

Patron Surveillance



A lifeguard's primary responsibility is to ensure patron safety and protect lives. A primary tool to accomplish this function is patron surveillance—keeping a close watch over the people in the facility. Lifeguards will spend most of their time on patron surveillance. To do this effectively, they must be alert and attentive at all times, supervising patrons continuously.

EFFECTIVE SURVEILLANCE

With effective surveillance, lifeguards can recognize behaviors or situations that might lead to life-threatening emergencies, such as drownings or injuries to the head, neck or back, and then act to modify the behavior or control the situation. Effective surveillance has several elements:

- Victim recognition
- Effective scanning
- Lifeguard stations
- Area of responsibility

The previous chapter focused on eliminating hazardous situations. This chapter concentrates on recognizing patrons who either need, or might soon need, assistance.

Victim Recognition

When conducting surveillance, lifeguards should look for behavior that indicates a patron needs immediate assistance. Lifeguards are better able to identify these behaviors because they are universal responses that indicate a patron is in trouble in the water. Deciding that a patron is in trouble must be based on his or her behavior, not on physical characteristics or appearance, such as age or ethnic or racial background.

It is important to understand the behaviors that a victim shows when in distress or drowning. **Table 3-1** compares the behaviors of a swimmer with those of a distressed swimmer, an active drowning victim and a passive drowning victim. Notice differences in—

- Breathing.
- Arm and leg action.
- Body position.
- Body propulsion or locomotion (movement) through the water.

Understanding these behaviors enables a lifeguard to recognize quickly when someone needs help. Quick action can mean the difference between life and death for a distressed or drowning victim.

Swimmer

Depending on his or her proficiency with the stroke, a swimmer's arms and legs work in a coordinated and effective way. The body position is nearly horizontal, and there is some breath control. The person is able to make recognizable progress through the water (**Fig. 3-1**). Note that a person with a physical disability (such as the loss of a leg) might have to modify a stroke, but that person's unique swimming style can soon be recognized.

Distressed Swimmer

For a variety of reasons, such as exhaustion, cramp or sudden illness, a swimmer can become distressed. A distressed swimmer makes little or no forward progress and may be unable to reach safety without a lifeguard's assistance.

Distressed swimmers can be recognized by the way they try to support themselves in the water. They might float or use swimming skills, such as sculling or treading water. If a safety line or other floating object is nearby, a distressed swimmer may grab and cling to it for support. Depending on the method used for support, the distressed swimmer's body might be horizontal, vertical or diagonal (**Fig. 3-2**).

The distressed swimmer usually has enough control of the arms and legs to keep his or her face out of the water to continue breathing and call for help. In most cases, a distressed swimmer is also able to wave for help. He or she can use the legs and one arm for support, while raising the other arm to wave for assistance. The distressed swimmer generally has the ability to reach for a rescue device.

As conditions such as fatigue, cold or sudden illness continue to affect the distressed swimmer, he or she is less and less able to support him or herself in the water. As this occurs, the victim's mouth moves closer to the surface of the water, and anxiety increases. If a distressed swimmer is not rescued, he or she may become an active drowning victim.

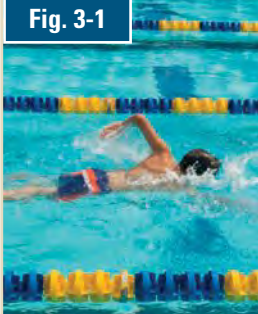
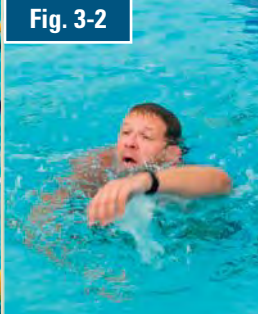
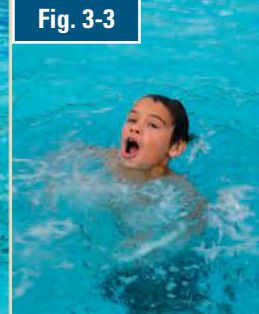
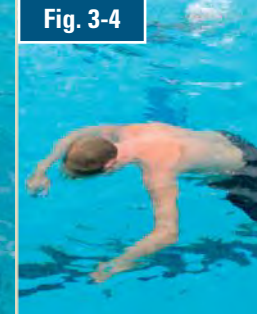
Active Drowning Victim

Active drowning victims have distinctive arm and body positions. They try to keep their mouths above the surface of the water (**Fig. 3-3**). This universal behavior is called the *instinctive drowning response* (Pia, 1974). This means that all active drowning victims have the same behaviors. An active drowning victim—

- Struggles to keep the face above water in an effort to breathe. If unable to do this, he or she begins to suffocate.
- Has arms extended to the side, pressing down for support.
- Has a vertical body position in the water with no supporting kick.
- Might continue to struggle underwater.
- Might eventually lose consciousness and stop moving.

An active drowning victim is struggling to breathe. His or her mouth repeatedly sinks below the surface and reappears. While the mouth is below the surface, the drowning victim keeps it closed to avoid swallowing water. When the mouth is above the surface, the drowning victim quickly exhales and then tries to inhale before the

TABLE 3-1 BEHAVIORS OF DISTRESSED SWIMMERS AND DROWNING VICTIMS COMPARED TO SWIMMERS

	Fig. 3-1 	Fig. 3-2 	Fig. 3-3 	Fig. 3-4 
	Swimmer	Distressed Swimmer	Active Drowning Victim	Passive Drowning Victim
Breathing	Rhythmic breathing	Can continue breathing and might call for help	Struggles to breathe; cannot call out for help	Not breathing
Arm and Leg Action	Relatively coordinated	Floating, sculling or treading water; might wave for help	Arms to sides alternately moving up and pressing down; no supporting kick	None
Body Position	Horizontal	Horizontal, vertical or diagonal, depending on means of support	Vertical	Horizontal or vertical; face-down, face-up or submerged
Locomotion	Recognizable	Little or no forward progress; less and less able to support self	None; has only 20 to 60 seconds before submerging	None

mouth goes below the surface again. While the victim is gasping for air, he or she also might take water into the mouth. Although some people believe active drowning victims can call out for help, this is not the case. They can barely take in enough air to breathe, so there is no air left over to call out for help.

Active drowning victims do not make any forward progress in the water. All of the person’s energy is devoted to keeping the mouth above the surface of the water, and the person is unable to reach for a rescue device. The active drowning victim usually stays at the surface for only 20 to 60 seconds. The victim may continue to struggle underwater but eventually loses consciousness and stops moving.

Passive Drowning Victim

A victim might progress from active to passive drowning or suddenly slip under water without a struggle. Passive drowning victims might float face-down at or near the surface or might sink to the bottom (Fig. 3-4). A passive drowning can result from a variety of conditions that can lead to a loss of consciousness, including—

- A heart attack or stroke.
- A seizure.
- A head injury.
- A heat-related illness.
- Hypothermia.
- Hyperventilation.
- Use of alcohol and other drugs.

Once a victim submerges and loses consciousness, water can enter the trachea (windpipe). This may cause a spasm of the vocal cords (*laryngospasm*), which blocks the airway to keep fluid or food out of the airway. Water might get into the lungs after submersion or loss of consciousness. Anyone who is submerged or floating face-down and motionless for 30 seconds should be considered a passive drowning victim. Lifeguards should check the victim's condition immediately. If the victim is conscious and was just holding his or her breath, the patron needs to be directed to stop doing so.

Heart Attack, Stroke, Seizure and Head Injury. A person who has suffered a heart attack, stroke, seizure or head injury might feel dizzy or faint or be temporarily paralyzed. These conditions cause great difficulty in swimming or even walking in the water. The person might also suddenly stop swimming and become a passive drowning

victim. **Table 3-2** lists the signs and symptoms for these conditions.

Heat-related Illness. A *heat-related illness* occurs when a person's inner core temperature rises above its normal temperature of 98.6° F (37° C) to 102.6° F (39° C) or higher. The victim becomes weak and dizzy, and might become confused or lose consciousness. See Chapter 9 for the signs and symptoms and care for heat-related emergencies.

For facilities with a spa, exposure to hot water can make it difficult for a person to get out. It is important for lifeguards to monitor patrons as they use spas and hot tubs and to advise them not to stay in the water too long. Also, advise pregnant women, adults with cardiac or circulatory problems and parents or guardians of young children about the risk hot water can pose to their health. Since many health clubs and recreation departments with

TABLE 3-2 SIGNS AND SYMPTOMS OF A HEART ATTACK, STROKE, SEIZURE AND HEAD INJURY

	Heart Attack	Stroke	Seizure	Head Injury
Signs and Symptoms	<ul style="list-style-type: none"> ● Persistent chest pain or pressure (a primary signal of a heart attack) that lasts longer than 3 to 5 minutes, or goes away and comes back ● Chest pain spreading to the shoulders, neck, jaw or arms ● Shortness of breath or trouble breathing ● Nausea or vomiting ● Dizziness, lightheadedness or fainting ● Pale, ashen (grayish) or bluish skin ● Sweating ● Denial of signals 	<ul style="list-style-type: none"> ● Sudden weakness or numbness to the face, arm or leg; usually to one side ● Difficulty with speech or vision ● Severe headache ● Confusion, dizziness or disorientation 	<ul style="list-style-type: none"> ● Confusion, dizziness or disorientation ● Difficulty breathing ● Body might stiffen ● Convulsions followed by— <ul style="list-style-type: none"> ■ Relaxed state ■ Fatigue and confusion ■ Headache 	<ul style="list-style-type: none"> ● Swollen or bruised areas ● Unconsciousness ● Confusion or loss of memory ● Severe pain or pressure in the head ● Profuse or external bleeding of the head

swimming pools now include spas, it is important to be aware of the risks associated from the effects of hot water.

Hypothermia. *Hypothermia* develops when the body can no longer generate sufficient heat to maintain normal body temperature. In hypothermia, body temperature drops below 95° F (35° C). As the body cools, an abnormal heart rhythm might develop and the heart eventually stops. A person can develop hypothermia even if environmental temperatures are not extreme. See Chapter 9 for the signs and symptoms and care for hypothermia.

Hyperventilation. Hyperventilating is a dangerous technique some swimmers use to try to swim long distances underwater or to hold their breath for an extended period while submerged in one place. They mistakenly think that by taking a series of deep breaths in rapid succession and forcefully exhaling that they can increase the amount of oxygen they breathe, allowing them to hold their breath longer underwater. This is not true. Instead, it lowers the carbon dioxide level in the body.

The practice is risky because the level of carbon dioxide in the blood is what signals a person to breathe. As the level of carbon dioxide increases, a person normally takes a breath. When a person hyperventilates and then swims underwater, the oxygen level in the blood can drop to a point where the swimmer passes out before the body knows it is time to breathe. Then, when the person finally does take a breath instinctively, water rushes in and the drowning process begins.

Alcohol. The following are some ways alcohol can affect a person in the water and lead to drowning or head, neck or back injuries.

- **Alcohol affects balance.** Some people with alcohol in their body have drowned in shallow water when they lost their balance and were unable to stand up. “Ordinary” actions on steps, ladders, diving boards or play structures become hazardous for an intoxicated person.
- **Alcohol affects judgment.** A person might take risks, such as diving into shallow water, which he or she would not normally take.
- **Alcohol slows body movements.** It can greatly reduce swimming skills, even those of an excellent swimmer.

One of the biggest myths about alcohol is that an intoxicated person can sober up by going swimming. Splashing water on a person’s face or immersing a person in water **will not** reduce the amount of alcohol in the bloodstream, nor reduce the effects of alcohol.

EFFECTIVE SCANNING

Knowing how to recognize a victim in trouble in the water is the first step, but lifeguards also need to know how to scan effectively. *Scanning* is a visual technique for



Fig. 3-5

watching patrons in the water (**Fig. 3-5**). It is an active process. When scanning, a lifeguard should not just passively watch patrons in the water. The lifeguard should actively observe the swimmers’ behaviors and look for signals that someone in the water needs help. The lifeguard’s head needs to move while scanning to look directly at each area rather than staring in a fixed direction. Movement may be noticed with peripheral (side) vision, but recognition requires looking directly at the person.

Guidelines lifeguards should follow for effective scanning include:

- Scan the patrons in the assigned area of responsibility.
- Scan above and below the surface of the water, and include the bottom of the pool in the scan.
- Scan thoroughly and repeatedly. Do not neglect any part of the assigned area of responsibility, including any deck or beach areas and those areas under, around and directly in front of the lifeguard station.
- Scan from point to point, rapidly watching all movements of the patrons in the area.
- Do not focus on a scanning pattern itself, but stay focused on effective patron surveillance.
- Scan for potential problems. Arm and leg action, body position and movement through the water are good indicators of weak swimmers and those in trouble in the water.
- If a weak swimmer is slowly moving toward safety, check him or her more frequently while scanning the whole area of responsibility.
- Spend less time and attention on patrons who are good swimmers or who are safely enjoying the water, but still include them while scanning.
- Scan crowded areas carefully. Partially hidden arm movements might indicate that a victim is actively drowning.

- While scanning, do not be distracted by people or activities. Keep focused on the assigned area of responsibility.
- Do not interrupt scanning an area except during an emergency or to stop someone from breaking a rule. The facility's emergency action plan (EAP) should address back-up coverage if a lifeguard must make a rescue or provide emergency care, such as first aid or CPR. If only one lifeguard is performing patron surveillance and must stop someone from breaking a safety rule, the lifeguard should do this quickly. Get the person's attention, explain the danger and how he or she can become injured, and, if necessary, how to avoid the injury. This should take only a few seconds, and it can be done while still scanning. If the patron needs a detailed explanation, the lifeguard should call for assistance or tell the patron that his or her questions can be discussed further during a break.
- Do not interrupt scanning an area if a patron asks a question or has a suggestion or concern. A lifeguard should acknowledge the patron and quickly explain that he or she cannot look at him or her while talking, but he or she is still listening to the patron. Politely but briefly answer the patron's question, suggestion or concern, or refer him or her to the head lifeguard, facility manager or another staff member.
- Do not wait for patrons or other lifeguards to indicate that someone is drowning. A drowning victim is often surrounded by others who are unaware the drowning is happening right next to them. New lifeguards sometimes feel unsure of themselves and mistakenly wait for patrons or more experienced lifeguards to tell them that someone is in trouble.
- Be aware of areas that cannot be seen or that are difficult to see. Areas might be blocked when patrons cluster together or from water movement, such as fountains or bubbles that block the view underwater. The lifeguard should adjust body position to see into blind spots.
- Be aware of conditions that affect visibility, such as glare from the sun or overhead lights, cloudy water or shadows on the water at different times of the day. The lifeguard should adjust his or her position or move to a point with clear visibility.
- Various factors can affect a lifeguard's scanning technique. Make adjustments for—
 - Area of responsibility.
 - The type and location of the lifeguard station.
 - The variety of patron activities in the area being scanned.
 - The number of patrons in the area of responsibility.
 - Fatigue.

Fatigue

There are many things that can cause fatigue when performing patron surveillance. These include—

- Dehydration.
- Heat exhaustion.
- Overexposure to the sun.
- Lack of sleep.
- Poor nutrition and lack of regular meals.

The following guidelines will help lifeguards prevent fatigue:

- Always drink plenty of water. Keep a plastic bottle of water around at all times.
- Use adequate sun protection, such as hats, polarized wrap-around sunglasses with UVA/UVB protection and umbrellas.
- Come to work well-rested and well-nourished.
- Rotate stations and take breaks.

