies, pests and bacteria likely to make the food unfit for human consumption

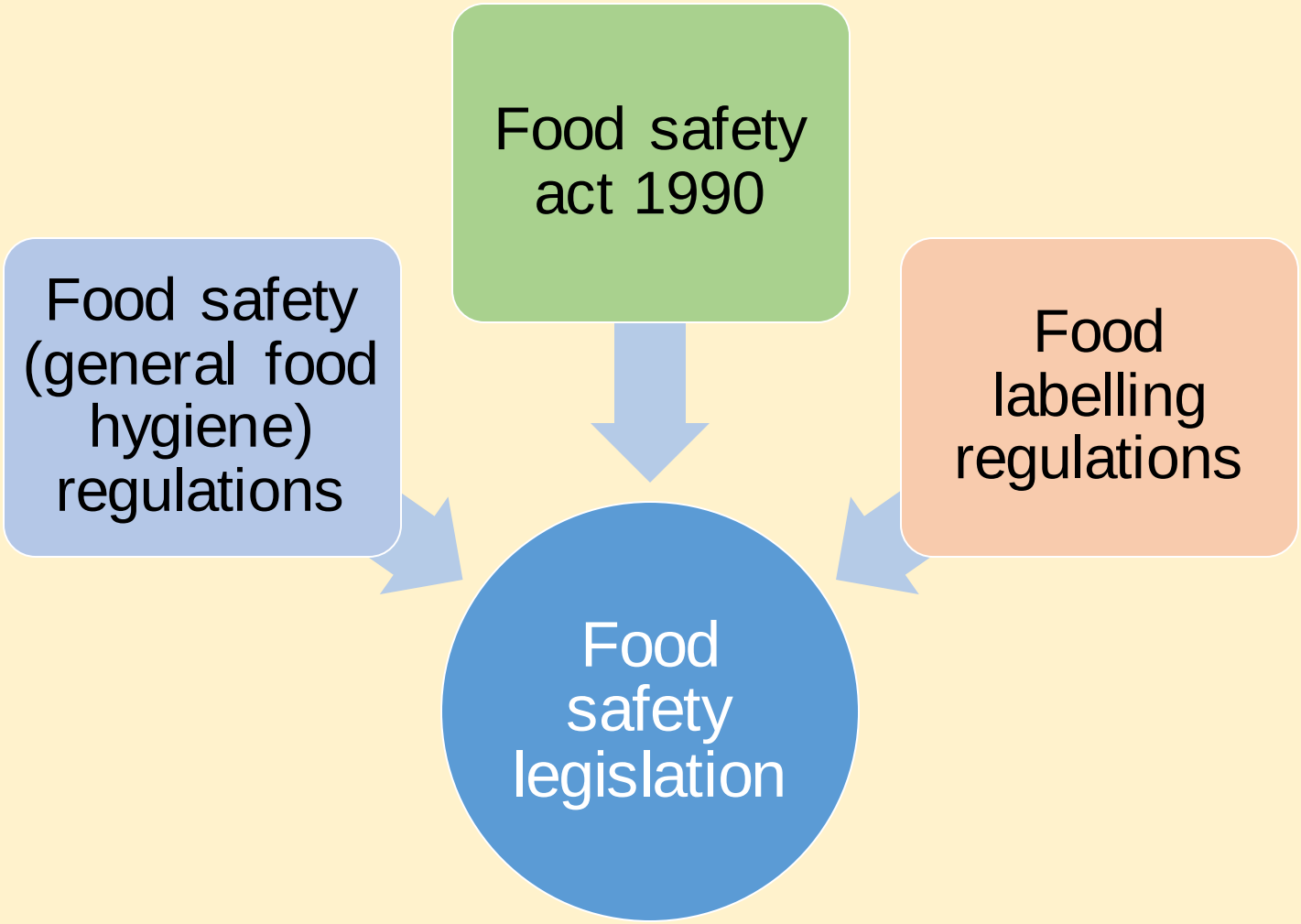
List four hygiene problems with Joe's café (4)

Joe's café is due a visit from the EHO. Give four reasons why joes café will not pass the inspection (4)

What might the EHO suggest happens to the café? Give two ideas (2)

AC 4.3
Food safety legislation

What food safety legislation do we need to know?



If a person renders (which means “makes”) a food injurious to health: by adding an article or substance to it; using an article or substance as an ingredient in its preparation; abstracting (which means “taking away”) any constituent from it; or subjecting it to any other process or treatment then they are guilty of an offence.

Main provisions of the Food Safety Act

1. It is an offence to supply food that fails to comply with food safety requirements
2. Strengthened powers of enforcement including detention and seizure of food
3. It requires training in basic food hygiene for all food handlers
4. All food premises must be registered
5. Authorises EHOs to issue improvement notices if there is a potential risk
6. EHOs can issue emergency prohibition notices to force caterers to stop their business immediately

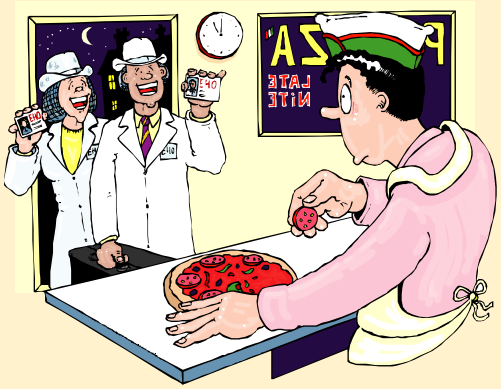
The Food Safety Act 1990

Food businesses:

- Must ensure that the food served or sold is of the nature, substance or quality which consumers would expect, e.g. :
    - Nature - pollock rather than cod;
    - Substance - contains foreign material including glass or packaging;
    - Quality – mouldy bread or stale cake.

- Ensure that the food is labelled, advertised and presented in a way that is not false or misleading, e.g. photos on menus that do not look like the dishes served to customers.

Role and powers of E.H.O



Environmental Health Officers

- Provide Food Safety advice
- Inspect food premises
- Enforce legislation covering food
- Investigate outbreaks of food-borne disease and possible offences

- Powers of entry at any reasonable time
- Inspect food and premises
- Power to seize and detain food
- Serve notices, power to close businesses
- Power to prosecute

Loads more on EHOs to come later!

