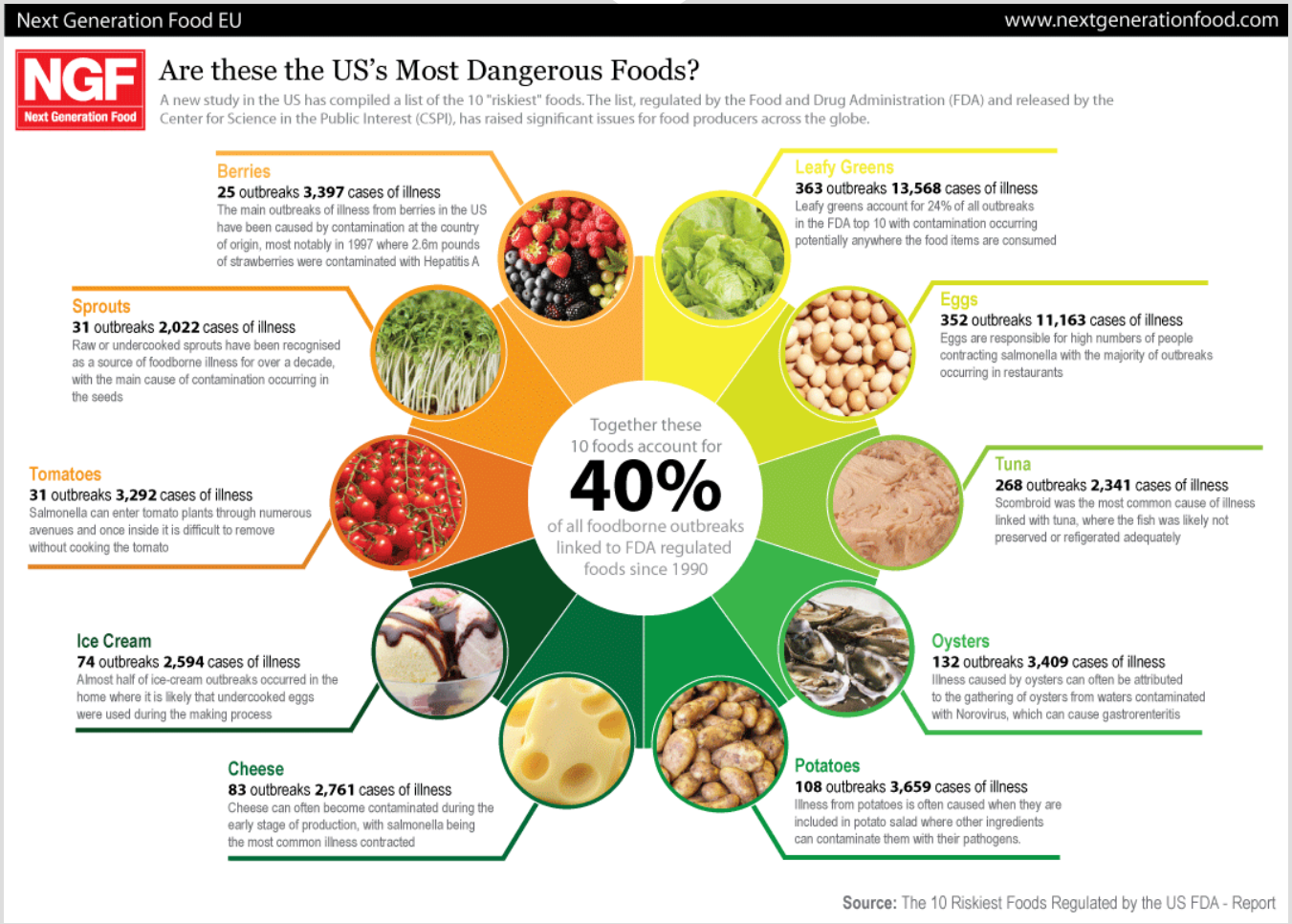
# Employee Food Safety and Sanitation Training

# Dangers in Context



# Why Is Sanitation Important?

- Essential to programs such as HACCP, ServSafe®
- Most cases of foodborne illness are  associated with sanitation problems.
- The complete sanitation process will reduce bacteria and viruses that cause foodborne illness.
- Ensures quality and consistency of food products.
- Controls cross-contamination.

