

SHELTERING-IN-PLACE & LOCKDOWNS

What if the emergency situation that you are faced with requires that you stay inside your building because there would be a greater danger in evacuating?

In emergencies, two protection strategies can be preferable to an evacuation: sheltering-in-place and lockdown. Sheltering-in-place procedures may be ordered in situations involving chemical leaks, biological or chemical attacks.

The purpose of lockdowns is to minimize accessibility to a school or rooms in that school, thus reducing the risk to staff, students or patrons of some sort of victimization from dangerous intruders. The recent series of attacks in the Washington, D. C. area by a pair of snipers is a good illustration of the need to designate a room or rooms for lockdowns. Under such circumstances, not only would everyone be compelled to stay inside the building, but they would need to be secured in a room that had no direct access to the outside.

Lockdowns might be necessary in situations of: persons armed with firearms on school property, gunshots directed at or near school and grounds, police incidents involving dangerous person(s) that are adjacent to or within a short distance of the school site, intruders, Plan on sheltering-in-place in the event of hazardous chemical spills, gas leaks, electrical conditions, or disasters close to the school or grounds. Severe weather conditions can also involve sheltering-in-place. These lists are not all inclusive.

Lockdowns involve securing the building from outside intruders and moving students away from exposed areas such as doors and windows. Ideally, clients, students and staff congregate in safe rooms, locked from the inside.

For more specific information on sheltering-in-place, see the Israel Defense Forces web site at <http://www.idf.il/english/organization/homefront/homefront2.stm> or a report from the Lawrence Berkley National Laboratory: at <http://securebuildings.lbl.gov/images/BldgAdvice.pdf> A good training document is available from the Centers for Disease Control at <http://www.bt.cdc.gov/planning/shelteringfacts.asp>.

QUICK TIP

Evacuations move people from areas of danger to areas of relative safety. These strategies keep people in, away from the danger.

Sheltering-In-Place Planning

Essentially, the procedures for both of these protection strategies are similar. The critical issue is the pre-selection of safe areas within your building. The best area for lockdowns may be dangerous for sheltering-in-place. Your planning should include the following elements:

- Identifying rooms that are internally located within the building, i.e., containing no windows and no external walls, with doors that lock from the inside.
- Naming and training a team (can be the same as the evacuation team) who will be responsible for directing personnel to the shelters.
- The designated rooms should be stocked at a minimum with canned food and bottled water, plus plastic sheets and tape to seal any openings in the doors in the event of a biological or chemical attack.
- Procedures to account for staff, students, clients and visitors.
- Communication devices and alternative, backup methods to initiate the evacuation to the designated rooms.
- Communication devices and alternative, backup methods to contact the fire or police departments.
- Rehearsal, drill and evaluation.

The same planning that should be done for evacuation strategies should also be done for sheltering-in-place. All of the same concerns are relevant; the only difference is that you will be moving people to a location inside of the building instead of outside. Planners need to consider various scenarios and revise strategies after conducting drills.

Internal safe zones

Internal safe zones or “sheltering-in-place” areas are rooms that can be created or identified for people to occupy in the event of an outdoor chemical or biological release. The goal is to create areas where outdoor air infiltration is very low. Usually such rooms will be in the inner part of the building, with no windows accessing the outdoors. They should have doors that are fairly effective at preventing airflow from the hallways. At the minimum, there should be no gaps around the edges of the door, and preferably there should be a gasket to completely seal the room. If that is not pos-

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sible, plastic sheets and duct tape should be helpful for sealing the openings in the event of a biological or chemical attack. Keep in mind, though, that not all adhesives have been tested for resistance to biological and chemical elements.

Bathrooms are a logical but usually bad choice, because they often have an exhaust duct that leads directly to the outside. If the exhaust fan is turned off, then the duct, which leads directly outside, can allow toxin-bearing outside air to enter the bathroom, which could be very harmful during an outdoor release.

Additionally, natural ventilation patterns⁹ can draw air into the bathroom from within the building, eventually contaminating the building during an indoor release. If the exhaust fan is left on, then air will be drawn into the bathroom from other parts of the building, which will eventually contaminate the bathroom.

Conventional doors can act as a pump—sweeping significant amounts of outside air into the safe room. If local building and fire codes permit, replacing the conventional door with a sliding door can substantially reduce this effect.

