

Cross Out Cross Contamination



Jeannie Sneed, PhD, RD, SFNS
Catherine Strohbehn, PhD, RD, CFSP

Impact of Employee Training on Mitigating Contamination in Retail Foodservice Operations



Project funded by the United States
Department of Agriculture
Cooperative State Research, Education,
and Extension Service
Project Number 2005-51110-03282

Today's Objectives

1. Identify common sources of cross contamination based on research in schools.
2. Develop strategies to eliminate cross contamination in schools.
3. Develop action plans to minimize cross contamination in support of school food safety plans.

What is cross contamination?

- Transfer of harmful bacteria and viruses from a contaminated surface to another surface
- Types of cross contamination
 - Hand-to-food
 - Food-to-food
 - Equipment/food contact surface-to-food
 - Chemicals-to-food

Sources of Cross Contamination

- **People**
 - Unwashed hands
- **Work surfaces**
 - Dirty cutting boards
 - Counters
- **Equipment**
 - Refrigerator handles
 - Knives
- **Cleaning cloths**
- **Other food**
 - Raw to ready-to-eat foods
 - Unwashed produce

Cross Contamination

Could it happen here?

The GloGerm™ powder reveals what's happening.



<http://www.glogerm.com/>
<http://www.glitterbug.com/>

Real Life Scenarios

What could go wrong?

What could go wrong?



Box to Counter Contamination



What could go wrong?



Handle to Gloved Hand



What could go wrong?



Gloved Hand to Cutting Board



Cutting Board to Celery



Have you seen this?



- What needs to happen to make sure cross contamination is not occurring?



It is important to wash them before you glove them.



If you don't wash before putting on gloves.....



Crossing Out Cross Contamination

How can that be achieved?



Research on Cross Contamination in Foodservice Operations

40 schools observed in one study; 40 assisted living facilities observed in one study; 16 foodservice operations observed in one study



Causes of Cross Contamination

- Packages on counter tops
- Handling refrigerator and freezer handles
- Multiple items prepared on same cutting board
- Hands not washed before donning gloves
- Work surfaces not sanitized
- Handwashing not done between handling dirty and clean dishes
- Sanitizing solutions not at correct concentration
- Final rinse temperature not met

Prevention – it is important to establish standard operating procedures (SOPs) that focus on these areas.

- Personal Hygiene
- Receiving
- Storing food and chemicals
- Preparing
- Equipment and Utensil Use
- Cleaning and sanitizing

Prevention

- Personal Hygiene
 - Maintain good personal hygiene at all times.
 - Thoroughly wash hands when changing tasks.
 - Use gloves properly.
 - Avoid using cloths or clothing to wipe hands or wipe around dished food.
 - Use proper tasting procedures.

Prevention

- Receiving
 - Raw and cooked/ready-to-eat foods must be kept separate during delivery



Prevention

- Storing Food
 - Use separate refrigerators for raw meat and cooked/ready-to-eat foods when possible. Where not possible, store raw meat in bottom of a shared refrigerator below the cooked/ready-to-eat foods.
 - Wrap foods well
 - Keep food at least 6" off the floor
 - Avoid stacking items
 - Limit access to storage areas

Prevention

Order of Refrigerator Storage – top to bottom
Based on the required minimum internal cooling temperature of each food.

- Top

Cooked and ready-to-eat food
Whole fish--145 F
Whole meat--145 F
Ground beef--155 F
Poultry--165 F

- Bottom

Prevention

- Storing Chemicals
 - Store in separate locked storage area when possible. If not, separate from food.
 - Limit access to chemicals.
 - Store chemicals in original containers.
 - Maintain inventory of chemicals.

Prevention

- Preparing
 - Raw meat, which is being defrosted, should be stored on the bottom shelf of the refrigerator in a tray/bowl that will catch any "drips" as the food is defrosting.
 - All foods in the process of being cooled should be kept separate from raw meat.
 - Clean and sanitize work areas and food contact surfaces frequently.