Penalties under the Food Safety Act

Food Safety Act 1990	Magistrates court	Crown court
Selling food that does not comply with the Food Safety Act	6 months in prison or max £20,000 fine	2 years in prison Unlimited £ fine
Obstructing an Environmental health Officer	3 months in prison or max £2,000 fine	
Other serious offences	6 months in prison or max £20,000 fine	2 years in prison or £ unlimited fine

Defence of Due Diligence

- The principal of defence under The Food Safety Act 1990
- A business must be able to demonstrate that it has done everything within its power to safeguard consumer health
- Accurate records are useful in proving this defence; these may include:
  - Temperature control records delivery/storage/cooking
  - Microbiological records
  - Hygiene training for staff
  - Use of HACCP system
  - Pest control records
  - Hygiene manuals, cleaning schedules
  - Hygiene policy

The European Union (EU) adopted the General Food Law Regulation (EC) 178/2002 in 2005.

food safety and hygiene (england) regulations 2013

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Safety

Food shall not be placed on the market if it is unsafe. injurious to health

•unfit for human consumption

Presentation

labelling, advertising and presentation, including the setting in which the food is displayed, of food shall not mislead consumers.

Traceability

food business to keep records of food, supplied to their business,.

Withdrawal, recall and notification

withdraw food which is not in compliance with food safety requirements, and to recall the food if has reached the consumer.

Food Safety (General Food Hygiene) Regulations (1995)

-Food premises

- Personal hygiene of staff

- Hygienic practices

•make sure food is supplied or sold in a hygienic way;
•identify food safety hazards;
•know which steps in your activities are critical for food safety;
•ensure safety controls are in place, maintained and reviewed.

Food premises should

- be clean and in good condition, made from easy to clean materials
- have potable (drinking) water;
- have pest control measures
- have adequate lighting and ventilation ;
- clean lavatories which do not lead directly into food rooms;
- have adequate hand washing facilities and drainage
- facilities for washing food and equipment;
- facilities for the storage and removal of food waste.

Food Handler – Legal Requirements

- Keep yourself clean
- Keep your workplace clean
- Protect food from contamination or anything that could cause harm
- Follow good personal hygiene practices
- Wear appropriate protective clothing
- Sell food with an expired date mark
- Work with food if they have symptoms of food poisoning or had diarrhoea and sickness in the last 48 hours.

Food Safety Training

- Food handlers must receive adequate supervision, instruction and/or training in food hygiene. Each food business must decide what training is needed

- Legal requirement
- Appropriate to tasks undertaken
- Recorded
- Refreshed at given intervals eg yearly

HACCP- legal requirement

Hazard

Analysis

Critical

Control

Point

Hazard – anything that could cause harm to consumers

HACCP is designed to help food companies to minimise the risk from food hazards

Hazard

Analysis

Critical

Control

Points

- Legal requirement
- Identify the most critical (dangerous in terms of bacteria) areas of their business to make sure they are under control

HACCP System

Food companies need to:

- Analyse the hazards to food safety
- Assess the level of risk from each hazard
- Decide the most critical points that require controls
- Implement appropriate controls
- Establish a monitoring system
- Set up procedures to correct problems (corrective action)
- Review the system when operations change

Hazard **A**nalysis

A hazard is something that has the potential to cause harm…..

Type of hazard	**Example**
Biological	Salmonella in chicken
Chemical	Contamination from cleaning materials e.g. bleach
Physical	Damaged packaging, glass found in food

Critical

Control

Points

A critical control point is a step which eliminates or reduces the hazard

Control is essential to reduce the risk of food poisoning.

If a caterer gets it wrong they could be breaking the law

all stages from purchasing through to preparation and serving is controlled.

Record Keeping

Legal requirement that certain records are kept as part of the HACCP-based food safety management system, eg:

- Fridge/freezer records
- Cooking/hot-holding temperatures
- Cleaning records
- Training records
- Pest control checks

Using HACCP

Fill in the chart, stating what the hazards/dangers might be at every stage and stating what action you would take to ensure your customers do not suffer from salmonella food poisoning.

Stage chicken breast	Hazard	Action
Buying		
Delivery		
Storage		
Preparation		
Cooking		
Chilling		

Penalties for Non-Compliance

- Prohibition from using part of business
- Fines and legal costs
- Prison sentence
- Closure of business
- Prohibition from running a food business
- Criminal record
- Defence of Due diligence also for this regulation

The Food Hygiene regulations 2006

- Applies to high-risk foods
- Cold foods- store below 8^{o}C
- Hot foods – store above 63^{o}C

During service :-

- Cold food max 4hrs at room temperature then discard or refrigerate
- Hot food maximum 2 hrs
- Buffet food 90mins at room temperature

Questions

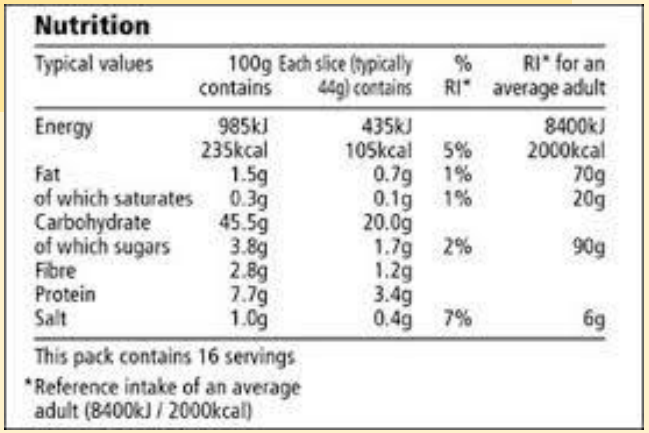
- The King George Hotel has decided to refurbish the kitchen and dining room.
- Describe the role of the EHO before , during and after the refurbishment.
- Think about advice the EHO can give the owners before they start to redesign the kitchen.
- Advice on where equipment should be placed. The triangle. Cookers, fridges, sinks.

Food labelling regulations 2006

Pre-packaged foods have information on their labels which can help consumers choose between different foods, brands, or flavours.

- Much of the information must be provided by law.
- Additional information may also be provided, such as cooking instructions or serving suggestions.
- In the UK, foods sold loose are currently exempt from many of the food labelling laws

Information that must appear by law on food labels:



Nutrition

Typical values	100g contains	Each slice (typically 44g) contains	% RI*	RI* for an average adult
Energy	985kJ 235kcal	435kJ 105kcal	5%	8400kJ 2000kcal
Fat	1.5g	0.7g	1%	70g
of which saturates	0.3g	0.1g	1%	20g
Carbohydrate	45.5g	20.0g		
of which sugars	3.8g	1.7g	2%	90g
Fibre	2.8g	1.2g		
Protein	7.7g	3.4g		
Salt	1.0g	0.4g	7%	6g

This pack contains 16 servings

*Reference intake of an average adult (8400kJ / 2000kcal)

- the name of the food;
- weight or volume;
- ingredient list;
- allergen information;
- genetically modified (GM) ingredients;
- date mark and storage conditions;
- preparation instructions;
- name and address of manufacturer, packer or seller;
- place of origin;
- lot (or batch) mark;
- nutrition information

Weight or volume

The weight or volume of the food must be shown on the label. By comparing the weight with the price, consumers can make sure that they are getting value for money.

