

# FOOD SCIENCE & HYGIENE

- Food born illness
  - What is it?
  - What causes it?
  - How can we prevent it?
  
- LET'S SEE...

# Dangers of Foodborne Illness

- A foodborne illness is a disease carried or transmitted to people by food
- Foodborn illness outbreak is defined as:
  - “2 or more people experience the same illness after eating the same food”
- Most common causes are failure to :
  - Cook or Cool, or Hold at the proper temp

# Providing Safe Food

Increased foodborn outbreaks due to:

- The emergence of new foodborne pathogens (Microorganisms)
- Imported Foods
- Composition of food
- Take out meals
- Changing demographics ( Large Numbers)
- Lack of Food Safety Management Systems in small operations



# Cost of Foodborne Illness

The cost to a food establishment can be very large and can include the following:

- A Lawyer
- Court fees
- Testing of food samples
- Bad publicity... loss of customers & sales
- Prestige & Reputation

# The benefits of a FSMS

A Food Safety Management System ensures that you can :

- Offer a defense against a Lawsuit
- Protect your Customers & Staff
- Higher profits & better service
- Better food quality
- Lower food costs due to less waste

# Preventing Foodborne Illness

In order to prevent foodborne illness you should be aware of the 3 ways in which food could effect people

1. ***Biological...*** Bacteria, Viruses, Parasites
2. ***Chemical...*** Cleaning products, polishes
3. ***Physical...*** Pieces of debris



# Training Employees in Food Safety

A manager's responsibility is to ensure that the Food Safety Principles are practiced by everyone.

All Employees must be properly trained :

- Programs for both new and current employees
- Ongoing food safety training for everyone
- Appropriate training materials
- Records documenting employees training

# Food Safety Management System

A ( FSMS ) will help to prevent foodborne illness by controlling hazards throughout the flow of food, and should incorporate the **Hazard Analysis Critical Control Points** ( HACCP ) principles.

## FLOW OF FOOD

*Purchasing, Receiving, Storing, Preparing, Cooking, Holding, Cooling, Reheating, Serving.*



# People at high risk

The demographics of the population in developed countries show an increase in the percentage of people at high risk and they include :

- *Infants and preschool-age children*
- *Pregnant women*
- *Elderly & People taking medication*
- *People with terminal diseases (cancer, HIV)*

# Food most likely to become unsafe

Any food can become contaminated, however there are some foods that are classified as Potentially Hazardous Foods (PHF) and they are:

- Dairy Products.....Milk products, Eggs, etc
- Meat, Poultry, Fish, Shellfish.
- Soy-protein food, Cooked potatoes, Vegetables
- Unwashed raw foods, Fruits etc

# Exceptions

Some exceptions to Potentially Hazardous foods are:

- Air-dried foods
- Low water
- Pickled Foods
- Un-opened containers... cartons, tins, etc  
(Care must be taken once opened)



# How food becomes unsafe

Common factors that are responsible for foodborne illness outbreaks are :

- Purchasing food from unsafe sources
- Failing to cook food adequately
- Holding food at improper temperatures
- Using contaminated equipment
- Poor personal hygiene

# Do your research...

Find an article in a magazine, newspaper, or the internet, that talks about a case of food poisoning in your country

Create a summary of that article including:

1. What, when & where it happened
2. What was the cause
3. How many people got ill
4. What was the result of the outbreak
5. What happened to the establishment