

MAJOR PROGRAM POINTS

"FIRE PREVENTION AND SAFETY IN THE OFFICE"

Part of the "GENERAL SAFETY SERIES"

Quality Safety and Health Products, for Today...and Tomorrow

Outline of Major Points Covered in the "Fire Prevention in the Office" Course

The following outline summarizes the major points of information presented in the course on "Fire Prevention in the Office". The outline can be used to survey the course before taking it on a computer, as well as to review the course when a computer is not available.

- **Throughout history, fire has been a devastating destroyer.**
 - In 1835, a fire in New York City destroyed 530 buildings.
 - 36 years later, a city-wide fire engulfed Boston, MA, annihilating 800 buildings.
 - In 1871, the great Chicago fire consumed 17,450 buildings.
- **The wooden structures of the 19th century allowed fires to spread quickly.**
 - Firefighters of the day could do nothing to stop them.
- **Today there a number of things that make our workplaces much safer:**
 - Fire-resistant materials.
 - Smoke detectors.
 - Sprinkler systems.
- **In spite of these advances, devastating industrial fires still occur all too often.**
 - When a blaze consumes chemicals, plastics and other modern day substances, it can create toxic infernos that spread quickly and kill instantly.
- **The best way to "fight" a fire is to prevent it.**
 - First you need to know what causes things to burn.
- **All fires involve three elements:**
 - Heat.
 - Fuel.
 - Oxygen.

- **Removing any of the three elements will stop a fire.**
- **Fires start with heat, which serves as a source of ignition. Heat can be generated by many things, including:**
 - Open flames.
 - Faulty electrical circuits.
 - Overheated equipment.
 - Unshielded hot surfaces.
- **Once a fire is burning, it produces more heat, which helps it to grow even larger.**
 - As long as there is enough fuel and oxygen, a fire will continue to spread.
- **Fuel can include:**
 - Combustible solids like paper, wood and some metals.
 - Flammable liquids.
 - Ignitable gases.
- **The vapors coming off a flammable or combustible material, mixed with oxygen in the air, produce flames.**
 - Some materials are always giving off flammable vapors.
 - Other materials have to be heated to produce these vapors.
- **For example, you have to apply heat to get a log to burn.**
 - The heat from the flames causes the wood to decompose, creating ash and flammable vapors.
 - These vapors mixed with oxygen in the air to produce more flames.
- **The more oxygen there is available to the fire, the greater the amount of fuel that will burn.**
 - This is why "fanning" a fire causes it to get hotter.
- **As a fire grows, it begins to draw in oxygen from the surrounding area, causing even more fuel to burn.**
 - As a result, a fire can quickly get out of control, engulfing everything in its path.

- **To extinguish a fire this pattern must be broken.**
 - Fires are usually put out by applying substances that either remove the heat or the oxygen.

- **What fuels a fire determines what type of extinguishing agents can be used.**
 - This is critical, because applying the wrong material will make things worse.

- **For instance, water:**
 - Will extinguish smoldering paper and wood.
 - Can cause burning liquids to spread.
 - Conducts electricity, so it can not be used where it would come into contact with live wires or electrical equipment.

- **To identify the different types of burning materials, and indicate what substances can be used to extinguish them, fires are separated into four classes.**
 - Class A.
 - Class B.
 - Class C.
 - Class D.

- **Class "A" fires involve everyday combustibles, such as paper and wood.**
 - These are often put out with water, which cools the burning materials.

- **Class "B" fires are fueled by flammable gases and liquids, such as oil, propane and toluene.**
 - Some cleaning supplies and items made of plastic are considered Class B materials.
 - Class B fires are usually extinguished by applying chemical foams that blanket the area and cut off the fire's oxygen supply.