Some foods such as bread, tea and butter are only sold in standard amounts.

PINEAPPLE, COCONUT & BANANA SMOOTHIE

A blend of apple juice, banana, pineapple juice and coconut milk

Ingredients:

Apple Juice (42%), Banana Puree (21%) [Banana Puree, Lemon Juice], Pineapple Juice (20%), Coconut Milk (17%)

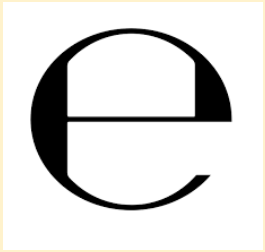
Storage:

Keep refrigerated. Once opened consume within 1day. Do not exceed the Use By date.

250ml

For Use By: See lid

NUTRITION:	Typical values Per 100ml
Energy:	271kJ/65kcal
Fat:	2.5g
Of which saturates	2.3g
Carbohydrate:	9.6g
Of which sugars	9.4g
Fibre:	0.6g
Protein:	0.6g
Salt:	Trace



The e mark means it is packed to the average weight system

The name of the food

It is important that the name of the food must be clearly stated and not be ambiguous or misleading with a description if needed.

Ingredients

- Ingredients are listed in order of weight, according to the amounts that were used to make the food, starting with the largest ingredient and ending with the smallest.

- Food additives and water must also be included in the list if they have been added.

- Sometimes a particular ingredient is highlighted in the name, e.g. ‘Prawn Curry: now with extra prawns’. If so, the minimum amount of the named ingredient must be included in the ingredients list, or next to the name of the food.

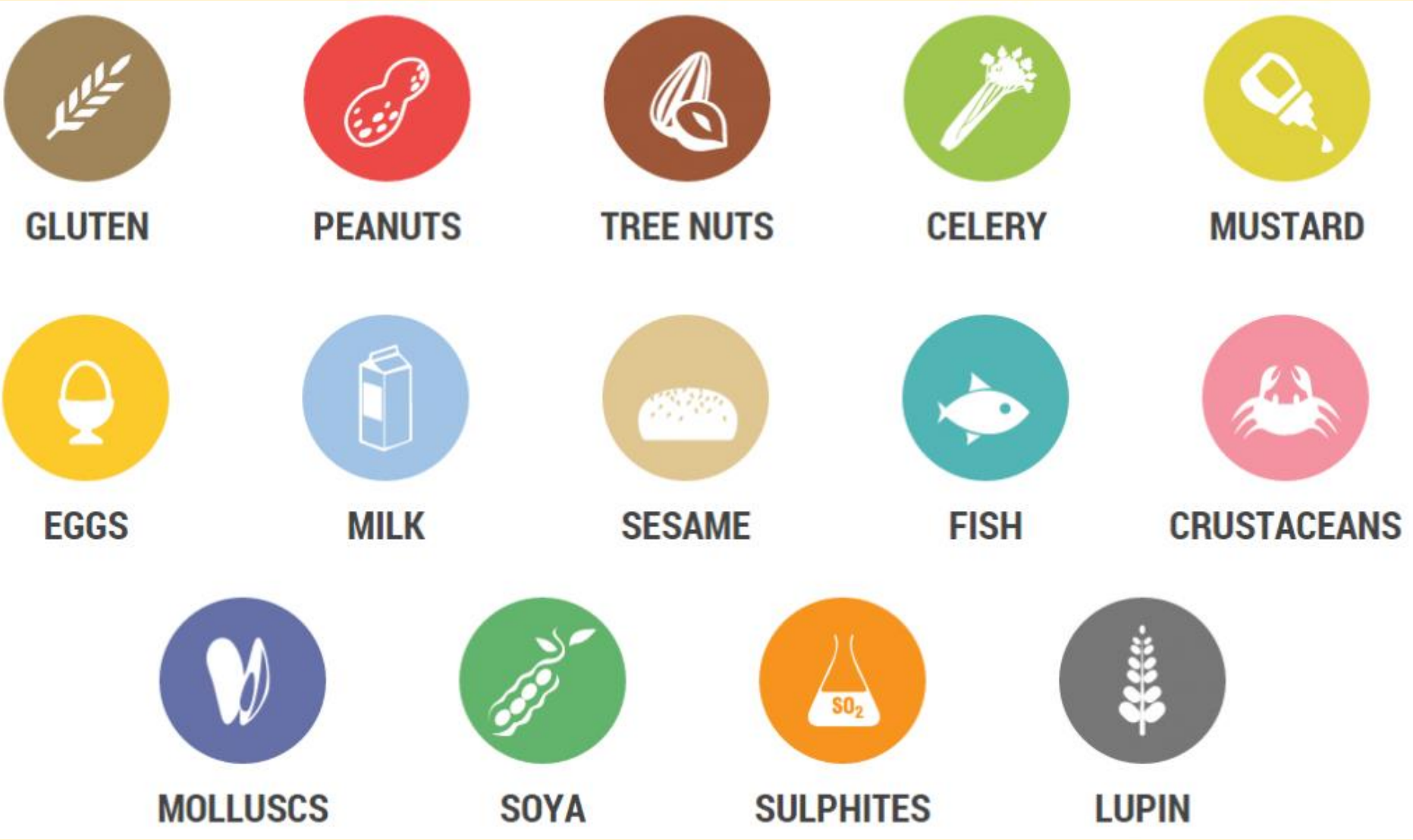
- Allergens must be listed in **bold** to highlight them

Allergy information

- celery;
- cereals containing gluten (such as wheat, barley, rye)
- crustaceans (lobster and crab);
- eggs;
- fish;
- lupins;
- cow's milk;
- molluscs (mussels and oysters);
- mustard;
- nuts (almonds, hazelnuts, walnuts, Brazil nuts, cashews, pecans);
- peanuts;
- sesame seeds;
- soybeans;
- sulphur dioxide and sulphites (preservatives in some foods and drinks)

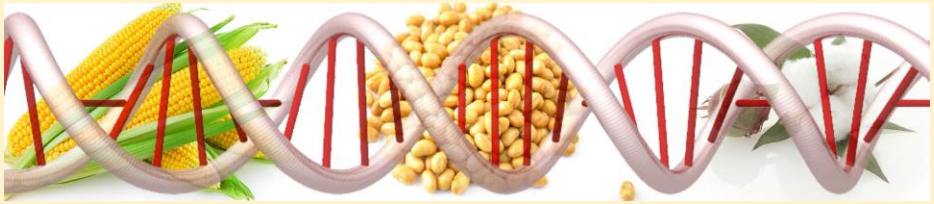
Major allergens

Must be highlighted in ingredients list



Genetically modified (GM) ingredients

The presence of genetically modified organisms (GMOs) or ingredients produced from GMOs must be indicated on the label.