# Results of Poor Sanitation

- Reduced shelf life
- Poor quality product
- Customer illnesses or death
- Medical claims, lawsuits
- Loss of job
- Food recalls
- Fines or other regulatory action
- Bad publicity
- Loss of customers and business

- **It is estimated that there are 76 million cases of foodborne illnesses in the US every year, causing more than 325,000 hospitalizations and 5,000 deaths**

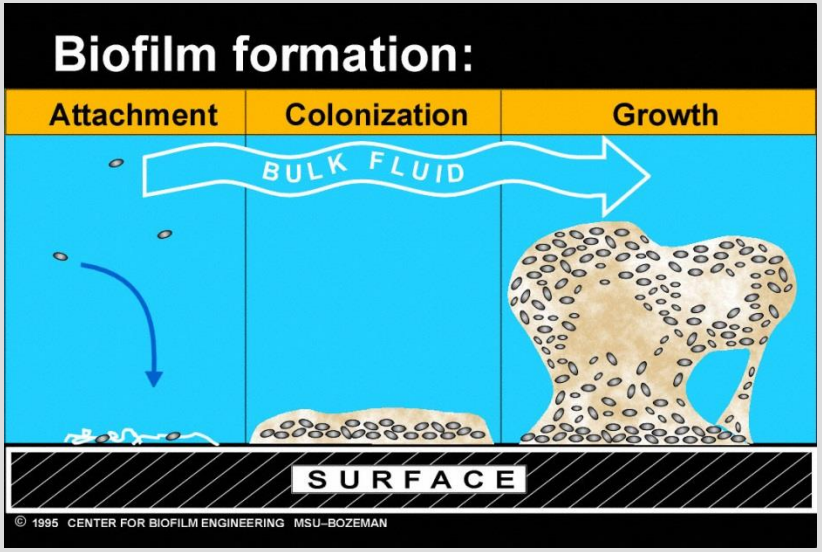
# Allergens

- Big 8 Allergens: Dairy, Eggs, Soy, Wheat, Fish, Shellfish, Tree Nuts, Peanuts cause 90% of all allergic reactions
- Care must be taken to prevent cross-contamination between allergens containing products and other products

Figure 1: The "Big Eight" Allergens: Tree Nuts, Peanuts, Soy, Egg, Milk, Fish, Wheat and Shellfish.