Prevention

- Preparing, continued
 - Avoid placing boxes on counter tops.
 - Sanitize handles routinely.
 - Clean and sanitize cutting boards between uses.
 - Sanitize utensils between uses. If students do self service, change utensils often.
 - Change gloves frequently.
 - Wash hands as required in *Food Code*.
 - Use only single use towels.
 - Cover foods put into storage.
 - Avoid eating in work station.

Prevention

- Equipment
 - Designated equipment should be used for raw and cooked/ready-to-eat foods. If not possible, SOPs should state cleaning and sanitizing equipment between uses.



Prevention

- Equipment, continued
 - Probe thermometers should be thoroughly cleaned and sanitized between uses. If possible use separate thermometers for raw and ready-to-eat products. Use of infrared thermometers can reduce the risk of cross contamination.



Prevention

- Equipment, continued
 - When cleaning, it is recommended that high risk areas are cleaned before low risk, especially when the same cleaning equipment is being used.
 - To prevent cross contamination, employees must use each sink in an establishment for its intended purpose.
 - Do not reuse foil, cling film or plastic bags.

Prevention

- Utensils
 - Designated utensils should be used for the handling of raw meat and separate utensils used for cooked/ready-to-eat foods.
 - Reduce the handling of ready-to-eat food. This may be achieved in various ways such as the use of dedicated tongs and serving spoons.



Prevention

- Cleaning and Sanitizing
 - Use designated cleaning and sanitizing buckets
 - Check chemical concentration of sanitizing solutions frequently
 - Change sanitizing solutions often
 - Check temperatures or sanitizing solution concentrations for dishmachines

Taking Action

Action Plan

- Develop Standard Operating Procedures (SOP) that address cross contamination
 - Integrate into each SOP
 - Develop SOP to address cross contamination issues
- Train staff
- Monitor
- Document
- Take corrective actions

Cross Contamination Prevention SOP

- Describe
 - Control Measures and Critical Limits
 - Monitoring including frequency

Cross Contamination Prevention SOP

Areas to Include

Personal Hygiene	Washing produce
Receiving	Use of Tongs, Serving Spoons & Gloves
Storing	Equipment
Refrigeration	Utensils
Frozen	Work surfaces
Ambient	Sinks
Chemicals	Cleaning cloths/equipment
Defrosting Raw Meat	Cutting boards
Food Preparation	Thermometers
Cooling of Foods	Allergy Awareness

Training Tools

- Slides using GloGerm™ powder or demonstrate it in your operation.
- *Why Don't We Do It In Our Sleeves?* - DVD
- SpotCheck™
- *Handwashing for Life* – DVD
- NFSMI *It's In Your Hands*



Why Don't We Do It In Our Sleeves?

5 minutes long

<http://www.coughsafe.com/media.html>

SpotCheck™



<https://www.weberscientific.com/>

Training

- **SpotCheck™ can tell you in 60 seconds if the surface has food residue left on it.**
 - SPOTCHECK™ Detects residue of virtually any food or drink
 - Glucose residue device
 - Glucose/lactose device, for dairy products
 - Pro-Clean™ Rapid Protein Food Residue Test
 - Cost approx. \$135/case of 100. Expiration dated and best if stored refrigerated.

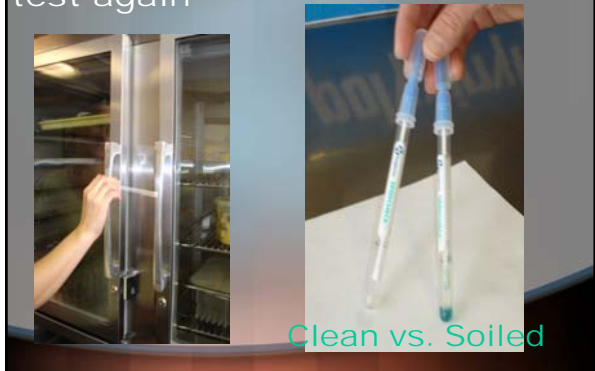
SpotCheck™ Swab Test – Glucose Check



Surface was not clean



Clean and sanitized surface – test again



Cross Out Cross Contamination

Jeannie Sneed, PhD, RD, SNS, CFSP
Catherine Strohhenn, PhD, RD, CFSP

For additional information, contact:

