

Food Handling Module 5



Contamination:

The presence of hazards in food that could cause injury or death.

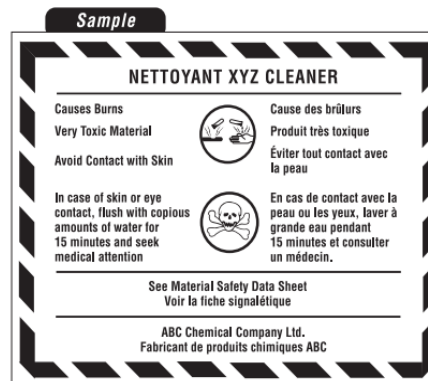


Contamination means there are hazards in the food.

What are some examples of food hazards?



Sample
WHMIS
Label





Physical hazards can be:



- hair



- broken glass or ceramics



- pieces of metal



- parts from equipment



More physical hazards:



- wood



- fruit pits

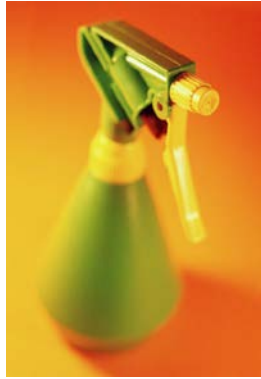


- pieces of packaging



- pebbles

Chemical hazards can be:



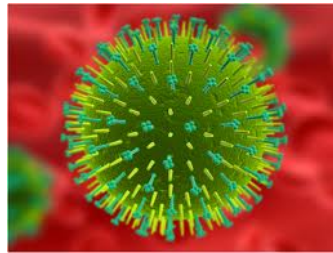
- pesticides
- cleaners and sanitizers



- food additives
- allergens such as nuts, eggs, milk and shellfish

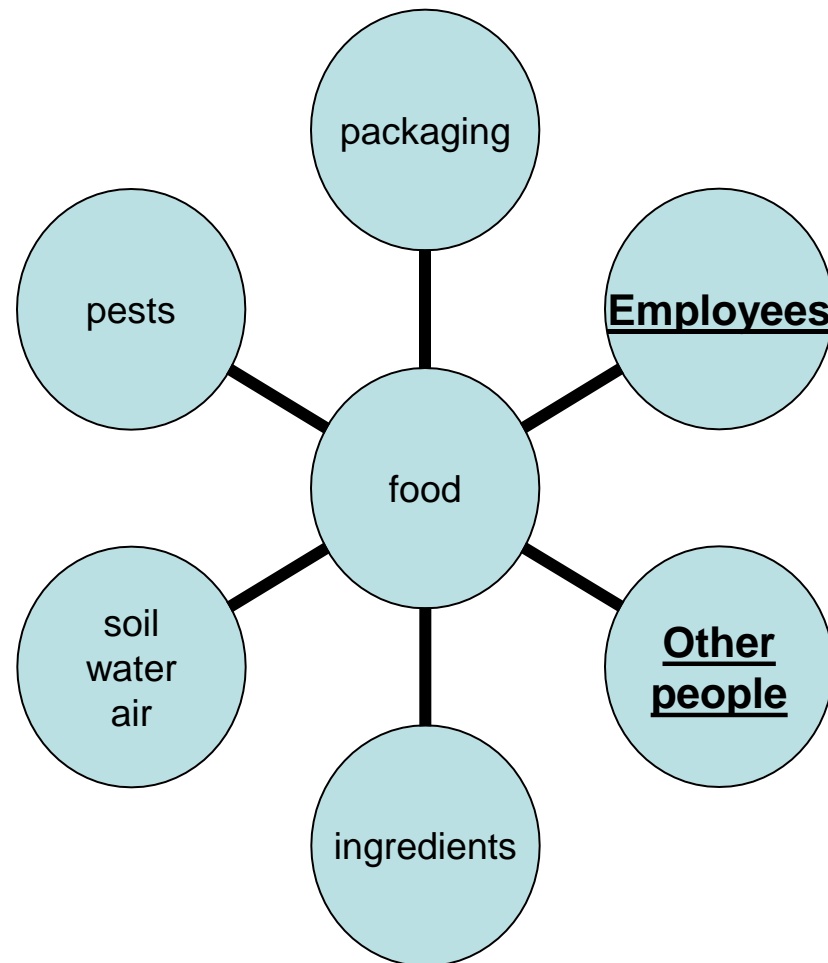


Biological hazards are caused by microbes:



- **bacteria**
- **viruses**
- **parasites**
- **protozoa**
- **yeasts and molds**

Where do biological hazards come from?