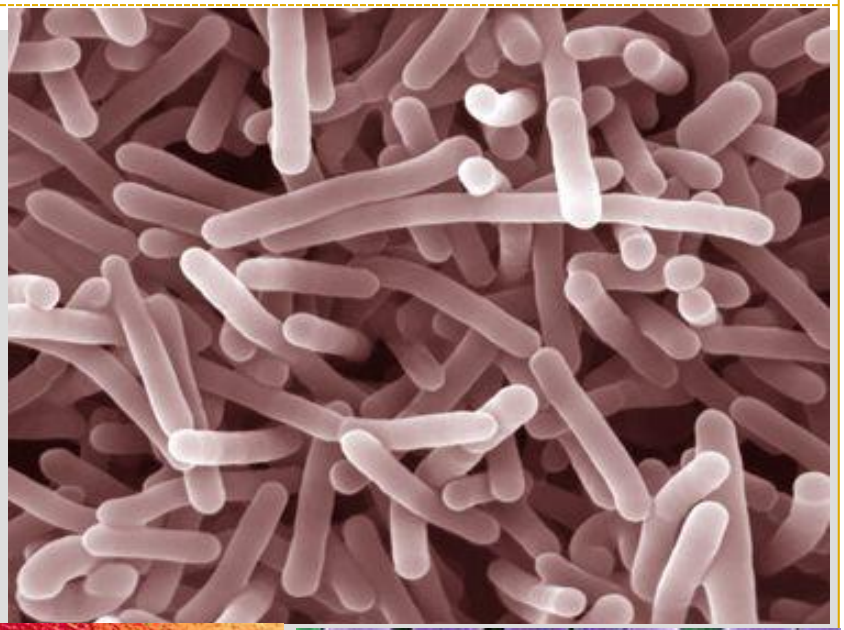
# Biofilms

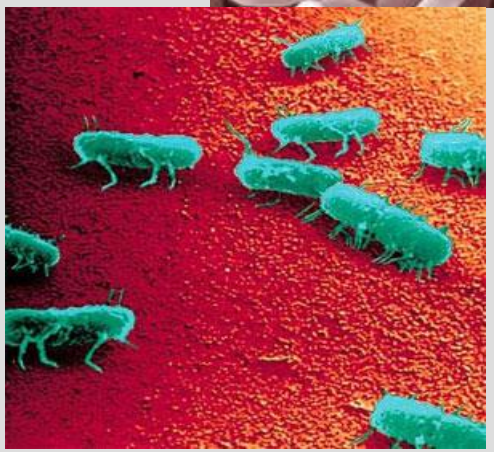
- A hidden sanitation hazard
- Thin, not visible layer of food and bacteria that builds up on a surface
- Are a result of poor cleaning procedures
- Prevent cleaners and sanitizers from effectively reaching all surfaces

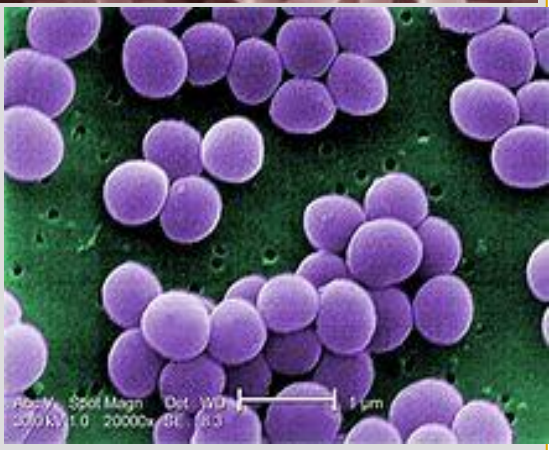


# Common Pathogens

- *Listeria monocytogenes*
- Salmonella
- E. Coli, Shiga Toxin producing
- *Staphylococcus aureus*
- Campylobacter







# Foodborne Illness Risk Factors

1. Improper Holding
2. Poor Personal Hygiene
3. Inadequate Cooking
4. Contaminated Equipment
5. Food from Unsafe Sources

## Key Interventions

1. Demonstration of Knowledge
2. Employee Health
3. Time/Temperature
4. Hands a vehicle of contamination
5. Consumer Advisory

# Cleaning vs. Sanitizing

- **Cleaning**: process that removes visible dirt and prevents accumulation of food residues by using detergent/degreaser and water

- **Sanitizing**: process that reduces disease-causing organisms to safe levels

# What is Good Sanitation?

- Process of creating conditions that promote safe handling of food
- Covers many aspects of an operation
  - Employee practices, maintenance of the facilities, cleaning procedures, storage, etc.
- Divided into 2 components:
  - Good Retail Practices/Good Manufacturing Practices
  - Sanitation Standard Operating Procedures

# Good Retail Practices (GRPs)/ Good Manufacturing Practices (GMPs)

- Basic requirements to ensure production of wholesome food including employee practices, buildings/facilities, equipment/utensils, and production/process controls.
- Protect against product adulteration
- Ensure products have been prepared, packaged, and held under sanitary conditions so they do not become contaminated

# Pre-Requisite Programs

- Good Manufacturing Procedures (GMPs)/Good Retail Practices (GRPs)
  - Employee practices
  - Buildings and facilities
  - Equipment and utensils
  - Production and Process controls

# Good Retail Practices of Importance

- Food contact surfaces sanitized prior to use and every 4 hours after that
- Allergen containing products get special care
  - Nuts packed in a separate location using new gloves and different uniform
- No jewelry is to be worn in the Caves, No hand jewelry is to be worn behind the counter
- Chemical Safety
  - DO NOT MIX CHEMICALS

# Sanitation Standard Operating Procedures (SSOPs)

- The specific steps taken to perform sanitation tasks including the details of your sanitation procedures and frequency.
- Help ensure good sanitation results
- Assist with consistency
- Make training easier
- Assist with quality

