

HIGH RISE FIRE SAFETY

Every year there are about 7,000 fires that break out in high rise office buildings causing deaths, injuries and millions of dollars in fire damage. Most of these could be eliminated if everyone practiced good fire prevention on the job and planned ahead for a fire emergency.

In terms of fire safety, a high rise building could be defined as a building taller than four stories or 75 feet since fire department aerial ladders rarely reach anything higher than that. The possibility of a fire deserves serious thought. In a high rise building, it's especially important to know when and how to escape in case of fire.

Prevention

- △ Smoke only where it is permitted.**
- △ Use large non-tip ashtrays and empty them only when you are sure the ashes, matches and butts are cold. Make sure that no one, including visitors, has left cigarettes smoldering in wastebaskets or on furniture.**
- △ Be alert around electrical equipment. If electrical equipment is not working properly or if it gives off an unusual odor - often the first sign of a problem that could cause a fire - disconnect the equipment and call the appropriate maintenance department.**
- △ Promptly replace any electrical cord that is cracked or has a broken connection.**
- △ When using extension cords, protect them from damage; do not put them across doorways or any place where they will be stepped on or chafed. Check the amperage load specified by the manufacturer or the "listing laboratory," and do not exceed it. Do not plug one extension cord into another and do not plug more than one extension cord into one outlet.**
- △ Keep all heat-producing appliances away from the wall and away from anything that might burn. Leave plenty of space for air to circulate around copy machines, word processors and other equipment that normally gives off heat.**
- △ Make sure all appliances in your work area - such as coffee makers and hot plates - are turned off at the end of each work day. It's best to assign one person to make this check every day.**
- △ Keep storage areas, stairway landings and other out-of-the-way locations free of waste paper, empty boxes, dirty rags and other material that could fuel a fire or hamper an escape.**
- △ Arson is the largest single cause of fires in office buildings. Therefore, proper security measures to keep unauthorized people out of the building will help prevent both theft and fire. In addition, make sure that alleys and other areas around buildings are well-lit.**

In Case of Fire

△ If a fire does break out, sound the alarm and call the fire department. Large fires start as small fires.

△ Learn the sound of your building's fire alarm. Encourage management to schedule regular fire drills so that everyone will know how the alarm sounds and how to escape.

△ Evacuation plans for your building should be posted where everyone can see them. They should be discussed with new employees during orientation.

△ Learn the evacuation plans and participate in fire drills.

△ Know the location of the two exits closest to your work area. Count the number of doors between your office and each of those exits - in case you must escape through a darkened, smoke-filled corridor where you can't see very well.

△ Close the door to the room containing the fire and close all other doors that you pass through during your escape, assuming you are the last person out. Closing the doors helps to control the spread of fire.

△ If it becomes necessary to use an escape route where there is smoke, crawl low under the smoke. Stay close to the floor where visibility is better, the air is less toxic and it is cooler. Before you open a closed door, feel it with the back of your hand. If it is hot, don't open it. Use your alternate escape route. If it feels normal, open it carefully.

△ Be ready to slam it shut if heat or smoke starts to rush in. Once you are outside the building, move well away from the building to a designated meeting area where all members of your floor can be accounted for. If anyone is missing, notify the fire department, DO NOT reenter the building.

△ If it's not possible to escape from the floor you are on, don't panic. Stay calm. Try to go to a room with an outside window and stay there. Try to keep smoke out and be sure doors are closed. Stuff the cracks around the door and vents using clothing, towels, paper or whatever is available. If water is available, dampen a cloth and breathe through it to filter out smoke and gases. If there is a working telephone, call the fire department and tell them exactly where you are. This information will be relayed immediately to the firefighters on the scene. Stay where you are and wave something to attract their attention.

△ Each person with a disability should be assigned a co-worker (and an alternate) to render assistance in case of an emergency. Participating in drills is especially important for people with disabilities.

△ Never use an elevator during a fire emergency. Most modern elevators select buttons are heat-activated, so they might go to the fire floor and stop there with the doors open, exposing passengers to deadly heat and fumes.

△ Be sure that stairwell doors are never locked.

Fire Extinguishers

*** Portable fire extinguishers are useful only if they are used properly, if they are right for the type of fire and if the fire is discovered immediately.**

△ If there is a portable fire extinguisher in or near by, take the time to read the operating instructions and get training in how to use.