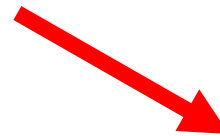


What is cross contamination?



Cross contamination happens when a microbe or allergen from one place gets into something else.

What is the result?



Bacteria are hitchhikers.



Both items are now contaminated.

Where can cross contamination happen?

- food storage
- water
- ingredients with **allergens**
- **reworked product**: using one product to make something else



Other sources of cross contamination are:



- chemicals
- poor cleaning
- poor hand washing
- traffic paths



Salmonella:

a bacteria that can make you very sick



Raw chicken example

14 people got sick after eating lettuce that had **salmonella**.

The lettuce was cross contaminated with raw chicken.





The employee cut raw chicken on a countertop.

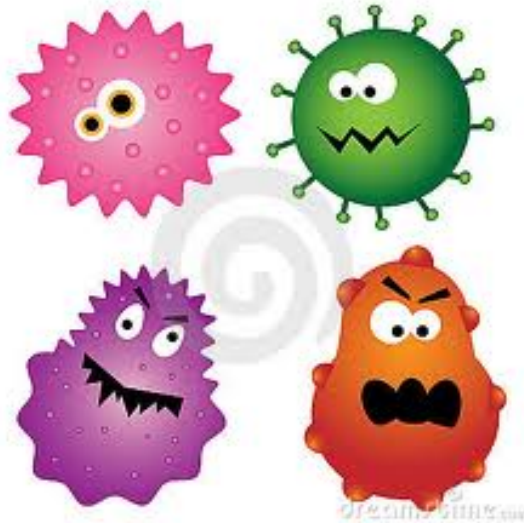


The employee did not wash and sanitize the countertop.



The employee cut lettuce for salad on the same countertop.

Bacteria can grow to large
numbers in food and on
surfaces



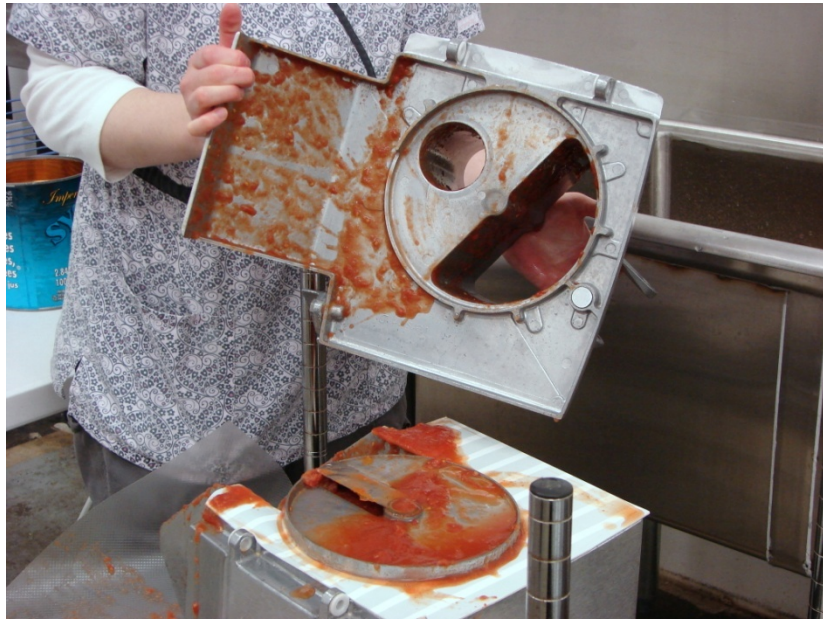
Bacteria needs this to grow:

F ood	energy to grow
A cidity	right ph level
T emperature	right temperature for growth
T ime	to grow
O xygen	to survive
M oisture	to grow

Food

Bacteria find food in:

- the food you are making
- the food left on equipment
- the food left on mops and cloths





Acidity (pH)