# SSOP's

- Sanitation Standard Operating Procedures (SSOPs)
  - Quality and Consistency
  - Sanitation Tasks
  - Cleaning and sanitizing is a 5-steps process:
    1. Pre-cleaning
    2. Washing
    3. Rinsing
    4. Sanitizing
    5. Air Drying

# Examples of SSOPs

- First-in First-out Rotation
- Uniform Laundering
- Hand Washing & Sanitizing
- Bare Hand Contact
- Cheese Cutting & Wrapping (retail)
- Slicing Cured Meats
- Packaging Allergen Containing Products
- Consumer Complaint Logs
- Storage of Chemicals
- Employee Health
- Counter Sanitation Program
- Retail Scales & Slicers Sanitation Program
- Receiving & Unpacking Product Protocol
- Facilities Cleaning Protocol

# What is HACCP?

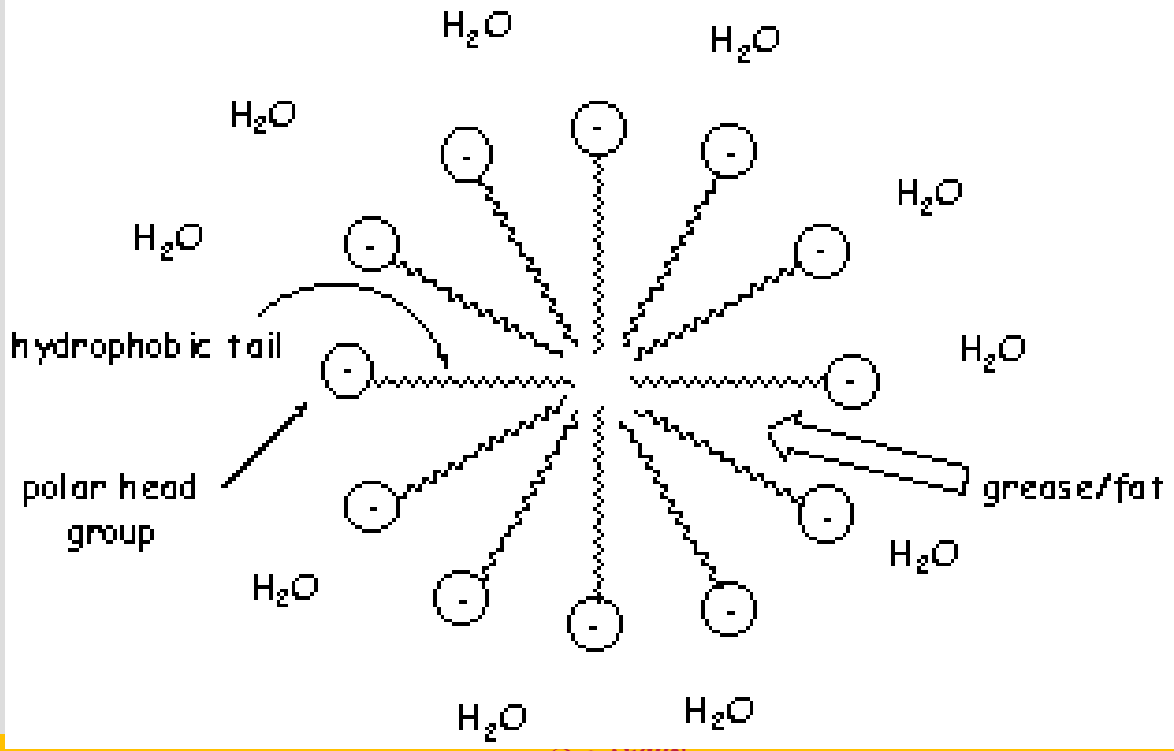

- Hazard Analysis and Critical Control Points
- Assessment of food safety through analysis and control of biological, chemical, and physical hazards
- **Prevention** of hazards rather than reaction to problems
- Focuses only on health safety issues, not quality

# First-In-First-Out

- Way of controlling inventory items that have expiration dates so no product is left to waste
- Oldest product towards front of rotation (pulled first)
- Newest product towards back of rotation (pulled last)
- Products can be moved to front of rotation as dictated by manager if they are in danger of perishing