PLANNING TIP

Areas that might be safe for lockdowns (e.g., basements) are the worst places in case of the discharge of chemical or biological agents.

General Sheltering-in-Place/Lockdown Considerations

Planning

The plan should clarify the authority for declaring the emergency as well as staff responsibilities. Areas of responsibility include command (including backup decision makers), communicators (including announcers, runners and individuals assigned outside the building, if possible), area supervisors, room supervisors and searchers.

Initial announcement

Announce the sheltering-in-place procedure using the public address or intercom system. When a sheltering-in-place order is given, it should be given in “Plain English.” Do not use codes!¹⁰ No one can be sure that everyone in the building will know the code. If at all possible, 911 should be called prior to notifying the main office!

⁹ This is called the “stack effect.” Buoyancy-driven vertical air flow between floors of a building, caused by a temperature difference between indoor and outdoor air, will tend to rise (if indoor air is warmer than outdoor air) and escape through the upper parts of the building shell, and be replaced by air entering the lower part of the building. If the indoor air is cooler than outdoor air the reverse occurs.

¹⁰ Some people feel that there are two advantages to coded announcements: 1) the intruder is not further alarmed; and 2) there is less panic. The importance of clear and concise orders outweighs those considerations.

While sheltering-in-place and lockdowns are similar, make sure that the announcements are clear so people go through the proper procedures.

Staff responsibilities

- All staff members, who are in control of students at the time of the sheltering-in-place/lockdown, are responsible for their students at that time. Students without staff supervision must be directed to the nearest room by the searchers.
- All staff shall immediately secure their rooms and must also address any other pre-planned areas of responsibility. Minors should not be left without responsible supervision.

Securing each room

1) Room supervisors

- Close windows, blinds and in the event of a lockdown, cover the door glass. If you have metal doors, a piece of cardboard with magnets, cut larger than the door window, can be affixed to the door and moved over the window to cover it.
- Turn off lights.
- In the event of a lockdown, lock doors in area of assigned responsibility beyond your room/work area.
- When sheltering-in-place, use duct tape to seal the door.
- In the event of a lockdown, direct students to line up against the longest portion of the door wall. Record names/emergency numbers for those present and also list those now missing. Tape the list to a wall, close to a phone if possible.
- Have students sit so that they are below window height.
- Once your area is secure, do not let anyone in your room without confirming their identity.
- Staff should then use phones or intercom only if their room is called or there is a life threatening emergency in their room. Keep all lines of communication clear of non-emergency talk!

2) Searchers

- Take control of any wandering students.
- Check bathrooms, empty rooms, auditorium and other unstaffed areas.
- Upon completion searchers should re-enter their work area and lock themselves in, making sure the exterior door handle is in a locked position.

3) Reporting

- While it is desirable to have the various rooms or sections report that they are secure, such reporting is usually limited by the capacity of the communications system. A flood of calls to the Incident Commander may interfere with an emergency call. It is best to de-

PLANNING TIP

No matter how sophisticated your plans, worried parents will show up during emergencies wanting to take their child home. Make plans for, and assign talented staff to handle worried parents.

sign your response team so that section chiefs can ascertain whether their area is secure and only report problems.

- If the dangerous person enters a particular area, the person responsible for that area should report it to the Incident Commander, who will be coordinating with police. By doing so the police can track the dangerous person and appropriately respond.

Note: There are situations (police activity nearby) where a sheltering-in-place/lockdown is appropriate but activity *inside* the building can continue as usual. This guide suggests actions in extreme emergency conditions. Less restrictive sheltering-in-place/lockdown conditions may be used based upon facts known to the administrator in consultation with the proper authorities.

Subsequent announcements

After the initial lockdown announcement, consult with law enforcement personnel about whether a second announcement should be made describing the reason for the lockdown and a description of the suspect if available.

Parents

One other important consideration is to have a pre-designated site for parents to meet when there is an emergency that requires a sheltering-in-place or lockdown procedure. This site should be several blocks away from the campus and have plenty of parking. If possible, staff members should be designated to respond to this site immediately after the conclusion of the sheltering-in-place procedure to instruct parents on how the students will be released from school.