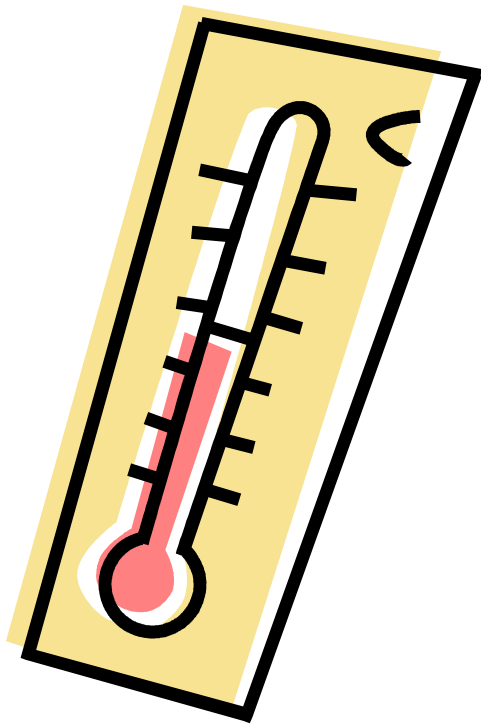
What is acidity?

What kinds of foods are acidic?





Temperature



- controlling temperature is the **easiest way to keep food safe**



It is important to control the time and temperature:



- when you cook food
- when you cool food
- when you process food
- when you store food

Time and temperature

The areas that need to be controlled are:

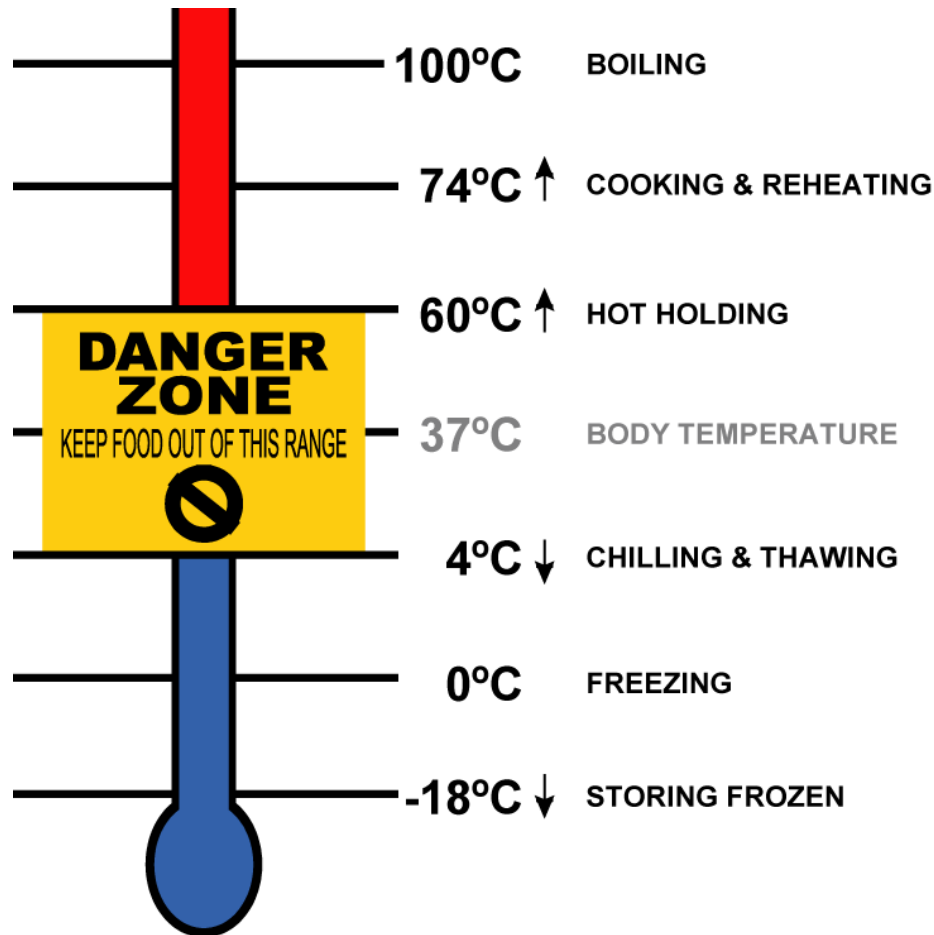


- storage areas
- processing areas
- freezers
- coolers
- trucks



Temperature

Danger Zone





Time

Bacteria growing

0
1 bacterium



20 minutes
2 bacteria



40 minutes
4 bacteria



1 hour
8 bacteria



2 hours
64 bacteria



8 hours 20 minutes
33,554,432 bacteria



Improper time and temperature control

Improper time/temperature control





Oxygen

- Vacuum packing food removes oxygen



Moisture

Bacteria need water to grow:



- moist foods
- wet equipment
- wet cloths
- water puddles

Preventing contamination

Why is it important to store food properly?

