



**Fire Safety  
&  
Evacuation Planning**

# *Topics*

- *Fire in the United States*
- *Where Fires Occur*
- *Causes of Fires and Fire Death*
- *Who is Most at Risk?*
- *Fire Safety - Off-the-Job*
- *Fire Safety - On-the-Job*
- *Evacuation Planning - Off-the-Job*
- *Evacuation Planning - On-the-Job*

# *Fire in the United States*

- The U.S. has one of the highest fire death rates in the industrialized world. For 1997, the U.S. fire death rate was 15.2 deaths per million population.
- Between 1993 and 1997, an average of 4,500 Americans lost their lives and another 26,500 were injured annually as the result of fire.
- Fire is the third leading cause of accidental death in the home; at least 80 percent of all fire deaths occur in residences.
- Direct property loss due to fires is estimated at \$8.5 billion annually.

# *Where Fires Occur*

- **1,795,000 fires in the United States in 1997. Of these:**
  - 40% were Outside Fires
  - 31% were Structure Fires
  - 22% were Vehicle Fires
  - 7 % were fires of other types
- **Fires in the home most often start in the:**
  - Kitchen 29%
  - Bedroom 13%
  - Living Room 7%
  - Chimney 5%
  - Laundry Area 4%

# *Causes of Fires and Fire Death*

- **Cooking** is the leading cause of home fires & injuries in the U.S. Cooking fires often result from unattended cooking and human error, rather than mechanical failure of stoves or ovens.
- **Careless smoking** is the leading cause of fire deaths. Smoke alarms and smolder-resistant bedding and upholstered furniture are significant fire deterrents.
- **Heating** is the second leading cause of residential fires and ties with arson as the second leading cause of fire deaths. However, heating fires are a larger problem in single family homes than in apartments. Unlike apartments, the heating systems in single family homes are often not professionally maintained.
- **Arson** is the third leading cause of residential fires and the second leading cause of residential fire deaths. In commercial properties, arson is the major cause of deaths, injuries, and dollar loss.

# *Who is Most at Risk?*

- Senior citizens and children under the age of five have the greatest risk of fire death.
- The fire death risk among seniors is more than double the average population.
- The fire death risk for children under age five is nearly double the risk of the average population.
- Children under the age of ten accounted for an estimated 18 percent of all fire deaths in 1995.
- Over 30 percent of the fires that kill young children are started by children playing with fire.
- Men die or are injured in fires twice as often as women.

# *Fire Safety - Off-the-Job*

- Do not trap electrical cords next to the wall where heat can build up.
- Take extra care when using portable heaters. Keep combustible items at least 3 feet away.
- Only use lab-approved (UL) electric blankets & warmers.
- Replace mattresses made before the 1973 Mattress Flammability Standard. Newer mattresses are safer!
- Check your smoke detectors routinely and change batteries, at a minimum annually. Replace if > 10 years old.
- Never Smoke in Bed!

# *Fire Safety - On-the-Job*

- Keep flammables away from ignition sources
- Utilize flammable storage cabinets
- Know your chemical properties (check the MSDS for flammable/combustible information)
- Do not block fire extinguishers with equipment
- Utilize those with electrical expertise/installations/assistance
- Do not overload outlets - use a track plug
- Practice good housekeeping techniques in the lab/office/work area
- Inspect wires for possible damage and replace as needed

# *Evacuation Planning - Off-the-Job*

- Make sure everyone in your family knows and practices escape routes from every room in your home.
- Remember to escape first, know how to notify the fire department, and when to call for help.
- Never open doors that are hot to the touch.
- Teach your family to stop, drop to the ground and roll if their clothes catch fire.
- Designate a meeting place outside. Try to make it a location away from your home, but not necessarily across the street.
- Teach your family to never re-enter a burning building.

# *Evacuation Planning - On-the-Job*

- Know the way out from your work area.
- Know the location of the closest manual fire alarm station.
- Know the location of the closest fire extinguisher.
- In the event of a fire in a lab or work area dial the emergency number, evacuate the location or pull the manual fire alarm station.
- Review the location of the meeting place for the group in the event of a building evacuation.
- Utilize a check sheet to ensure everyone is accounted for. This re-emphasizes the importance of communication between team members.