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FSM 120 L
Lesson Content Outline

Fire Extinguishers and Use

3 Behavioral Learning Objectives:

1. Food service workers will be knowledgeable in proper fire extinguisher types by correctly matching each type with their specific task and class of fire.
2. Food service workers will demonstrate knowledge of how to properly extinguish a fire.
3. Food service workers will demonstrate basic steps on what to do when there is a fire.

Supply List:

- Activity handout (30 copies)
- Fire extinguisher (maybe)

Fire Prevention in the Kitchen:

- Install an automatic fire-suppression system in the kitchen
- Keep portable fire extinguishers as a backup
- Schedule regular maintenance on electrical equipment,
- Have your exhaust system inspected for grease buildup
- Never throw water on grease fires
- Properly train staff to know what to do

How to Properly use a Fire Extinguisher:
P- Pull the Pin
A- Aim at the base of fire
S- Squeeze the handle
S- Sweep side to side

[interactive activity]

Types of Fire Extinguishers:

<u>Water - Air-pressurized Water Extinguishers (APW)</u>

- APWs are commonly used to extinguish type A fires. It usually looks like a big silver container. Two-thirds of the container is filled with water, while rest of the space is pressurized with air. Sometimes, detergent is added to the water to produce foam. The container is about two to three feet tall and weigh about 25 pounds.
- APWs remove the “heat” from the surface of the fuel to extinguish fire
- APWs are designed for Class A (wood, paper, cloth, rubber, and certain plastics) fires only.
- Never use water to extinguish an electrical fire. Water can conduct electricity which may lead to electrocution. Unplug electricity equipment before using the water extinguisher.

<u>CO2 or Dry Chemical - Carbon Dioxide Extinguishers</u>

- Carbon Dioxide (CO2) is filled in this type of extinguisher. Carbon Dioxide (CO2) is a non-flammable gas under extreme pressure. These extinguishers displace oxygen with

Carbon Dioxide to distinguish fire. Because of its high pressure, sometimes CO2 will become dry ice and shoot out of the extinguisher, which also has the cooling down effect
- CO2 extinguisher is used to extinguish Class B and C (flammable liquid and electrical) fires only.
- CO2 is not the best option for Class A fires (paper, cardboard, plastics) because after CO2 is gone, they may continue smolder and re-ignite again under the exposure to oxygen.
- Never use CO2 extinguisher in confined space when people don't have a respiratory equipment.

Multi-purpose - Dry Chemical Extinguishers
- Dry chemical extinguishers put out fires by coating the fuel with a thin layer of fire retardant powder, separating the fuel from the oxygen. The powder also works to interrupt the chemical reaction, which makes these extinguishers extremely effective.
- Dry chemical extinguishers work for B and C fires and may be marked multiple purpose for use in A, B, and C fires.
- ABC fire extinguishers are red in color, and range in size from five pounds to 20 pounds- these are what you would normally see in commercial buildings.
- Locations: These extinguishers will be found in a variety of locations including: public hallways, laboratories, mechanical rooms, break rooms, chemical storage areas, offices, commercial vehicles, and other areas with flammable liquids.

Class K - Dry and Wet Chemical Extinguishers for Kitchen Fires
- Vegetable oils cook at really high temperatures, therefore they need their own special fire extinguisher.
- Class K extinguishers are now required to be installed in all applicable restaurant kitchens. Once a fire starts in a deep fryer, it cannot always be extinguished by traditional range hoods or Class B extinguishers.
- Never use a Class A extinguisher containing water or CO2 on a deep fat fryer fire. An explosive type reaction may result.
- Class K fire extinguishers are only intended to be used after the activation of a built-in hood suppression system. If no commercial cooking system hood and fire suppression system exists, Class K extinguishers are not required.
- Class K extinguishers should only be used after electrical kitchen appliances have been shut off.
- Locations: These extinguishers will be found in commercial cooking operations such as restaurants, cafeterias, and other locations where food would be served.

Types of Fires
Class A: ordinary combustibles such as wood, paper, cloth, trash, and plastics.
Class B: flammable liquids such as gasoline, petroleum oil and paint. Class B fires also include flammable gases such as propane and butane. Class B fires do not include fires involving cooking oils and grease.
Class C: energized electrical equipment such as motors, transformers, and appliances. Remove the power and the Class C fire becomes one of the other classes of fire.
Class D: combustible metals such as potassium, sodium, aluminum, and magnesium.
Class K: Kitchen fires that involve cooking oils, trans-fats, or fats in cooking appliances and are typically found in restaurant and cafeteria kitchens

[interactive activity- foodservice workers will participate in a matching activity (fire extinguisher types to classes of fire)]

Reference List:

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