Name & address, packer or seller

Consumers can then contact the manufacturer if they have a complaint about a product or if they wish to know more about it

Storage conditions and ‘Use by’ mark

The label must say how long foods should be kept and how to store them.

Following storage instructions can reduce the risk of food poisoning and help to make sure that it tastes and looks its best when it is eaten.

Foods which spoil quickly (i.e. are highly perishable) such as cooked meat and fish have a ‘Use by’ date. If kept for too long these foods can cause food poisoning even though they may not taste odd.

‘Best before’ date

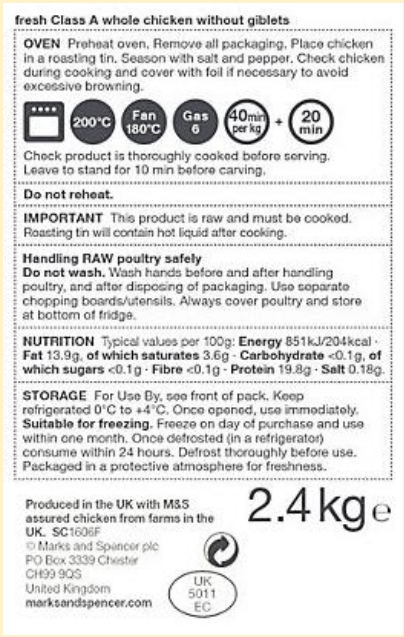
- Other foods have a ‘best before’ date, after which foods may not be at their best, with regard to flavour, colour and texture, even though they will probably be safe if they have been stored according to the instructions on the label.

- Salt only needs to have a year as a best before but most manufacturers label it to the month

Preparation instructions

- Instructions on how to prepare and cook the food must be given on the label, if they are needed. If the food has to be heated, the temperature of the oven and the cooking time will usually be stated.

- Instructions may also be given for heating in a microwave oven. These instructions should make sure that the food tastes its best and that it will be thoroughly heated to a core temperature of 72ºC to help minimise the risk of food poisoning.



fresh Class A whole chicken without giblets

OVEN Preheat oven. Remove all packaging. Place chicken in a roasting tin. Season with salt and pepper. Check chicken during cooking and cover with foil if necessary to avoid excessive browning.

200°C · Fan 180°C · Gas 6 · 40min per kg + 20 min

Check product is thoroughly cooked before serving. Leave to stand for 10 min before carving.

Do not reheat.

IMPORTANT This product is raw and must be cooked. Roasting tin will contain hot liquid after cooking.

Handling RAW poultry safely
Do not wash. Wash hands before and after handling poultry, and after disposing of packaging. Use separate chopping boards/utensils. Always cover poultry and store at bottom of fridge.

NUTRITION Typical values per 100g: **Energy** 851kJ/204kcal · **Fat** 13.9g, **of which saturates** 3.6g · **Carbohydrate** <0.1g, **of which sugars** <0.1g · **Fibre** <0.1g · **Protein** 19.8g · **Salt** 0.18g.

STORAGE For Use By, see front of pack. Keep refrigerated 0°C to +4°C. Once opened, use immediately. **Suitable for freezing.** Freeze on day of purchase and use within one month. Once defrosted (in a refrigerator) consume within 24 hours. Defrost thoroughly before use. Packaged in a protective atmosphere for freshness.

Produced in the UK with M&S assured chicken from farms in the UK. SC1606F
© Marks and Spencer plc
PO Box 3339 Chester
CH99 9QS
United Kingdom
marksandspencer.com

UK 5011 EC

2.4kg e

Place of origin

- The label must show clearly where the food has come from if it would be misleading not to show it, for example, a tub of ‘Greek Yogurt’ which was made in France.

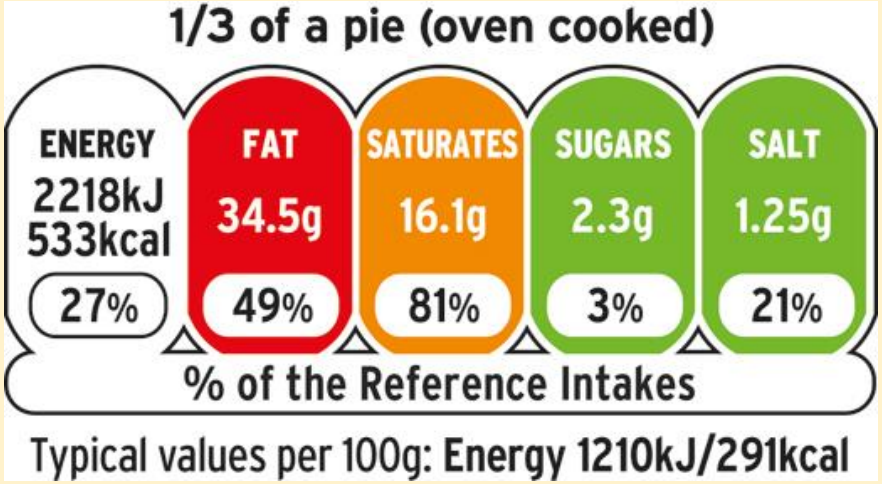
Protected Designation of Origin (PDO) is used for food produced, processed and prepared in a given geographical area using recognised know-how, e.g. West Country farmhouse Cheddar cheese and Jersey Royal potatoes.

Lot (or batch) mark

- A lot mark is a code which is required by law to appear on the label. It helps to identify batches of food in the event that they need to be recalled by the manufacturer, packer or producer.
- A date mark is sometimes used as a lot mark. Lot marks may be indicated by the letter ‘L’.
- Pre-packed red meat and meat products, must carry traceability information for identification of the product through the supply chain back to the farm.