Lifeguard Stations

Patron surveillance might be performed in an elevated lifeguard chair or by standing on the deck, beach, pier or in the water. The goal is to provide optimum coverage for the whole facility. A lifeguard must be in a position to recognize and respond to an emergency at all times.

The location of the lifeguard station must allow lifeguards to see their entire area of responsibility. The lifeguard stand may need to be moved or the position adjusted during the day to adapt to the changing sun, glare, wind or water conditions. Having a clear view of the whole area so that everyone can be seen in it is critical. Additional coverage at waterfront areas can be provided by foot patrols, boat patrols and four-wheel drive vehicles.

Elevated Stations

Elevated lifeguard stations usually provide the most effective position for patron surveillance because they offer an excellent place for scanning the area of responsibility (Fig. 3-6). This is particularly important at a facility where a single lifeguard is doing patron surveillance. An elevated stand provides a much better view of patron activities than the view from a ground-level lifeguard station.



Fig. 3-6

The area under, around and directly in front of the stand should be included in the scan. Lifeguards on opposite sides of a pool can solve this problem by scanning below each other's stands. Movable stands should be positioned close to the edge of the water with enough room to climb up and down from the stand.

The area surrounding an elevated stand must be kept clear of patrons or objects that might interfere with the lifeguard's ability to respond. A safety zone should be established that allows access to the water in case of an emergency. At a waterfront, this area should be thoroughly inspected with rakes and shovels before opening each day. This helps prevent injuries to lifeguards during emergency exits from the lifeguard stand.

Ground-Level Stations

Lifeguards might be assigned to a walking patrol, a fixed location on the deck or a position in the water near a play structure (Fig. 3-7). In these positions, the view of the entire swimming area is limited, and patrons might be hidden from view by play structures or other patrons.



Fig. 3-7

While walking, lifeguards need to face the patrons in the area of responsibility. The primary purpose of ground-level stations is to be close to patrons. Here a lifeguard can easily make assists and enforce safety rules for patrons in the water and on the deck. While maintaining surveillance, a lifeguard can also educate patrons about the reasons behind the rules, but he or she should never become distracted from surveillance duties by talking socially with patrons.

Rescue Water Craft

In many waterfront facilities, lifeguards watch swimmers from water craft. Rescue water craft typically patrol the outer edge of a swimming area. Often, someone in trouble in the water can be reached more quickly from water craft.

In a small, calm area, a rescue board or a flat-bottom rowboat might be used (Fig. 3-8). In rough water, a v-hull or tri-hull rowboat might be used. Powerboats, inflatable boats, kayaks and personal water craft also can be used as rescue water craft (Fig. 3-9, 3-10). Facility management normally provides on-the-job training in the use of water craft at a facility.

It is important that water craft are properly equipped. Inspect equipment at the start of each shift, and inform the lifeguard supervisor or facility manager about any damaged or missing equipment. Water craft should have at least the following equipment:

- Extra oars or paddles
- Several life jackets in various sizes
- Rescue tube(s)
- Throwable personal floatation devices
- Extra anchor and line
- First aid kit
- Fire extinguisher



Fig. 3-8



Fig. 3-9



Fig. 3-10

- Bailing device
- Communication equipment (radio, whistle, flag, flares and air horn)
- Basic tool kit

If stationed on water craft in water with a current, a lifeguard might have to row or paddle to stay in position. In rough water or a strong wind, a lifeguard needs to be in good physical condition for constant rowing or paddling. Some water craft use a special anchor line with a quick release for making a rescue. In some larger water craft, one lifeguard maintains the craft's position while a second watches the swimming area.

Lifeguards should make sure they are well trained in operating the facility's water craft before using it for surveillance or to make a rescue. They should be even more cautious with water craft with a motor, and take care to avoid injuring swimmers or damaging lifelines when crossing into the swimming area to make a rescue.

Lifeguard Rotations

Periodic rotations from one station to another, along with breaks, help lifeguards stay alert and decrease fatigue. Rotating from station to station also helps lifeguards learn conditions and hazards in the entire facility, instead of in just one location. Lifeguards must maintain patron surveillance when rotating from one station to another.

Each lifeguard may carry a separate rescue tube during the rotation. If not, then the rescue tube is passed from the lifeguard on duty to the new guard during the rotation. Patron surveillance must always be maintained while the rescue tube is removed and passed on to the next lifeguard.

At a ground-level station, the relieving lifeguard should—

1. Walk to the side of the lifeguard being relieved and begin scanning (**Fig. 3-11, A**).
2. Ask the lifeguard being relieved whether any patrons in the area of responsibility need closer than normal supervision (**Fig. 3-11, B**).
3. Once scanning has started, signal or tell the outgoing lifeguard that he or she can leave (**Fig. 3-11, C**).

At an elevated station, the relieving lifeguard should—

1. Take a position next to the stand and begin scanning the area of responsibility. After a few moments of scanning, signal the lifeguard in the stand to climb down (**Fig. 3-12, A**).
2. Once on the deck, this lifeguard takes a position next to the stand and resumes his or her surveillance of the area. Climb up in the stand and begin scanning (**Fig. 3-12, B**).

Fig. 3-11



A



B



C

3. Ask the lifeguard being relieved whether any patrons in the area of responsibility need closer than normal supervision.
4. Signal or tell the outgoing lifeguard that he or she can leave (**Fig. 3-12, C**).

Lifeguards should take a break at least once an hour. In one system of surveillance, a lifeguard might spend 20 or 30 minutes at one station, rotate to another station for 20 or 30 minutes, and then take a 20- or 30-minute break. In another system, a lifeguard might spend 45 minutes at

Fig. 3-12



A



B



C

one stand, take a break for 15 minutes and then go to another stand.

Lifeguards should not make changes or substitutions in the schedule of rotations and breaks or leave the facility during a break without permission from the lifeguard supervisor or facility manager. If only one lifeguard is performing patron surveillance, then he or she should clear the water during breaks. Never leave patrons in charge while on a break. Another lifeguard or staff member should monitor the pool while the lifeguard is on a break to prevent patrons from entering the water.

Lifeguard Rotations at Waterparks. Lifeguards typically move from one station to another during a shift. They might rotate through different attractions or different positions at the same attraction. Usually they rotate positions every 30 to 45 minutes to help them stay alert.

Lifeguard rotations are usually based on—

- Locations of stations.
- Type of station (sitting or standing).
- The need to be in the water at some stations.
- The number of patrons using the attraction.

Area of Responsibility

The lifeguard supervisor or the facility manager establishes each lifeguard's area of responsibility for patron surveillance. This might be total coverage (the whole pool, attraction or waterfront area) or zone coverage (only part of a pool, attraction or waterfront area). Another type of coverage is back-up coverage, in which a lifeguard takes over part or all of an area for another lifeguard who is making a rescue.

The area of responsibility assigned to a lifeguard in a waterfront environment may be larger than that assigned to a lifeguard working at a pool or waterpark. In addition, lifeguards who work at a waterfront may also contend with more swimmers in their area and a wide variety of activities. For example, lifeguards are primarily responsible for watching swimmers but might also have to warn people on boats, fishing, operating personal watercraft or using water skis to stay away from the swimming area.

Total Coverage

Total coverage is used at facilities where a single lifeguard is conducting patron surveillance at a time or when only one lifeguard is needed for a small number of patrons present. If there is only one lifeguard conducting patron surveillance, that lifeguard has to scan the entire area, rescue distressed swimmers or drowning persons, control the activities of patrons in and out of the water and recognize and respond to other emergencies (Fig. 3-13). If the lifeguard cannot provide adequate coverage for all patrons, he or she needs to inform a supervisor that help is needed.