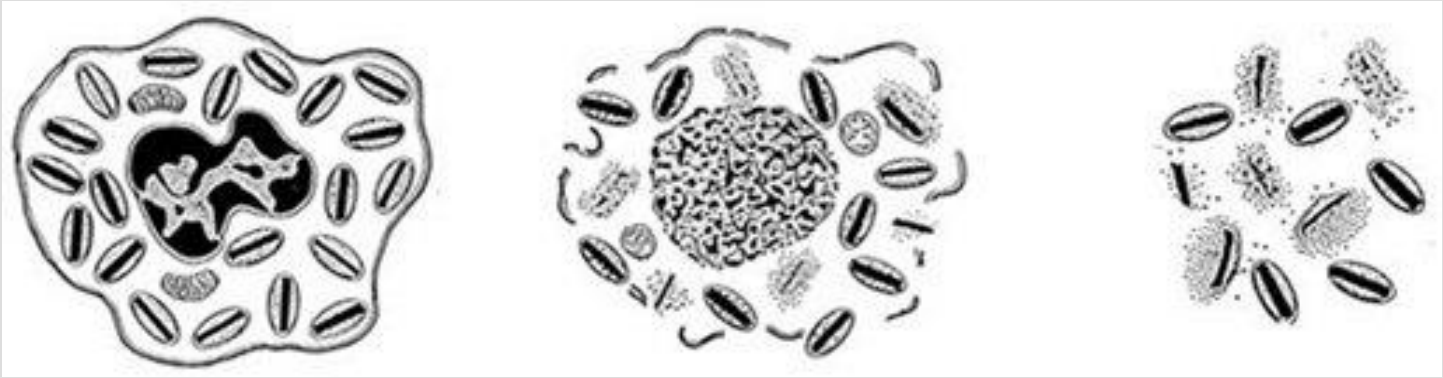
# How degreaser works

- Soap is an emulsifier
- Oil/grease (nonpolar compounds) are insoluble in water
- Nonpolar “tails” break up oil/grease molecules
- Oil/grease is caught inside the micelle and is rinsed away



# How sanitizer works

- Quat-based sanitizers carry a positive charge
- Bacteria, viruses and fungi carry a negative charge
- When applied, the charge distribution of the microbial cell changes from negative to positive
- Disruption of microbe cell wall leads to death



# Using Cleaning Agents

| CHEMICAL | CONCENTRATION | CONTACT TIME | ADVANTAGE | DISADVANTAGE |
|---|---|---|---|---|
| Chlorine | 50 ppm in water between 75 and 100ºF | 7 seconds | Effective on a wide variety of bacteria; highly effective; not affected by hard water; generally inexpensive | Corrosive, irritating to the skin, effectiveness decreases with increasing pH of solution; deteriorates during storage and when exposed to light; dissipates rapidly; loses activity in the presence of organic matter |
| Iodine | 12.5-25 ppm in water that is at least 75ºF | 30 seconds | Forms brown color that indicates strength; not affected by hard water; less irritating to the skin than is chlorine; and activity not lost rapidly in the presence of organic matter. | Effectiveness decreases greatly with an increase in pH (most active at pH 3.0; very low acting at pH 7.0); should not be used in water that is at 120oF or hotter; and might discolor equipment and surfaces. |
| Quaternary Ammonium Compounds | U to 200 ppm in water that is at least 75ºF | 30 seconds to several minutes | Nontoxic, odorless, colorless, noncorrosive, nonirritating; stable to heat and relatively stable in the presence of organic matter; active over a wide pH range | Slow destruction of some microorganisms; not compatible with some detergents and hard water |
| Acid Sanitizer | 1 oz in 10 gallons | 2 minutes | Effective in presence of organic matter. Leaves surface in an acid state, thus residual sanitizing effect. | Expensive, moderately corrosive (metal) |

# Importance of Monitoring

- Critical in identifying sanitation failures
- Provides documentation for verification
- Employees responsible for monitoring must be properly trained so that they  fully understand the purpose and importance of monitoring, and be accurate and unbiased when taking measurements.
- If monitoring indicates that there is a trend toward loss of control, then action can be taken to bring the process into control before a deviation from a critical limit occurs.