Nutritional labelling

Front of pack nutrition panel



Back of pack nutrition panel

Nutrition

Typical values	100g contains	Each slice (typically 44g) contains	% RI*	RI* for an average adult
Energy	985kJ 235kcal	435kJ 105kcal	5%	8400kJ 2000kcal
Fat	1.5g	0.7g	1%	70g
of which saturates	0.3g	0.1g	1%	20g
Carbohydrate	45.5g	20.0g		
of which sugars	3.8g	1.7g	2%	90g
Fibre	2.8g	1.2g		
Protein	7.7g	3.4g		
Salt	1.0g	0.4g	7%	6g

This pack contains 16 servings

*Reference intake of an average adult (8400kJ / 2000kcal)

This is a USA nutrition label

Nutrition claims

A nutrition claim describes what a food contains (or does not contain) or contains in reduced or increased amounts. Examples include:

- Low fat (less than 3g of fat per 100g food);
- High fibre (at least more than 6g of fibre per 100g food);
- Reduced sugar (30% less than the original product);
- Source of vitamin C (at least 15% of the recommended daily allowance for vitamin C).

Health claims

A health claim may be featured on the packaging if a food or one of its ingredients has been agreed by experts to provide additional health benefits.

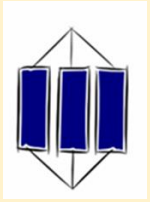
Examples of health claims include:

- *Calcium is important for normal growth and development of bones in children.*
- *Beta-glucans from oats help to reduce blood cholesterol.*
- *Xylitol in some sugar-free chewing gum helps neutralise plaque acids.*

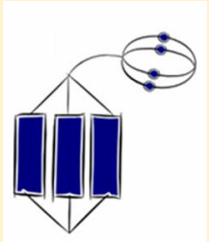
AC 4.4
common types of food poisoning

What causes food poisoning?

Be able to state the 7 common types of food poisoning



Be able to relate the food poisoning species to food types and symptom types



Be able to identify potential sources of pathogens from description of symptoms and foods consumed

Common types of food poisoning

campylobacter

Salmonella

E. coli

Clostridium perfringens

Listeria

Bacillus cereus

Staphylococcus aureus

The first word always starts with a capital, the second with lower case

Correct names of bacteria

Known as	Full scientific name
Campylobacter	Campylobacter jejuni
Salmonella	Salmonella typhimurium *et al*
E . coli	Escherichia coli
Cl . perfringens	Clostridium perfringens
Listeria	Listeria monocytogenes
B . Cereus	Bacillus cereus
S . aureus	Staplylococcus aureus

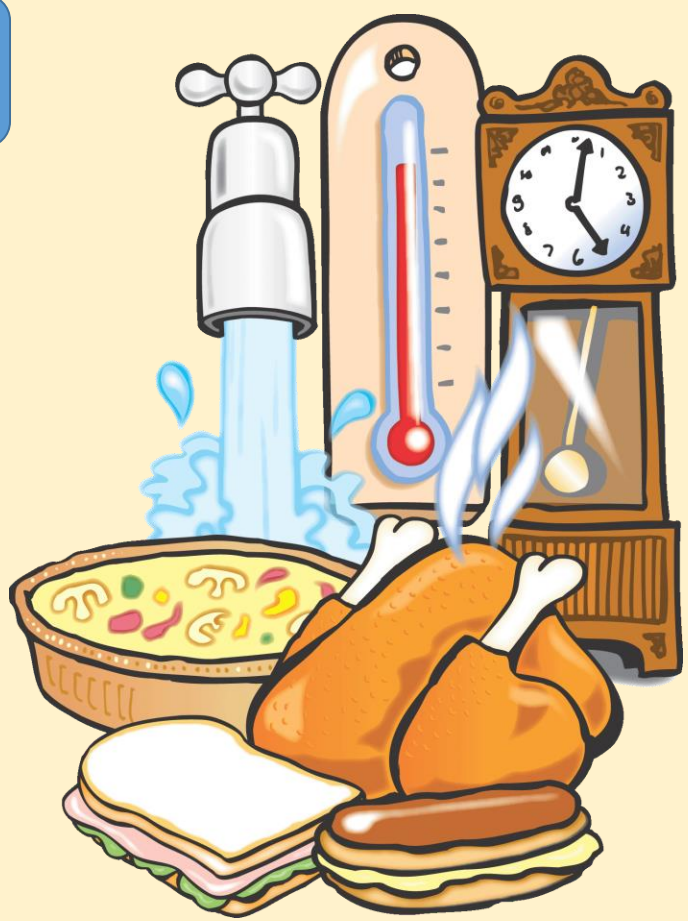
Common food hygiene faults leading to food poisoning

- Preparation too far in advance and storage at room temperature
- Slow cooling
- Inadequate reheating/cooking
- Contaminated food (cross-contamination or raw)
- Inadequate thawing prior to cooking
- Food handlers (infected/bad personal hygiene).

What do bacteria need to multiply?