△ No one should attempt to fight even a small fire until people have been evacuated from the area and the fire department has been called.

Never attempt to fight a fire if any of the following is true:

△ Uncertainty about how to use the extinguisher.

△ The fire is spreading beyond the immediate area where it started.

△ The fire could block the escape route.

Owners, Managers and Employers

If you own, manage or employ workers in a high rise building, you should have the answers to these questions:

△ Do you have a fire emergency plan?

△ Has it been reviewed and approved by the fire department?

△ Have tenants and employees been given full instructions on the details of the plan?

△ Can the building be evacuated to the street without interfering with fire department personnel?

△ If the answer to question #4 is no, are there areas of refuge in the building?

△ Is there provision for physically challenged people who may be in the building?

△ If a fire starts, will it be detected promptly? How?

△ Will the fire department be notified promptly? How?

△ Is there a provision for heating, ventilation and air conditioning smoke control?

△ Is there an emergency communications system?

△ Does the building have area or floor fire wardens? Have they been trained?

△ Are fire pumps, emergency generators and lighting systems ready to use if needed?

△ Are all exit doors and exitways clear?

△ Are emergency hand lines and fire extinguishers in working order?

△ Will security measures, such as locking of doors, interfere with evacuation of occupants or access of firefighters?

△ Is the fire department familiar with the building in all pertinent details?

△ Has space been designated for a fire department command center in the building?

Smoke

We've all seen the movies where the hero enters a burning building to rescue someone. Flames are everywhere and there's not very much smoke. The hero storms from room to room, standing straight up and looks through the flames for the victim. He finds the victim easily enough, picks her up in his arms and runs out of the house...a hero.

Unfortunately, that is a long shot from the way it really is. Unless an arsonist has set several fires, there is usually only one point of origin for a fire. That one point could smolder for quite some time. Even after flames flare, a tremendous amount of smoke is generated. In a realistic situation, our hero would rush into a burning building and find a room thick with black, toxic smoke.

Visibility would be zero. He may not even see any flames because there would be so much smoke. If he was standing straight up as he entered the building, he would probably fall down unconscious in a matter of seconds because he would be inhaling that poisonous smoke. Movie producers would run out of heroes quickly.

Smoke Rises

In a fire, heat rises. Therefore, smoke rises. In the early stages of a structure fire, it is very common for smoke to accumulate near the ceiling. That is why smoke detectors are always placed high on a wall or ceiling. They detect the first signs of smoke, which rises to the top of the room. Firefighters know this and that is why, when they enter a burning building, they are down on their hands and knees. There is far less smoke near the floor and the visibility is much better.

Smoke Inhalation can be Fatal

In most cases, fire fatalities result from victims who have succumbed to smoke inhalation long before burn injuries occur. Eighty percent of those who die in residential fires have first inhaled smoke and other toxic gases.

Fire produces many gases that are highly poisonous. These are found in smoke and include carbon monoxide, sulfur dioxide, hydrogen cyanide and hydrogen sulfide. They displace oxygen in the room, which can cause suffocation.

Fire also consumes oxygen. This reduces the amount of oxygen available for persons to breathe. When a person is exposed to the toxins of smoke, muscle control is lost, judgment is impaired and the ability to reason diminishes. At a time when a fire emergency is present, it is important to be able to make quick decisions. Yet, the toxic gases, superheated air, smoke and limited visibility may cause someone to act in an inappropriate or irrational manner. It is vital to recognize smoke in the home and be able to quickly escape by crawling low under smoke.

Drop and Crawl

- △ **When you are caught in a building with smoke, drop to your hands and knees and begin crawling to the nearest exit.**
- △ **If you come to a closed door, don't open it before testing it for heat. Place the back of your hand against the door. If it is hot, don't open it. Turn around and seek another exit. If it is not hot, slowly open it but be prepared to slam it closed again if you should encounter flames.**
- △ **Continue to crawl until you get outside. You may have to use the walls of the building to help you. Just place your shoulder against the wall and keep crawling with your shoulder against the wall. By doing so, you will reduce your chances of getting lost in the smoke.**
- △ **The best plan is to have a pre-arranged meeting place outside the house where everyone should meet and be accounted for.**