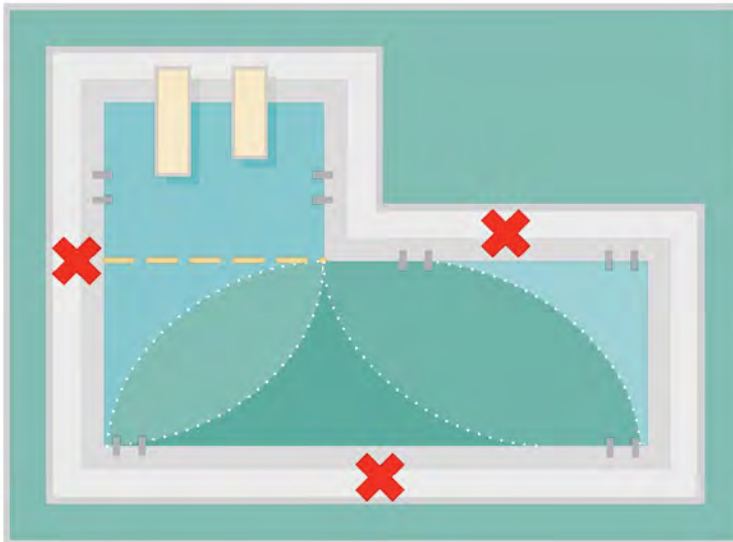
Zone Coverage

In zone coverage, the swimming area is divided into separate areas of responsibility for each lifeguard station (Fig 3-14, A-B). Areas can be marked by ladders, lane lines, lifelines, visual markers or the shape of the pool. Zone coverage is effective for high-risk areas, avoiding blind spots and reducing the number of patrons watched by each lifeguard.

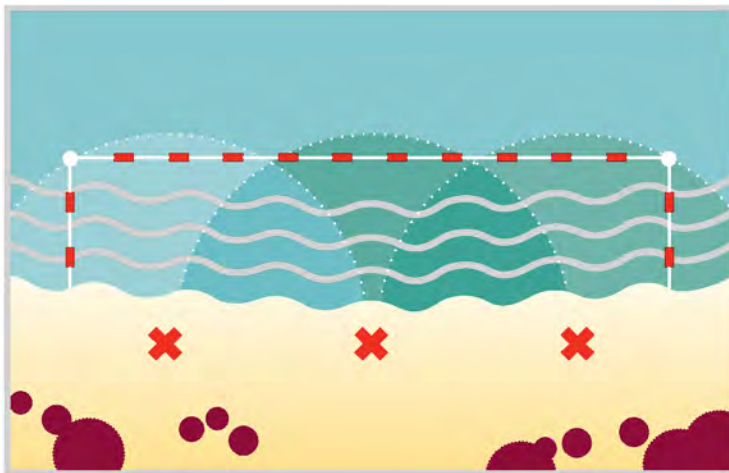
Fig. 3-13



Fig. 3-14



A



B

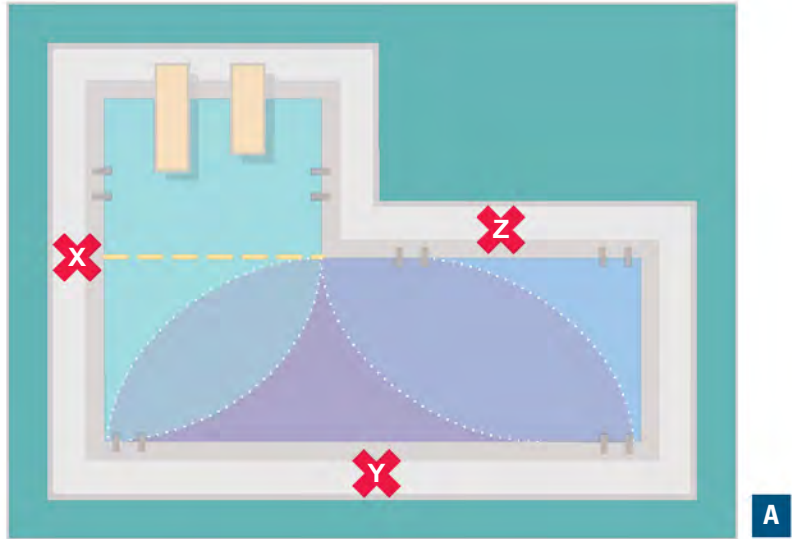
At a minimum, zones should overlap by several feet so that the boundaries between them have double coverage. This prevents any area from not being scanned. It is important for lifeguards to know the zone for each guarding position.

Back-Up Coverage

In emergency situations when there are two or more lifeguards on duty and one lifeguard must enter the water, lifeguards who remain out of the water must now supervise a larger area. They might need to move to better

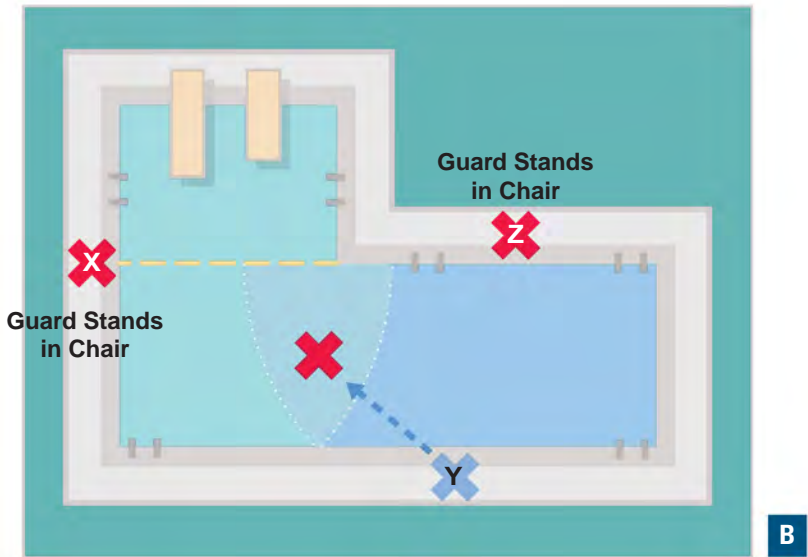
**ZONE COVERAGE
THREE LIFEGUARDS**

Fig. 3-15



A

**BACK-UP COVERAGE
THREE LIFEGUARDS**



B

vantage points, depending on the facility’s design. **Figure 3-15, A**, illustrates zone coverage when three lifeguards are on surveillance duty. **Figure 3-15, B**, shows an example of back-up coverage for the same three-lifeguard facility. In **Figure 3-15, B**, lifeguard Y is the primary rescuer. He or she signals and enters the water (indicated by a dotted line). The other two lifeguards (lifeguards X and Z) each stand in the lifeguard chairs and divide the responsibility for scanning the pool.

The “RID Factor”

Most drownings at supervised swim areas happen when neither lifeguards nor other patrons notice that a victim has slipped below the surface. Except for passive drownings, drownings in areas where lifeguards were on duty resulted from one or more of three causes, summarized as the RID factor (Pia, 1984)—**R**ecognition, **I**ntrusion and **D**istracted:

- The failure of the lifeguard to **recognize** the instinctive drowning response

- The **intrusion** of secondary duties on the lifeguard's primary responsibility of patron surveillance
- **Distraction** from surveillance duties

Recognition

Knowing how to recognize that a swimmer is in distress or a person is drowning is one of the most important lifeguarding skills. Lifeguards must be able to distinguish such behavior from that of others who are swimming or playing safely in the water. Lifeguards must recognize when someone needs to be rescued. A lifeguard cannot expect the victim or others to call for help in an emergency.

Even when a victim slips underwater without a struggle, with good surveillance and scanning techniques, a lifeguard can recognize someone lying motionless within seconds in clear water.

Intrusion

Intrusion happens when secondary duties, such as maintenance tasks, intrude on a lifeguard's primary responsibility of patron surveillance. Lifeguards often have to sweep the deck, empty trash cans, pick up towels, check locker rooms and perform other maintenance duties. While these duties might be part of the job, they must not be performed while conducting patron surveillance. Another lifeguard must first take over surveillance for the assigned area of responsibility.

A lifeguard cannot perform adequate surveillance duties while also coaching a swim team or teaching a swimming lesson. There should be a separate lifeguard, coach or instructor for these additional activities, even if no other patrons are in the water.

Distraction

Distractions also will affect patron surveillance, for example, a lifeguard talking with other lifeguards or friends. A brief conversation might seem innocent, but during that time a 20- to 60-second struggle of a young child could be missed. The child could die because a lifeguard was distracted! Social conversations should not be held while on duty.

SPECIAL CONSIDERATIONS FOR PATRON SURVEILLANCE

Facilities with Play Structures

Some facilities may have play structures that are either permanent or removable. Permanent structures include items such as regular or drop-off slides, sprays and fountains. Removable structures include items such as large floating toys, inflatable play structures and water basketball and volleyball nets. Some play structures require their own lifeguards, while others are watched by life-

guards surveying a larger area. The surveillance of patrons at play structures depends on—

- Location of the feature.
- Number of patrons in the facility.
- Number of patrons using the structures.
- Age and skill of patrons using the structures.
- Activity and excitement level.
- The lifeguard's ability to see around and under tethered structures.

The following techniques should be used when performing patron surveillance at play structures (**Fig. 3-16**):

- Pay close attention to nonswimmers or weak swimmers. The added excitement of play structures may lead nonswimmers or weak swimmers to become careless. They might try things they would not otherwise do, or they might accidentally enter deep water.
- Do not let a play structure become overcrowded. Be prepared to restrict the number of patrons using it at one time.
- Watch that patrons return to the surface after dropping into the water from a drop-off slide. Swimmers can be surprised by the fall from a drop-off slide, especially if they do not realize the slide is over deep water. Be certain that they return to the surface after dropping into the water.
- Pay close attention to children playing in sprays and fountains. These attractions are usually in shallow water. Excited children may run and fall and be injured. A very young child who falls might not be able to get back up.
- Pay close attention to patrons in moving water. Moving water can surprise people. They might lose their balance and be unable to stand up again.
- Keep play safe and orderly.
 - Patrons may climb onto floating toys and jump back into the water. They may not notice what is around them and jump onto other swimmers.
 - Patrons may throw balls and other toys and hit unsuspecting swimmers, resulting in injury.

Fig. 3-16





Fig. 3-17



Fig. 3-18

Waterparks

Lifeguards perform patron surveillance in a waterpark similar to that at pools, but they need to adapt their techniques for the specific attractions. Lifeguards should follow these general principles:

- Watch patrons as they enter and exit an attraction (Fig. 3-17).
 - Dispatch patrons safely on a ride at set intervals. Dispatching is the method of informing patrons when it is safe for them to proceed on a ride.
- Keep patrons in view as long as possible.
 - On some attractions, this is a problem. Lifeguards might be able to see only the beginning or end of a long water slide. Caves, enclosed tubes, bridges, buildings and other structures might keep a lifeguard from seeing patrons at all times. When a patron goes out of sight behind something, watch to make sure he or she emerges safely on the other side.
- Be aware of any special risks on the play equipment.
 - Structures that patrons sit, climb on or swim over or under pose hazards. Lifeguards should supervise patrons carefully. A patron who falls off a mat, raft or tube might be injured or pose a hazard to someone else.

Winding Rivers

In a winding river, water flows in a long circular or twisting path through a waterpark. Depending on the winding river, patrons float along slowly with or without inner tubes or walk or swim. Lifeguards might be stationed at the entrance and exit and at other positions with overlapping zones (Fig. 3-18).

Water Slides

Water slides are long, winding slides usually made of fiberglass or concrete. Water is pumped down the slide from the top to the catch pool. Some slides are in enclosed tubes and others are open (Fig. 3-19).

On some slides, patrons ride on an inner tube, raft or mat. On other slides, they do not use riding equipment. Do not let patrons stop, slow down or form a chain of riders. On most slides, only one person is allowed on an inner tube or a raft. On some slides, two or more people can go together on a special tube or raft. On an inner tube or raft, the rider goes feet-first in a sitting position. If no equipment is used, the rider goes face-up and feet-first.



Fig. 3-19

Fig. 3-20



The lifeguard at the top of a slide should perform the following duties:

- Instruct riders how to ride down the slide properly.
- Help riders with the equipment.
- Check that patrons are tall enough to use the slide (Fig. 3-20). A measuring pole or line on a wall may be used to check their height.
- When dispatching—
 - Dispatch riders at proper intervals to keep them from colliding on the slide.
 - Be cautious of hand placement on the tube. When available, use tube handles. Avoid pushing or pulling riders by their shoulders, arms or legs.
 - Do not pair unfamiliar riders.
 - Do not allow other patrons to force a reluctant patron to ride an attraction.

The lifeguard at the bottom of a slide in the catch pool should perform the following duties:

- Supervise riders on the slide and help them out of the water.
- Watch riders exit the slide into the catch pool (Fig. 3-21).
- Watch and help riders who might be caught in a hydraulic (Fig. 3-22). (A *hydraulic* is a strong downward flow in the catch pool that can knock a person off balance or hold a small person or nonswimmer under water.)
- Make sure that riders exit from the catch pool quickly and do not cross in front of any slide when getting out of the catch pool.

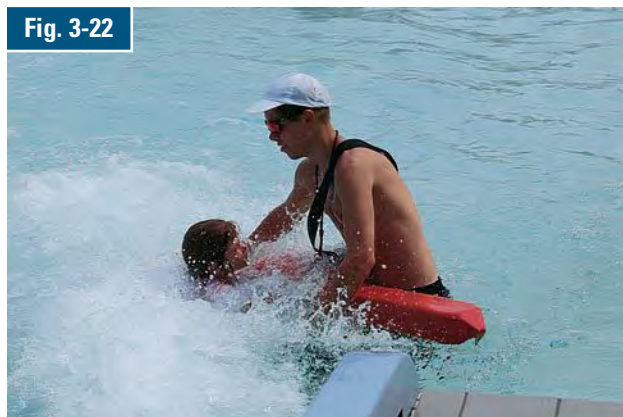
At some very long slides, a lifeguard in the middle of the slide watches and helps riders.

- Riders might need help in the middle of a slide.
- Riders might stop, slow down or stand up on the slide. They could be injured doing this.
- Riders might lose their mat, tube or raft and have trouble getting down the slide.
- Riders might hit their heads on the side of the slide.

Fig. 3-21



Fig. 3-22



Drop-Off Slides

A drop-off slide ends with a drop of several feet into the catch pool (Fig. 3-23). Patrons might not realize the depth of the catch pool and need assistance.

When supervising a drop-off slide, a lifeguard should make sure—

- Riders are aware of the depth of the water.
- Riders sit or lie in a feet-first position.
- Each rider has moved out of the catch pool before dispatching the next rider.

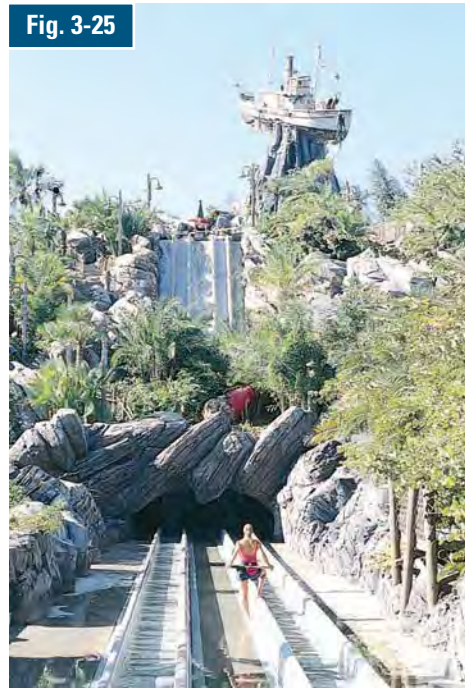
Fig. 3-23



Fig. 3-24



Fig. 3-25



Speed Slides

A speed slide is straight and steep and may have small hills or rises (Fig. 3-24). It usually has a runout into water several inches deep to slow patrons to a stop.

If stationed at the top of a speed slide, the lifeguard should—

- Allow only one rider down the slide at a time.
- Ensure that riders are in the correct riding position (e.g., feet-first, lying on their back, with legs crossed at the ankles and arms crossed over the chest). This position is faster and reduces the risk of injury.
- Not dispatch a rider until the previous rider has left the runout or the catch pool and the lifeguard at the bottom signals for the next rider.
 - If the lifeguard at the bottom can be seen, a hand signal and a whistle might be used.
 - If the lifeguard at the bottom cannot be seen, a mechanical signal might be used.

If stationed at the bottom of a speed slide, the lifeguard should—

- Help riders, if needed, from the runout or catch pool. (Some might be disoriented or frightened from the ride.) (Fig. 3-25).
- Signal the lifeguard at the top when it is clear to send the next rider.

Free-Fall Slides

A free-fall slide has a nearly vertical drop that provides a sensation of falling. It is like a speed slide with a steeper angle (Fig. 3-26).

Lifeguarding responsibilities for a free-fall slide are like those for speed slides. The lifeguard at the top should give patrons specific directions, such as—

- Riders in line must stand back away from the slide.
- Riders must wait for the lifeguard's signal to start. The lifeguard should signal only when he or she is sure that the previous rider has left the runout.
- Riders should be lying flat on the back, with ankles crossed and arms crossed over the chest.
- Riders must not sit up until they come to a complete stop.

When dispatching a rider, the lifeguard needs to confirm that the rider is ready to go.

Riders who do not follow these directions could be injured, which may result in—

- Friction burns on the legs and arms.
- Bumps and bruises if the rider sits forward and tumbles down the slide.
- Head, neck or back injuries; broken bones; or sprains if the rider tumbles or twists down the slide.

Fig. 3-26



Fig. 3-27

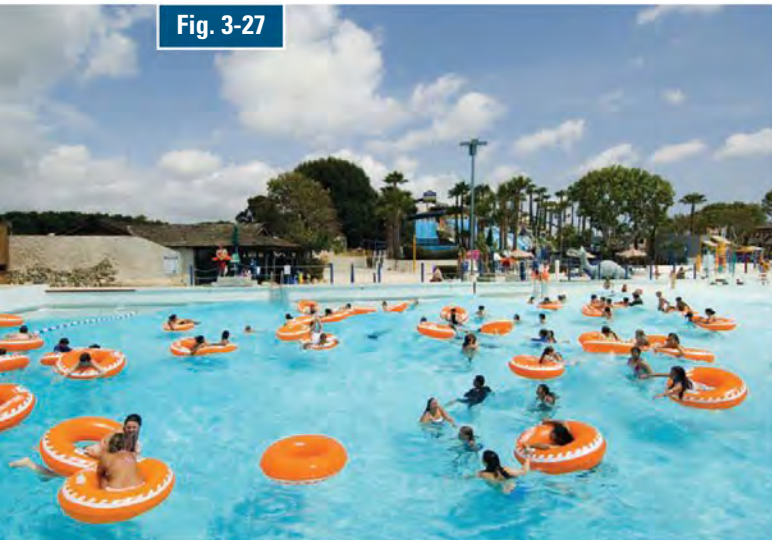


Fig. 3-28



Wave Pools

Wave pools are popular attractions that produce waves of various heights, intervals and patterns.

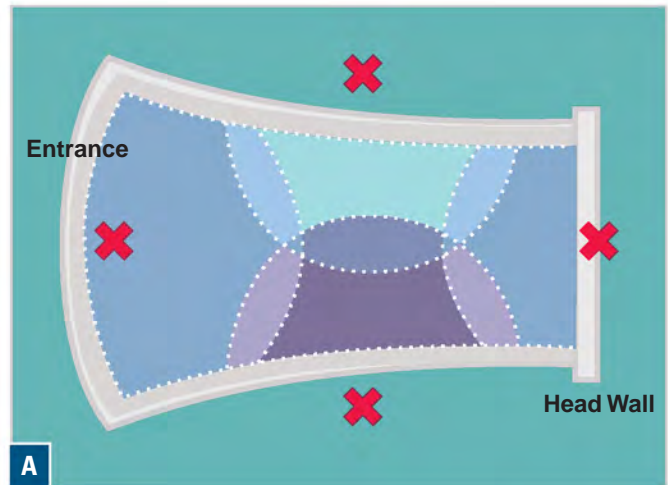
- Wave pools vary in size, shape and depth (Fig. 3-27).
- At one end is the head wall, where a mechanical system creates the waves.
- Lifeguards may be stationed on the head wall for a better view of the wave pool (Fig. 3-28).
- Many pools operate on a cycle, such as 10 minutes on and 10 minutes off. Times may vary. When waves are present, lifeguards should stand up to get a better view of patrons. When the waves are off, lifeguards might be allowed to sit, but should keep scanning. Lifeguards should rotate positions when the waves are off.
- Lifeguards are often stationed at various places around or in the pool.

Wave pools have special guidelines:

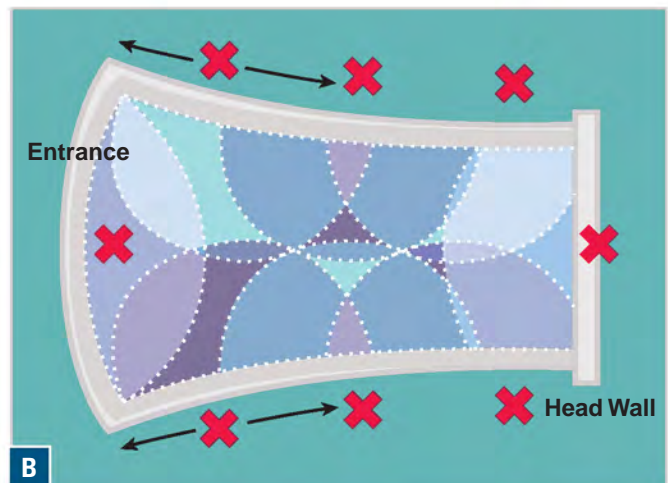
- As in other pools, the number of lifeguards depends on the size and shape of the pool, how many people are in the water as well as state and local health codes (Fig. 3-29, A-B).

Fig. 3-29

FOUR PERSON ZONE COVERAGE



EIGHT PERSON ZONE COVERAGE



- Lifeguard chairs often have an emergency stop button to turn the waves off in an emergency before a lifeguard performs a rescue (Fig. 3-30). The facility's EAP should tell how lifeguards cover all areas of responsibility while a rescue is being performed.
- Patrons often go to where the waves break because of the excitement. Inexperienced swimmers can be knocked over by the waves or carried into deeper water by the undercurrent.
- Patrons must enter the pool only at the shallow end. Do not let patrons dive into the waves. Keep the areas around ladders and railings clear so that patrons can exit from the pool quickly.
- If the waterpark has inner tubes or inflatable rafts for the wave pool, watch for inexperienced swimmers falling off



Fig. 3-30



Fig. 3-31

their tubes in deep water. When there are many inner tubes in the water, it is difficult to see everyone and the bottom. In a very crowded pool, someone who falls off an inner tube or raft might have trouble coming up for air if the surface is blocked by tubes or rafts. In addition, someone who is hit by an inflatable raft might be knocked down, hit the bottom and get into trouble.

- Lifeguards should change their scanning technique or move to a different position to eliminate any blind spots, and watch carefully in high-risk situations.
- Some wave pools have special activities like surfing at certain times. During these activities, other patrons should stay out of the pool because the surfboards or boogie boards in the wave pool present a hazard.

Kiddie Areas

Many waterparks have shallow pools for small children. Often, these areas have play equipment like slides, fountains, inflatable play equipment and climbing structures (Fig. 3-31). Lifeguards should provide effective patron surveillance at kiddie areas, even though the water may be shallow. Lifeguards need to enforce the rules, such as height and age requirements, fairly and consistently. Note that—

- Older children might be too large for some structures, or their play might be too rough for small children.
- Children often get lost. Ask adults to supervise their children at all times.
- Watch out for small children using the pool as a toilet. The facility should have a procedure for handling this situation, following local health department guidelines.
- Children usually do not consider overexposure to the sun or hypothermia. If a child is becoming sunburned or overly cold, tell the child’s parent or guardian immediately.

Special Attractions

Some deep-water pools have activities like specialty slides, diving platforms, cable swings or hand-over-hand structures like ropes, nets and rings (Fig. 3-32). These attractions might make surveillance difficult. Orientation



Fig. 3-32

and in-service training will include these attractions. Lifeguards must—

- Carefully watch both the water below and activities overhead.
- Allow only one person to swing at a time on a rope or cable swing over a deep-water pool. Do not allow horseplay on platforms. Patrons might not know the depth of the water, and nonswimmers could get in trouble in deep water.
- Not allow diving in water less than 9 feet deep.
- Watch for overcrowding and horseplay on “lily pads”—flat, floating structures tethered to the bottom of the pool that allow patrons to walk from one lily pad to another, holding on an overhead rope (Fig. 3-33).
- Carefully watch patrons using inner tubes or rafts on a rapids ride, which is a rough-water attraction that is like white-water



Fig. 3-33

rafting. Lifeguarding responsibilities are similar to those for water slides and winding rivers. Patrons should be in the same body position as on water slides. Lifeguards should be positioned at the top, the bottom and in between to watch all parts of the ride (Fig. 3-34).

- Enforce the height requirement on slides in which the rider sits on a plastic sled. Lifeguarding responsibilities are similar to those at other slides, such as free-fall slides. The lifeguard at the top of the slide starts sledders with a mechanical control. The lifeguard at the bottom watches for a sled flipping over. A signaling system is used to start riders.

Fig. 3-34



Youth Camps

Waterfront and swimming pool facilities operated by youth camps implement additional prevention strategies. Prevention strategies may include—

- **Safety orientation.** All campers are familiarized with water safety rules and regulations prior to in-water activities.
- **Smaller swimmer-to-supervisor ratios.** Lifeguard areas of responsibility and patron loads are generally smaller than at many public facilities. Although trained lifeguards are essential for proper supervision, they may be supplemented at some camps by other personnel serving as spotters or lookouts after proper orientation. These individuals do not take the place of lifeguards or reduce the number of lifeguards needed to provide effective patron surveillance. In addition, lifeguards must not reduce the size of their area of responsibility or become less attentive when scanning due to the presence of spotters or lookouts.
- **Classification of swimming abilities.** Campers are classified by swimming ability and limited to water depths and activities appropriate to their demonstrated skills.
- **Buddy pairs.** Campers always swim in buddy pairs and are assigned the task of informing a lifeguard if their buddy experiences difficulty.
- **Buddy checks.** Although buddy checks are primarily designed to remind buddies to look after one another, common procedures also allow repeated confirmation of the number of campers known to be in the water.
- **Health screening.** Most camps require every camper to present a health history or physical examination. Any chronic or temporary conditions that indicate special precautions while swimming are discreetly communicated to the appropriate aquatic staff members.

Careful patron surveillance and prompt emergency response are just as important at youth camps as they are at other aquatic facilities. Common practices at waterfront and swimming pool areas operated by camps help make supervision more effective. Some of these practices include the classification of swimmers and the use of a buddy system and buddy boards.

Classification of Swimming Abilities

At the beginning of the camping session, the swimming skills and abilities of all campers and staff who will be participating in aquatic activities, such as swimming and boating, should be tested through a demonstration of swimming skills and abilities. The screening results, which should be conducted prior to any other aquatic programming, will determine which aquatic activities are appropriate for each person. Appropriate safety measures must be in place during the screening process. For example, a lifeguard provides surveillance while swimming instructors or

Swim Tests

Swim tests are used to determine if a person has the minimum level of swimming ability required to participate safely in activities, such as swimming in deep water, riding a slide that empties into deep water or jumping off a diving board into deep water. There is no single set of swim test criteria that best meets the needs of all facilities or organizations. Each facility or organization establishes swim test requirements based on the facility's design and features, the activities offered and common practice.

Procedures for conducting swim tests should be provided to lifeguards by facility management in the facility's policies and procedures manual. Swim testing should occur at established times during a facility's normal operating hours and be administered by lifeguards when not on surveillance duty.

aquatic staff cross-trained as both swimming instructors and lifeguards administer the tests. A lifeguard cannot administer a test while performing patron surveillance.

The swim test allows camp participants to be classified by swimming ability. Some camps may use a system to classify swimmers and nonswimmers, while some camps may use a three-tier system, such as shallow, intermediate and deep. At the swimming area, camp participants are grouped based on their classification. In some camps, campers are assigned a color-coded tag that is used to check into swimming and boating areas.

After the initial test, additional swim tests should be conducted at intervals throughout the camping session to determine if swimming abilities have improved or for campers who arrive after the initial test has been given.

Swimming Area Sections. The swimming area is clearly marked and divided into sections for each group as defined by each of the swim classification tests. The aquatics staff should be sure that campers remain in areas where they are assigned. Nonswimmers should never be allowed in water greater than chest height. There should be some type of continuous barrier, such as buoyed lifelines, piers, decks or a beach, around the perimeter of areas set aside for nonswimmers to prevent them from accidentally straying into deep water. Areas for swimmers may be defined with individual buoys.

Buddy System

Camps use the buddy system to pair a camp participant with another camp participant of similar swimming skills and abilities and then assign them to a specific swimming area. If buddies do not have similar swimming skills and abilities, the pair should be assigned to the swimming area to which the weaker swimmer is assigned. If there are an uneven number of participants in the group, consider forming one set of three participants or pairing the extra participant with a camp counselor.

Buddies must be instructed to be responsible for one another and to stay together in their assigned swimming area. If one leaves the swimming area for any reason, the other buddy must also leave. They must be taught that they are paired to watch out for each other. They need to tell a lifeguard immediately if their buddy is in trouble or missing. *Notifying the lifeguard is the first safeguard provided by the buddy system and should prompt immediate action.* The notification focuses the lifeguard's attention on the buddy in trouble and an appropriate response is to call for an immediate buddy check.

Buddy Checks. Buddy checks are often used at camps to reinforce the concept of the buddy system, and for that reason, buddy checks are often timed. That is, the person conducting the check may count out loud to ten while inattentive buddies strive to find one another. The primary purpose of the buddy checks is to account for all swimmers and to teach buddies to continuously monitor their partner by automatically conducting their own individual buddy checks.

During instructional periods, buddies do tasks together or watch each other perform a skill one buddy at a time. Instructional techniques are geared to support the buddy concept; the class does not need to be interrupted by a group buddy check. During recreational periods, buddy checks are called as needed to maintain order and to condition buddies to stay near one another.

To initiate a buddy check, a lifeguard, lookout or supervisor gives a prearranged signal, such as a whistle blast. The buddies grasp each other's hand, raise their arms over their heads and hold still while the staff confirms that everyone has a buddy (**Fig. 3-35**).

When buddy checks are being performed, buddies do not have to leave the water. Those in shallow water may stand in place; those in deep water may move with their buddy to the side and raise hands without leaving the water. Those already on deck should remain there. If the area needs clearing at the end of the period or for an evacuation, everyone is asked to exit the water in an orderly fashion after accounting for all buddies.

During a buddy check, lifeguards should quickly become aware of anyone without a buddy. *A person without a buddy during a buddy check is the second safe-*



Fig. 3-35

guard provided by the buddy system. A buddy check is needed only if both the buddy and the lifeguard fail to notice a problem as it occurs. If a buddy check reveals a missing person, the lifeguards should immediately suspect the buddy is submerged.

In clear water, the bottom can be quickly scanned from the surface during a buddy check to locate a submerged swimmer. In water where the bottom cannot be seen and a buddy is missing, the EAP for a submerged swimmer must be activated immediately. An in-water search must not be delayed while searching for the missing person outside of the swimming area. In the process of initiating an in-water search, the buddy check must be completed to ensure there is not an additional victim.

Counting the people in the area during a buddy check is the third safeguard provided by the buddy system. Normally, a count simply confirms that the system is working. Emergency situations should be noticed long before a miss-match between the number of people known to be in the area and the actual number of swimmers indicates a problem.

Two methods are commonly used to confirm the count of swimmers after everyone has located their buddy and grasped hands. Both use a buddy board or other tracking system to note everyone who enters and leaves the area. That task is assigned to a lifeguard or other staff member.

- Method 1: Lifeguards may count the swimmers in each area and relay those numbers to the monitor.
- Method 2: Each pair of buddies is given a number. The monitor calls off the numbers in order and buddies respond when their number is called.

If everything matches, the buddy check is over. If there is an inconsistency, the EAP for a missing person should be activated.

The buddy check is especially helpful during busy times when lifeguards want to account for swimmers who are present. The buddy check gives lifeguards the opportunity to check periodically the bottom of the pool and also gives swimmers a brief rest.

Although the buddy system provides useful safeguards, buddy checks are not conducted frequently enough to substitute for normal surveillance. Lifeguards should never depend on the buddy system as the only method of supervision. They must constantly watch their areas of responsibility, looking for the behaviors of swimmers in trouble.

Buddy Boards

Some type of buddy board is needed to keep track of campers in the swimming area (Fig 3-36). They are typically large permanent structures located at the swimming area.

Based on the initial swim test, every camper should get a colored tag with his or her full name and group designation, for example, a cabin or campsite number. Tags should be color-coded or labeled by swimming ability, such as “swimmer” or “nonswimmer.” Numbered tags should only be used in place of individual name tags if a complete list of campers and their numbers is available at the swimming area to identify quickly any missing or injured person. The camper’s name is needed to access medical files and emergency contact information on file at the camp office or first aid station.

If using a permanent board, it should be mounted within the confines of the swimming area and divided into sections matching how the swimming areas are divided. Tags are placed on hooks in the appropriate section

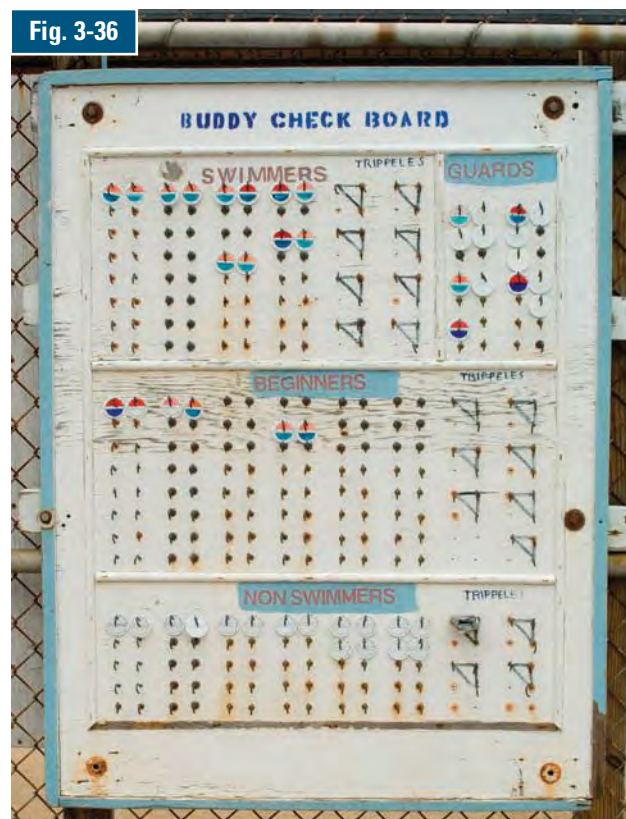


Fig. 3-36

when campers are within the area and removed when the campers leave. Tags not in use may be kept on a separate “out” board outside the swimming area, kept by the camper or collected by a counselor. Out boards are normally sectioned by campsite or cabin groups for easy retrieval. Removing the tags from the swimming area facilitates their use for boating activities as well. A single board may include both “in” and “out” sections for swimming-only tags provided the sections are clearly distinguished. Different camps have different arrangements to prevent tag loss and unauthorized use.

Before buddies enter the water, they should hang their tags on the section of the board that indicates the swimming area in which they will be swimming. If buddies decide to move from one section to another, such as from the deep section to the shallow area, they must first notify the person at the board and move their tags. Each buddy’s tag should be next to each other to indicate that they are a pair. Tags should be placed on separate hooks to facilitate a reliable count. A lifeguard or other staff member should be stationed at the buddy board to make sure the tags are placed correctly and that no one enters or leaves the swimming area without moving their tags appropriately. When swimmers leave the swimming area, they return their tags to the “out” section.

Color Caps. Another system for keeping track of campers in the swimming area is to use colored bathing caps, headbands or wristbands to distinguish swimming abilities. For example, nonswimmers wear red, swimmers wear blue or green and activity leaders or lifeguards wear white. This system can be used in addition to the buddy system or the buddy board. The advantage of using colored bathing caps is that the lifeguard can easily spot a cap in a swimming area, particularly if it is in the wrong section (**Fig. 3-37**).

Competitive Events

Participants in competitive events like swimming or diving meets, water polo games, synchronized swimming and life-



Fig. 3-37



Fig. 3-38

guarding competitions usually have good swimming skills, but they still need effective surveillance (**Fig. 3-38**). Lifeguards need to adapt their scanning techniques to their specific needs.

- Consistently enforce facility rules during competitive events as would be done during everyday operations.
- Know and understand the rules and regulations for events and the safety policies for the competitive program.
- Plan how to perform a rescue if needed. For example, a victim should not be towed across lane lines. Check the facility’s EAP for how to remove a victim from the water when lane lines are in place. Know how to remove lane lines (and where the tool is kept) in case this is needed during a rescue. The same is true for boundary lines in water polo.
- Have swimmers follow the rules set for the lanes. For example, accidents can occur when swimmers attempt to enter already crowded lanes. Enforce feet-first entries into the pool; racing starts are allowed only in designated, supervised lanes.
- If a pool has bulkheads, take a position where the water on both sides can be seen, or make sure there are enough lifeguards to scan both sides of the bulkhead (**Fig. 3-39**). Do not allow swimmers under the bulkhead.



Fig. 3-39

- During swim practices, scan the bottom frequently since practices can be crowded. Be aware of and watch for the possibility of swimmers colliding with the pool wall during turns and finishes and with other swimmers.
- In diving practices and competitions, watch for each diver to return to the surface. Take a position with a good view of the bottom.

Instructional or Therapeutic Activities

It is recommended that a lifeguard, in addition to the instructor, be present during instructional activities, such as swimming and diving lessons, water exercise and water therapy classes. Lifeguards should follow these guidelines:

- Different precautions might be needed, depending on the ages and abilities of participants. Note how tall participants are and the water depth where they are practicing. Make sure nonswimmers do not enter water more than chest deep without their instructor.
- Be sure infants and young children are with a parent or other responsible adult while in the water.
- Watch for signs of any participant becoming fatigued or chilled.
- In therapy programs for people with medical conditions, be familiar with the conditions of the participants.

PUTTING IT ALL TOGETHER

A lapse in coverage—even for just a few seconds—might result in injury or death. A lifeguard must be able to recognize a distressed swimmer and an active or passive drowning victim. Effective scanning techniques and lifeguard stations are needed to locate people in trouble.