moisture

Warmth



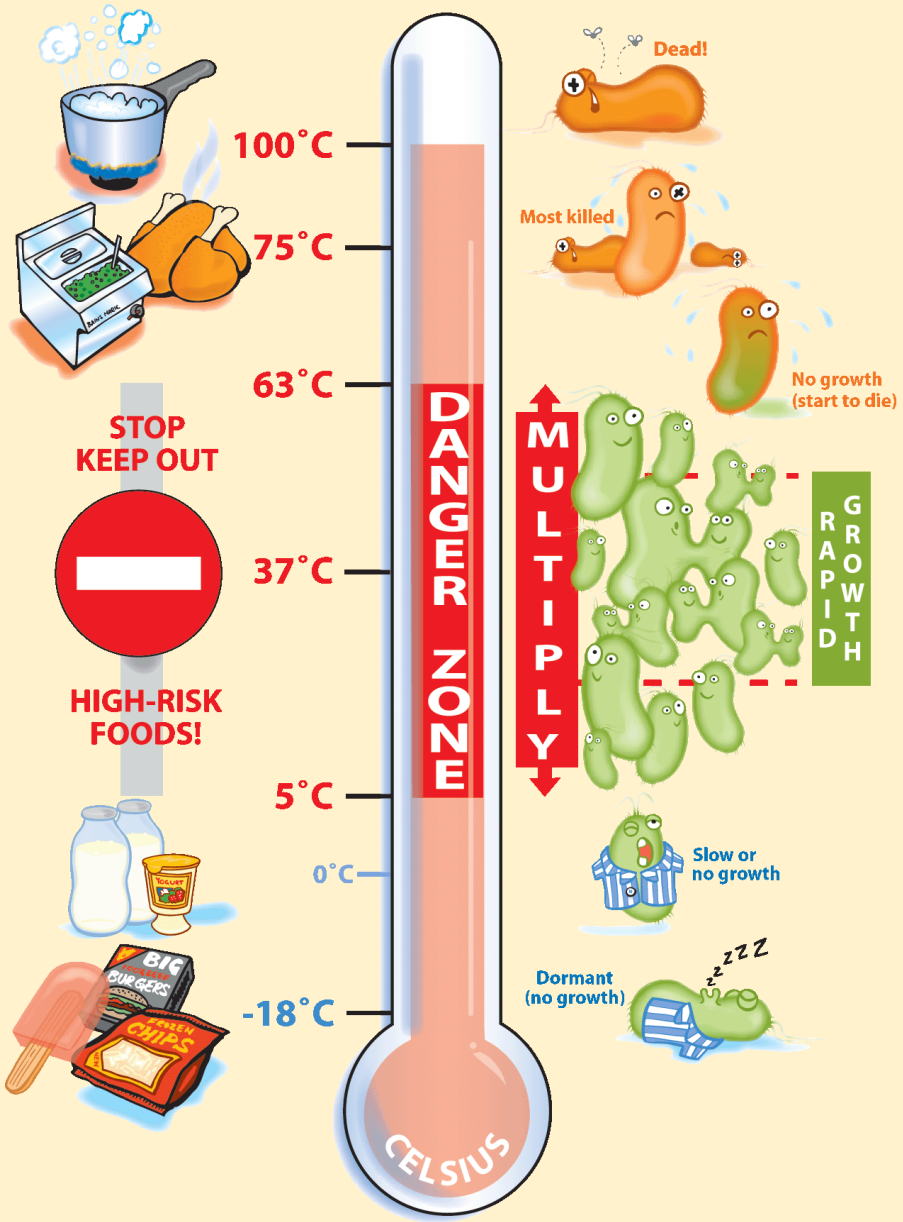
Time

Food

Sources of food poisoning bacteria

- People/sewage
- Raw food
- Insects
- Rodents
- Soil/dust
- Refuse/waste
- Animals/birds
- Contaminated packaging.

Influence of temperature



Dead!.

Destroys most pathogens

Too hot (start to die 63°C)

Multiply rapidly

Spoilage slow growth, most pathogens no growth (<5°C)

Dormant (no growth – spoilage or pathogens).

Campylobacter jejuni

Foods it is found in	Poultry , raw meat, unpasteurised milk products, water
Symptoms	Headache, abdominal pain,bloody diarrhoea
Onset	2-5 days after infection
Duration	Up to 10 days
Effects on body	Weakness and dehydration
Special points	Only needs a few bacteria to cause illness

Salmonella group of over 1600 species

Foods it is found in	Raw meat, unwashed vegetables, eggs undercooked chicken
Symptoms	Fever, diarrhoea, vomiting, abdominal pain, blood in poo
Onset	12-72 hours
Duration	4-7 days can be up to 3 weeks
Effects on body	Can take months to clear the body, weakness colonises the gut
Special points	Survives refrigeration Some named after locations

Escherichia coli 0157

Foods it is found in	beef,chicken, lamb, unpasteurised milk cheese, spinach, salads,raw veg
Symptoms	Abdominal cramps, bloody diarrhoea, nausea
Onset	Up to 24 hours
Duration	5-10 days
Effects on body	Kidney damage, pancreas damage, dehydration
Special points	Clings to lower intestine wall

Clostridium perfringens

Foods it is found in	Undercooked meats, large volumes of food ,casseroles, gravies
Symptoms	Stomach cramps, fever, diarrhoea (not ususally vomiting)
Onset	6-24 hours
Duration	Up to 24 hours
Effects on body	Fever, damage to intestines
Special points	Forms toxins in warm food, very few needed to cause illness .Anaerobic

Listeria monocytogenes

Foods it is found in	Raw foods, fridge temperatures, unpasteurised milk, cheese, smoked salmon, pate, raw sprouts
Symptoms	Headache, stiff muscles, confusion, fever, convulsions
Onset	3-70 days (21 typical)
Duration	3 weeks
Effects on body	Damage to central nervous system, miscarriage, meningitis
Special points	Grows at fridge temperatures

Bacillus cereus

Foods it is found in	Rice, leftover food, foods at room temperature, sauces and soups
Symptoms	1)Watery diarrhoea, cramps, 2)vomiting and nausea
Onset	1) 30 min-6 hrs 2) 6-15 hours
Duration	24 hours
Effects on body	Dehydration, fatigue
Special points	Produced toxins, only a few bacteria needed Can be anaerobic

Staphylococcus aureus

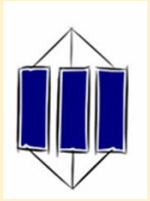
Foods it is found in	Foods made by hand and no additional cooking . Salads, ham,tuna chicken, cream pastries, sandwiches, dairy products, meat, eggs
Symptoms	Projectile vomiting, diarrhoea, abdominal cramps, fever
Onset	1-6 hours
Duration	24-48 hours
Effects on body	Dehydration, cramps
Special points	25% of people have it on their body, nose, throat and on infected cuts

People at high risk

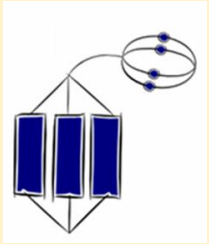
AC 4.5
Symptoms of food induced ill health

What are the symptoms of food induced ill health ?

Be able to state the common symptoms of food induced ill health



Be able to relate the symptoms to possible causes of illness



Be able to identify potential sources of pathogens from description of symptoms and foods consumed

Symptoms comparison

Intolerance	Allergy	Poisoning
Hours to days to see effect	Can occur within minutes of exposure to food	From 30 min for toxins 12-48 hours bacterial
Digestive system cant process the food	Immune response to allergen	Bacteria poison or disrupt digestive system
Possible to eat a small amount without effect	Body reacts to tiny amounts of food	Toxins- few bacteria Large amounts colonise gut
Stop eating the food and it goes away	May need adrenaline or anti histamines	Runs its course of illness then ends
Easier to detect the food	Allergens may be small amount in ingredients	No smell, no taste, no sign
Symptoms if you eat a lot or frequently	Symptoms every time even tiny amounts	Symptoms if the food is contaminated
Moderate to serious illness	Can be fatal	Serious illness to fatal