- **Class "C" fires are electrical and can involve things like office machines and lighting fixtures.**
 - These are also fought by smothering the fire.
 - But to prevent electrocution, Class C extinguishing agents are "nonconductive."
- **Class "D" fires are fueled by combustible metals such as potassium, sodium and magnesium.**
 - You will probably never encounter a Class D fire, but if you do, don't attempt to put it out.
- **To slow the growth of a fire, the first line of defense is usually a sprinkler system.**
 - There are different types of sprinkler systems, but the ones used in most offices quench Class A fires with a deluge of water.
 - Contrary to popular belief, sprinklers are not activated when a fire alarm goes off.
 - It is the heat from a fire that releases the valve on most sprinkler heads.
- **Sprinkler systems are not designed to put fires out.**
 - They beat down the flames and help keep them from spreading.
 - This allows people to evacuate and gives fire departments a fighting chance to save a building.
- **Employees who are trained to deal with fires are the next line of defense.**
 - All office buildings must have fire extinguishers, and it's a good idea to know how to use them.
- **There are many types of extinguishers. They discharge a range of materials, including:**
 - Water.
 - Carbon dioxide.
 - Dry chemicals.
- **Before using an extinguisher, make sure that it is compatible with the class of fire you are fighting.**
 - If the extinguisher's label doesn't indicate that it is rated for that class of fire, don't use it.

- **You often see fire extinguishers that are marked "A, B and C" on their label.**
 - This means that they can be used to extinguish all of these types of fires.
- **To put a fire out with an extinguisher use the "PASS" system.:**
 - **Pull** the pin.
 - **Aim** the nozzle.
 - **Squeeze** the trigger.
 - **Sweep** from side to side.
- **Once an extinguisher is empty, place it on its side in a out-of-the-way area.**
 - This will prevent anyone else from trying to use it again.
- **Most extinguishers empty in less than 15 seconds.**
 - If you can't put a fire out in that length of time you should evacuate the area immediately.
- **There are some dangerous misconceptions about how to put out fires that you should be aware of.**
 - Although you've probably seen it in movies, never use an ordinary coat or blanket to smother a fire (textiles like these will often ignite, making the situation worse).
 - Don't try to "beat" the flames down either (this will only fan the blaze, causing it to flare up).
- **To learn more about fire extinguishers and dealing with small fires at work and at home, talk to your local fire company.**
- **Sprinkler systems and fire extinguishers can help to keep a fire at bay, but the best way to "fight" fires is to keep them from starting in the first place.**
 - You can help to prevent fires by learning to recognize potential fire hazards, then taking corrective action.

- **Careless smoking has traditionally been a leading cause of fires both at work and in the home.**
 - If you smoke, make sure to follow your company's smoking policy.
 - Make sure cigarettes are completely out before you toss them.
 - Dispose of butts in proper containers, such as specially designed receptacles or metal pails filled with sand.

- **One of the simplest ways to prevent fires is to keep your work area clean.**
 - Piles of boxes or scattered papers can be a "fire waiting to happen".

- **Most office fires involve electricity, so as you are straightening up pay particular attention to electrical equipment and outlets.**
 - Overheated equipment and overloaded circuits are the primary hazards.

- **"Overloads" occur when equipment draws too much power for the circuit that it is on.**
 - In time this can cause wiring to heat up and burn.

- **To avoid overloads:**
 - Never use "adapters" that allow you to plug multiple power cords into the same outlet.
 - Don't use extension cords for devices that require a lot of current, such as copiers or microwave ovens.

- **Another problem with extension cords is that people tend to use them as a "permanent" solution.**
 - Over time, extension cords can deteriorate and crack, so if you use one remove it as soon as possible.

- **You should ensure that the office equipment you use is in good working order as well.**
 - Pay particular attention to power cords and make sure that they are not cracked or frayed.

- **Overheating is another problem to watch out for.**
 - This usually occurs with office equipment that is getting old, because electronic components can break down over time.
 - If you see smoke, or equipment smells like it is burning, unplug it and immediately tell your supervisor.
- **You also need to be careful when you are using appliances like coffeemakers and toaster ovens.**
 - These should only be used in breakrooms and kitchens, which are constructed to prevent fires from spreading.
- **Using hotplates or "mug warmers" in your office can also be dangerous.**
 - They can easily get buried under papers and other debris.
 - If you forget to turn these devices off, it's unlikely that anyone would notice... until its too late.
- **When you are leaving at the end of the day remember to perform a "fire prevention inspection" of your work area.**
 - Make sure the things are tidy.
 - Shut off office equipment that is not in use.
 - Unplug toasters, coffeemakers and other appliances in common areas.
- **No matter how many precautions you take, a fire can still occur.**
 - This is when fire alarms and smoke detectors save lives.
- **To be effective, fire alarms and smoke detectors should be strategically positioned throughout the workplace.**
 - This should include the basement and other storage areas.
 - If you hear an alarm or detector go off, you should leave the area immediately.