Rehearsals

Sheltering-in-place is very different from fire drills. A sheltering-in-place drill program should be established that will include periodic practice sheltering-in-place procedures. The frequency of these drills—monthly, quarterly, etc.—depends upon the employee/student turnover in the area. The schedule should be maintained and documented. The building's emergency plan should include a schedule of programmed fire, sheltering-in-place and evacuation drills. Fire, sheltering-in-place and evacuation procedures should be conspicuously posted in each room.

QUICK TIP

A chemical spill on the street is more likely than a terrorist attack. Your planning should consider all possibilities.

Specific Threats Requiring Sheltering-In-Place

Threats From Chemical, Biological and Radiological Agents

Chemical, biological and radiological (CBR) attacks may require a different type of safety approach from a physical assault from a person/people. Most experts who study terrorism are more concerned with the possibility of a small-scale CBR release in a relatively confined area than a large-scale, widespread attack. It is difficult to weaponize and distribute biological, chemical or radiological materials effectively, and therefore it is not easy to do large-scale damage.

CBR concerns are not limited to terrorist sources. Industrial chemical spills could have the same effect and require the same preparedness. As always, check with your local Office of Emergency Management and ask them to conduct a risk assessment of your facility. They should be aware of any factories, refineries or other repositories of toxic materials in your area. An industrial accident can be far more serious than a terrorist incident. Organizations located near such facilities should devote considerable resources to their evacuation and sheltering-in-place plans and preparations.

Chemical and biological attacks fall into two major categories: outdoor releases and indoor releases. The procedures to be followed vary by whether the release is outdoor or indoor, and whether it is chemical or biological. For an indoor release of either a chemical or biological substance, the priority is to evacuate the building and move upwind and uphill. For an outdoor release, moving everyone into pre-designated internal safe zones is the recommended procedure.

In the event of a chemical or biological attack, once it has been established that the attack has occurred outside of the building, all occupants within the building should be directed to a safe area in a room that is as remote and as sealed off from the outside as possible.

Post-release Shelter-In-Place Procedures

In the case of a chemical or biological attack, it is critical that a determination be made first as to whether the attack has occurred inside the building or outside. If it is established that the attack has occurred outside of the building, it is possible to minimize the risk of exposure by taking the following actions:

- Keep people indoors.
- Close all windows and doors to the outside.
- Close all internal doors.
- Shut off all HVAC fans and close all HVAC dampers, including ex-

haust dampers.

- Shut off other fans such as kitchen and bathroom exhausts.
- Do not use elevators—they create a piston effect and can pump air into or out of the building.
- Have people gather in pre-identified “shelter-in-place” rooms that have no or low air exchange with the outdoors and have low air exchange with the rest of the building.
- Once the outdoor concentration has diminished to safe levels (as determined by emergency response teams), evacuate the building and flush it with outdoor air. After the contaminated plume passes, the concentration of contamination will actually be higher inside the building than outside, because the building will tend to retain contamination that managed to enter.

Minimizing the rate of air exchange with the outside will keep the indoor concentration as low as possible for as long as possible. Normal operation of the HVAC system will exhaust some building air and pull in some outdoor air. If the outdoor air is contaminated, the HVAC system will spread the contamination throughout the building. Air exhausted from the building by exhaust fans will also be replaced by outdoor air. Shutting off the HVAC fans and exhaust fans will help minimize the air exchange with the outside. Once the emergency response teams have determined that the air outside is safe (generally not more than 2-3 hours), the building should be evacuated.

Lockdowns During a Threat by Dangerous Persons

Pre-planning and proper skill drills help eliminate mistakes and misunderstandings. Each building should maintain a written lockdown plan that is distributed to staff, posted and rehearsed.

Preparations should include having the necessary hardware in place so that a lockdown is possible. Doors should be lockable from the inside, but accessible through master keys. Do not retrofit doors with “sliding bolts” or similar hardware as these can be misused by an intruder taking hostages.

Can different parts of the building be locked? Plans must ensure that children outside their classrooms are moved to the closest safe area (and their teachers are notified that the children are accounted for). The safest part (e.g., away from doors and windows) of each “safe room” should be identified.

If possible, keep a reasonable amount of canned food and water available in the area designated as the safe area.