Food intolerance

Mouth ,may be sore, bad breath

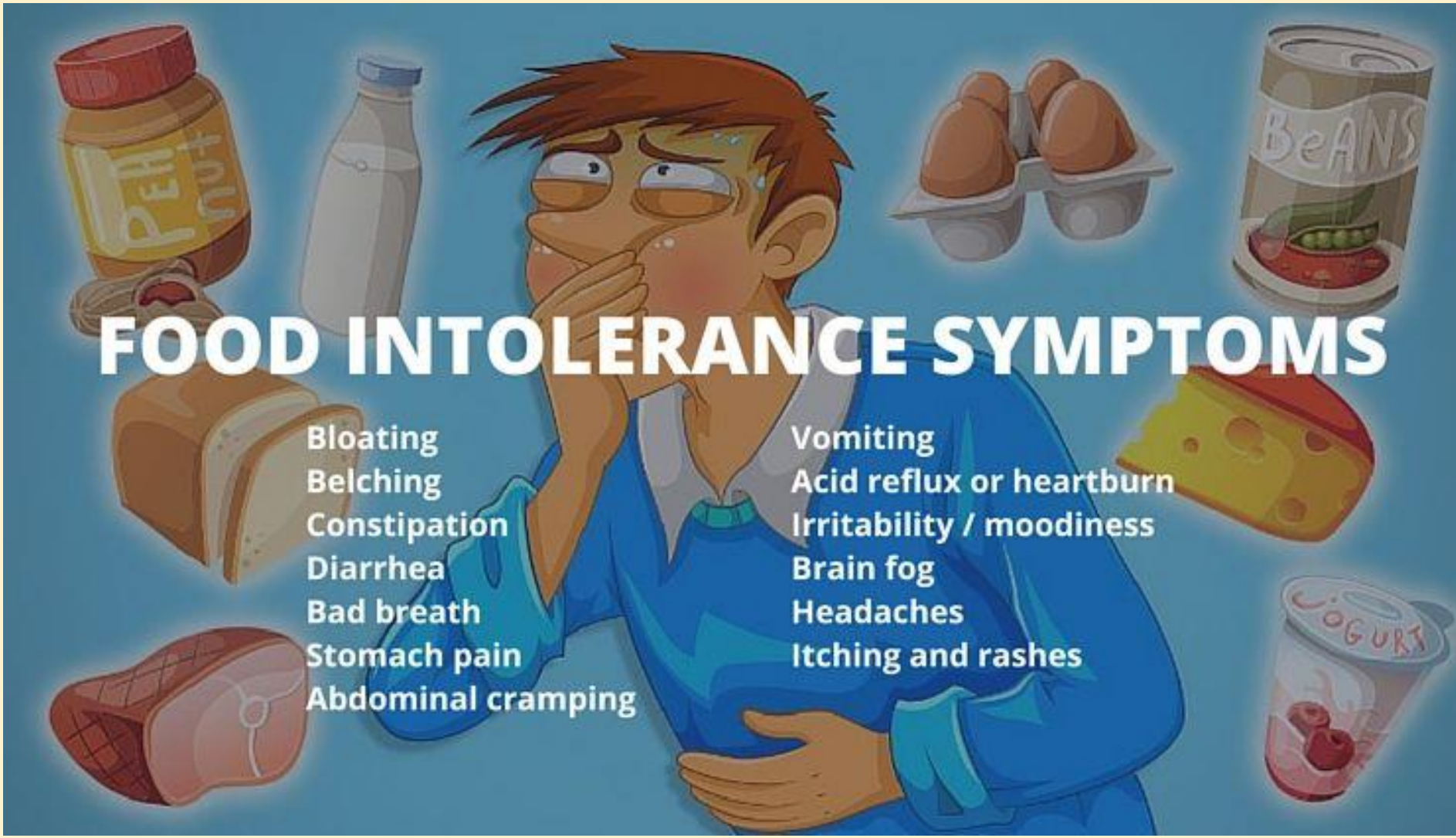
Skin rash, redness, itching swelling eczema

Gut abdominal pain, bloating, heartburn, cramping, vomiting, diarrhoea or constipation

Lungs chronic cough, wheezing

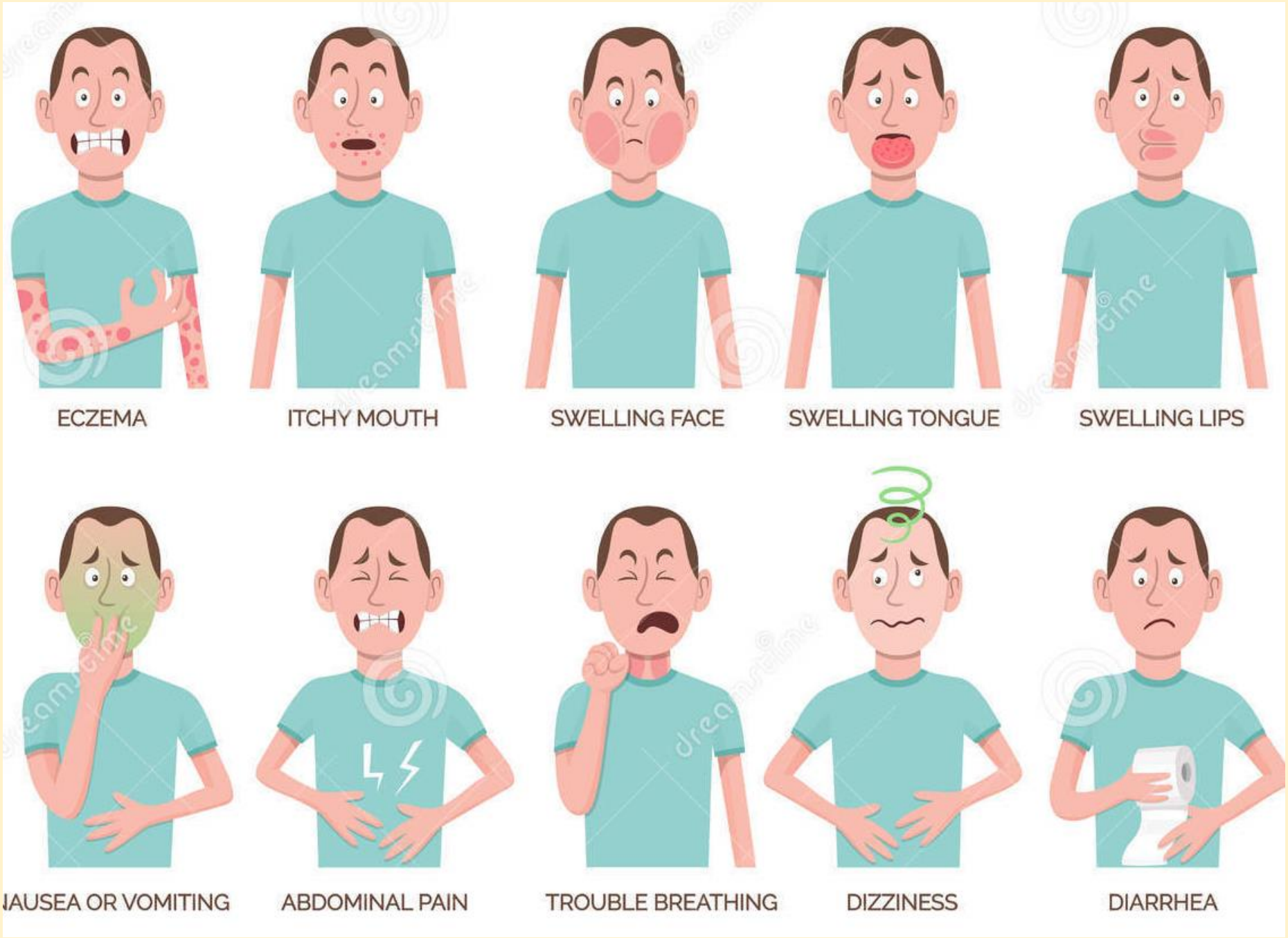
Head headache, brain fogginess, migraines

Perception irritable, moody, panic, depression


FOOD INTOLERANCE SYMPTOMS
Bloating
Belching
Constipation
Diarrhea
Bad breath
Stomach pain
Abdominal cramping
Vomiting
Acid reflux or heartburn
Irritability / moodiness
Brain fog
Headaches
Itching and rashes
PEANUT
BEANS
YOGURT

Food allergy

Mouth swelling of lips, mouth and tongue
Eyes and nose stuffy nose,sneezing, swollen eyes, itchy red eyes
Skin rash, redness, itching swelling
Gut abdominal pain, colic, nausea vomiting, diarrhoea
Throat tightening of throat, difficulty swallowing, coughing, sounds when breathing in
Lungs short of breath,wheezing,coughing,chest pain
Circulation, low blood pressure, weak pulse, turning blue, dizziness fainting, chest pain
Perception sense of doom, panic, anxiety


ECZEMA
ITCHY MOUTH
SWELLING FACE
SWELLING TONGUE
SWELLING LIPS
NAUSEA OR VOMITING
ABDOMINAL PAIN
TROUBLE BREATHING
DIZZINESS
DIARRHEA

Food poisoning

Mouth increase in saliva

Head headache

Skin fever, shivering

Gut abdominal pain, nausea vomiting, diarrhoea

Circulation, low blood pressure, weak pulse, fatigue


Achoo...

Steve

Steve often got diarrhoea at lunchtime at work. One morning he got up really late and skipped breakfast and noticed he didn't have diarrhoea that day.
When he thought about it, he didn't get diarrhoea if he had toast and peanut butter for breakfast but he did when he had a bowl of cereals and milk in the morning.

1. What is the most likely cause of Steve's diarrhoea?
2. What else could he have for breakfast to ensure it didn't happen again?

Anna

Anna and Steve went to their company summer barbeque where one of the men from accounts took charge of the cooking. He had bought the sausages the day before and kept them and the salads in the supermarket bag beside the barbeque.

When they got back home Anna began to feel ill and then was violently sick. Later Steve had the same sickness. Anna was sure it was something they had eaten.Then Steve told her that there weren't enough sausages and he had a vegetarian hot dog.

1. What could have been the source of the food poisoning?
2. What is the most likely bacterium to have caused the illness?

Alex

Alex met Sue from the office at the barbeque, the next weekend she invited him over for a meal. Sue decided to impress Alex by cooking a Chinese stir fry with authentic ingredients like spring onion, ginger and groundnut oil.

Alex liked the stir fry but his lips started to sting after eating it, then his mouth started to swell and he had trouble swallowing and breathing. Sue called the ambulance and their romantic night ended with Alex in a hospital bed on a drip of anti histamine until he felt better

1. What was the reaction that Alex had called?
2. What could have caused him to have the reaction?

Sue

Alex decided to make it up to Sue by taking her to lunch in the works canteen .

cp

Alex had the fish and chips and Sue had the Bolognese which was served from a big pan over the spaghetti. It wasn't as hot as Sue would have liked, it was just warm but she ate it anyway.

The next morning Sue texted Alex to say that she had been up most of the night with feeling hot and cold, stomach cramps and diarrhoea. Another "romantic" meal ruined!

1. What could have been in the Bolognese that made Sue ill?
2. Sue had food poisoning so why wasn't she vomiting as well?

The wedding

Alex and Sue got in so well they got married the next summer. Alex made sure the caterers knew about his peanut allergy and Steve's lactose intolerance.

The day went without a hitch and the guests all loved the food buffet.

When they got back from honeymoon, Sue's mum phoned to say that 20 guests had been really ill 2-3 days after the wedding. Auntie Betty had ended up in hospital with dehydration after vomiting and diarrhoea and blamed the undercooked chicken from the buffet. The caterer said he had stored the chicken in the fridge before serving it so it wasn't to blame.

1. Which bacterium could have caused the illness?
2. How did you decide which bacterium?
3. Who should Sue's mum have contacted to investigate?

The investigation

Auntie Betty's doctor was concerned that she was so ill after the wedding and made the phone call to Stentonshire councils Environmental health department.

Sarah the EHO was concerned about the incidents and decided to pay the catering company a visit to inspect them. The caterer wasn't pleased that she turned up unannounced but he let her in to inspect his kitchens

1. Does Sarah (EHO) need to let the catering company know she is going to visit?
2. Which food safety legislation should the caterer be following?
3. Give 6 powers that EHOs have while inspecting premises

The inspection

The EHO carried out the inspection on the caterer's premises and took the samples away to be analysed.
Following the inspection, she issued the caterer with a food hygiene ratings score of 1 and a hygiene improvement notice and closed the kitchens for 14 days to carry out deep cleaning and train the workers in food hygiene. The samples were tested and the laboratory confirmed that the cause of the food poisoning incident was Salmonella. The caterer made such an improvement to his kitchens that the Environmental health team decided not to prosecute. New salmonella species are often named after the town they are discovered in and the new one was named……Salmonella stenton

1. Name 4 types of samples Sarah would have taken
2. What would be the consequences for the business of being closed for 14 days and a hygiene ratings score of 1?
3. What are the penalties of being prosecuted by the EHO?

Anna Sa
Sue Cp
Vedding S