- **So that everyone in your facility knows what to do in the event of a fire, your company should have an "Emergency Action Plan." The plan will describe:**
 - How to report fires.
 - The evacuation procedures for your facility.
- **Each employee should know of at least two escape routes.**
 - That way, if one path is blocked they will know another way out.
- **Always keep evacuation routes uncluttered.**
 - Make sure all exit doors can be opened from the inside (otherwise you could find yourself trapped).
- **Your facility's Emergency Action Plan will also:**
 - List a location for you to report to after evacuating.
 - Establish a way to make sure that all employees have been accounted for.
- **The meeting place should be:**
 - Well away from the building.
 - In an area that won't interfere with emergency personnel.
 - Out of the weather, if possible.
- **In some high-rise buildings employees will be instructed to evacuate to "safe areas" inside the structure.**
 - This helps to organize the evacuation and keeps hundreds of people from crowding the stairways at the same time.
- **The Emergency Action Plan will also list ways to help physically challenged people to evacuate.**
- **When you hear a fire alarm there are several basic guidelines to follow:**
 - First, always evacuate, even if you think it's just a drill.
 - Remain calm.
 - Walk, don't run, and never push past other people.
 - Follow your predefined evacuation route (but be careful that you aren't heading into danger).

- **If it's not safe to proceed in the direction that you are going, find another escape route.**
 - But avoid taking "shortcuts."
- **Never use an elevator to escape from a burning building.**
 - You could get trapped inside if the power failed.
 - Use the stairs instead (but be cautious when you approach closed doors).
- **Make certain that doors are cool to the touch before you open them.**
 - Check doors with the back of your hand...its more sensitive to heat than your palms.
 - Never open a door that is hot (it probably has flames behind it).
- **If a door is cool, you can proceed on through but be sure to close it behind you.**
 - If you have time, shut all the windows too.
 - This limits the amount of available oxygen and helps to contain the fire.
- **When a building is burning, smoke can quickly build up and make it impossible to see.**
 - So you need to know your evacuation route "blindfolded."
 - Since smoke rises, get close to the floor to avoid inhaling it.
 - Cover your face with a wet cloth, if possible.
 - Take short breaths.
- **Smoke can kill, especially if it contains toxic substances.**
 - So get to fresh air quickly.
 - Then seek medical attention.
- **If your clothing catches fire, don't run around. This will only fan the flames. Instead, remember this simple phrase:**
 - "...Stop."
 - "...Drop."
 - ..."and Roll."

- **This means:**
 - Drop to the ground.
 - Keep your legs and arms close to your body.
 - Cover your face with your hands.
 - Roll back and forth until the flames are smothered.
- **Whenever there is a fire, injuries can occur.**
 - In these situations, knowing first aid can save lives.
- **Serious burns should be treated cautiously:**
 - Do not apply cold water or ice.
 - Never remove clothing that has stuck to the skin.
 - Cover the wound with loose, dry, sterile dressings.
 - Get medical help as quickly as possible.
- **You can treat slight burns or scalds by:**
 - Submerging them in cold water.
 - Then applying a dry, sterile bandage.
- **Never cover a burn with grease or butter.**
 - They trap the heat and actually make the burn worse.
- **Smoke inhalation can cause violent coughing and prevent people from catching their breath.**
 - Get victims to fresh air quickly.
 - Have them lay down and breath slowly, drawing in deep lungfuls of air.
- **If someone isn't breathing at all:**
 - Call for medical help immediately.
 - Then perform artificial respiration.

* * * **SUMMARY** * * *

- **The best way to "fight" a fire is to prevent it in the first place.**
- **Look for possible sources of ignition and report dangerous situations.**
 - If you see an electrical hazards, switch off the power immediately, then notify your supervisor.

- **Only smoke in designated areas.**
 - Make sure to thoroughly extinguish cigarettes and properly dispose of the butts.
- **Know your evacuation routes.**
 - Keep them uncluttered.
 - Make certain that all exit doors can open.
- **Be ready for an emergency.**
 - Participate in fire drills and take a first aid course.
- **If you discover a fire, sound the alarm and get out!**
- **Most fires can be prevented.**
 - But there is always a chance that one will occur.
- **By staying alert, and following your company's Fire Prevention Plan, you can make sure that you don't "get burned!"**