Title: Cross Contamination and Internal Temperatures

Date: 9/23/2010

Goals:

1. Increase employee awareness on cross-contamination
2. Help employees acknowledge requirements for minimum internal temperatures

Objectives:

1. Reinforce proper food handling to prevent cross contamination
2. Test employee knowledge on correct minimum internal temperatures

Audio-Visual Aids:

1. Audio cross contamination scenarios
2. Worksheet with internal temperatures to be filled in

Outline:

I. Introduction
   a. Who we are and what are our goals

II. Cross Contamination
   a. Read 4 different examples of cross-contamination scenarios and have employees identify what is incorrect. Depending on number of attendees, we will form groups. Go over the correct answer at the end of each reading.
      i. Lead cook prepares for lunch the next day, slicing ham and turkey on the slicer. After she is finished, she wraps the meat in individual containers, dates it, and puts in the walk-in. Salad prep cook comes in after cook leaves and starts by washing all vegetables. She then begins slicing tomatoes and cucumbers on the slicer. What is wrong with this situation? Cross contamination of the slicer, switching from lunch meat to vegetables without being cleaned.
ii. Homemade chicken fingers are on the menu for dinner and the cook prepares them by breading individual strips of chicken in Panko bread crumbs. He then places them in the oil and fries until golden brown. The Chef then goes to prepare the fries and fries them in the same oil used for the chicken fingers. What is wrong with this situation?

   1. Gluten in the bread crumbs could affect the french fries and cause an allergy for people on a gluten-free diet.

iii. The Tailgate event is going on Potomac Café and there is an all you can eat buffet. A customer comes through the line and gets a plate of salad, 10 minutes later the same resident comes back up for seconds with the same plate in his hand. He starts helping himself to another serving of salad, before joining his friends at lunch. What is wrong with this situation?

   1. Customers should not return to the salad bar with a dirty plate. A clean plate should always be used each time you return to the salad bar.

iv. The prep cook just finished preparing the items for the salad bar. She has wrapped all of the containers with plastic wrap and transports them to the walk-in refrigerator. She places the containers of sliced cucumbers on the shelf below the turkey that is going to be prepared for tonight’s dinner after realizing there was no space on the vegetable rack. What is wrong with this situation?

   1. Ready to eat vegetables should not be placed below raw poultry in the refrigerator. Foods should be stored in the following order from top to bottom in the refrigerator: Fruits and vegetables, whole fish, whole cuts of beef and pork, ground meats and fish, and whole and ground poultry.

III. Internal Temperatures

   a. Brief overview of why cooking to proper internal temperatures is important.

   i. If raw meats have been mishandled (left in the "Danger Zone" too long), bacteria may grow and produce toxins which can cause foodborne illness. Those toxins that are heat resistant are not destroyed by cooking. Therefore, even though cooked, meat and poultry mishandled in the raw state may not be safe to eat even after proper preparation.
ii. *Salmonella* can be found in raw or undercooked meats and eggs, unpasteurized milk and cheese products. *Salmonella* are destroyed at cooking temperatures above 150°F.

iii. Clostridium perfringens food poisoning results from eating food or meat contaminated by the bacterium Clostridium perfringens. Once in the small intestine, the bacterium releases a toxin that often causes diarrhea. *C. perfringens* can exist as a heat-resistant spore, so it may survive cooking and grow to large numbers if the cooked food is held between 40°F and 140°F, so food needs to be cooked and held higher than 140°F. Food should be reheated to 165°F prior to serving.

iv. *Listeria* is recognized as an important food-borne pathogen. It has the ability to grow at refrigeration temperatures. It is capable of doubling in numbers every 1.5 days at 39.5 degrees F. Since high heat, greater than 170 degrees F, will inactivate the Listeria organisms, post-process contamination from environmental sources then becomes a critical control point for many foods. Since *Listeria* will grow slowly at refrigeration temperatures, product rotation becomes even more important.

b. Have employees participate in internal temperature trivia. The employees will fill in a worksheet with the internal temperature foods have to be cooked to.

c. Foods:

   i. Beef steak - 145°F for 15 seconds
   
   ii. Duck – 165°F for 15 seconds
   
   iii. Hamburger patties – 155°F for 15 seconds
   
   iv. Fish – 145°F for 15 seconds
   
   v. Eggs – 145°F for 15 seconds
   
   vi. Leg of lamb - 145°F for 4 minutes
   
   vii. Injected Roast – 155°F for 15 seconds
   
   viii. Stuffing – 165°F for 15 seconds
   
   ix. Turkey chili – 165°F for 15 seconds