Food must be stored properly or it can become contaminated.

Food must be covered to keep out:



- dust and debris
- pests
- chemicals
- microbes





Stock rotation



What is stock rotation?

Why is it important?

Stock rotation is important:


- so you don't run out of products
- prevents food spoilage
- prevents food contamination
- saves money

Stock rotation

- your supervisor will tell you how to rotate stock

stock rotation is also called:

First In, First Out (FIFO)



Tell your supervisor if you see food or packages that are:



- leaking



- torn or broken



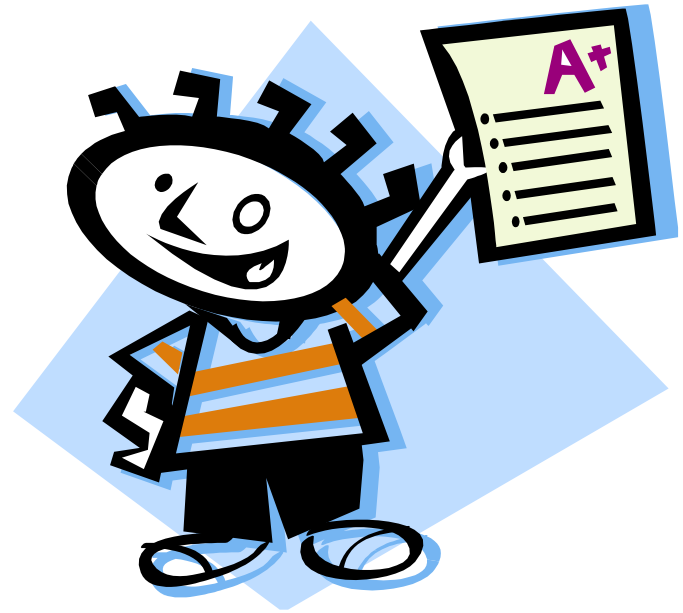
- spoiled



- past expiry date



Review



1. Contamination is the presence of hazards in food that could cause injury or death.

- a) true
- b) false



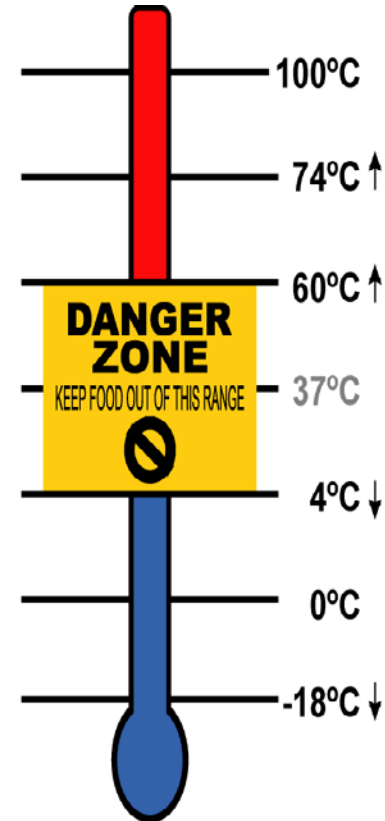
2. The temperature danger zone for food is:

a) $-18^{\circ}\text{C} - 0^{\circ}\text{C}$

b) $0^{\circ}\text{C} - 4^{\circ}\text{C}$

c) $4^{\circ}\text{C} - 63^{\circ}\text{C}$

d) $60^{\circ}\text{C} - 74^{\circ}\text{C}$



3. Which one is an example of a physical hazard?



a) bacteria



b) pieces of metal



c) chemicals



4. The best growing conditions for bacteria is known by which of the following acronyms?

a) FATCAT

Food

b) WHMIS

Acidity

Temperature

c) MSDS

Time

Oxygen

d) FATTOM

Moisture



You did it!



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**Growing Employment
Opportunities**

Vocational Counselors and Educators:

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