



Pool Events

Coaching Manual 5th Edition



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Note: Please regularly check the ILS sports competition manual for any rule changes. The manual can be downloaded from the ILS website www.ilsf.org

Pool lifesaving events combine the skills of stillwater swimming with lifesaving techniques.

There are numerous pool lifesaving events, which can be broken down into four main skills: swimming, swimming with fins, swimming under obstacles, carrying and towing a manikin. Manikin carrying is done both with and without fins.

As these core skills make up most of the events of pool lifesaving this manual will concentrate on them. This section will also provide a brief overview of some of the other skills that are required for certain events. These include: starts, relay changes, picking up the manikin, and putting the tube on the manikin.

An example of some of these skills combined into a pool lifesaving event is the 200m with obstacles. This event consists of starting the event, swimming under obstacles, and swimming between the obstacles at maximal speed.



Technique

Pool lifesaving events are skills oriented. These skills require practice for a competitor to become proficient in a stillwater lifesaving event. In this section we will focus on these specific lifesaving skills rather than the swimming technique. Information on the swimming technique can be gained from swimming specific manuals.

Swimming under Obstacles

Swimming under obstacles is a core skill of two events, the 200m with obstacles and the 4 x 50m obstacle relay. Obstacles are placed 12.5m from either end of a 50m pool. Each obstacle is submerged 70cm and can not be passed through. The objective of obstacle events is for the competitor to swim under the two obstacles each lap in the fastest possible time.

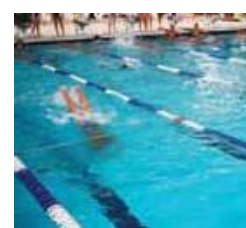
The most efficient way to negotiate the obstacles is to spend as little time as possible underwater. The closer you can swim to the obstacle and the steeper the descent, the less time spent swimming underwater, which is considerably slower than swimming on the surface and is less energy efficient. The less time spent returning to the surface after negotiating the obstacle, the quicker you can begin accelerating to your maximum swimming speed.

Approach to obstacle

- Swim towards the obstacle as normal.
- Swimming speed should be maintained on approach to the obstacle

Descent to obstacle

- At approximately 0.5-1 m from the obstacle take a last stroke.
- On the entry of the hand after the last stroke dive steeply towards the bottom of the pool.



Going Under the Obstacle

Use a strong dolphin kick and pull through with both arms (as in the underwater section of a butterfly stroke) to swim under the obstacle

Ascent from the obstacle

A powerful dolphin (or 6 beat) kick and momentum is used to propel the swimmer towards the surface. The angle of ascent is very important. If the ascent is too steep the swimmer will be in a near vertical position on breaking the surface. This will decrease momentum and make it more difficult for the swimmer to accelerate back to swimming speed. If the swimmer's return to the surface is too shallow they will lose speed and have greater energy costs associated with being underwater for a longer period.

Just before breaking the surface, the swimmer should position their arms so they can immediately take a swimming stroke on surfacing. On breaking the surface a strong kick is used to increase speed. If the swimmer doesn't take a breath immediately after surfacing it will aid a faster return to swimming speed.

Common mistakes

- Swimmers often attempt to swim under the obstacles by going under the water too early e.g. more than 1 metre away from the obstacle. This means the swimmer is submerged for a longer period, which is slower and has increased energy demands.
- In an attempt to make a fast/steep descent under the obstacle, swimmers may go too close and hit, or become caught up on the obstacle. This can cause time delays and disruption to the swimmer's rhythm.

Surfacing too steeply will cause the swimmer's body to be in a vertical position rather than horizontal on breaking the surface. A horizontal position will create better streamlining, allowing the swimmer to maintain greater momentum and therefore return to their optimal swimming speed more quickly and efficiently.

Can you push off the bottom?

Swimmers are allowed to push off the bottom of the pool when negotiating obstacles. The rules for championships state that a pool must be a minimum depth of 1.8m, so the extra time and energy taken to swim underwater from the bottom of the obstacle (70cm depth) to the pool bottom (minimum 1.8m depth) makes it difficult. Many male competitors use this method, but very few female competitors.

Can competitors stay submerged after the dive to negotiate the first obstacle?

No. Swimmers must break the surface after the dive before negotiating the first obstacle.

Carrying a manikin

The skill of carrying a manikin with or without fins is vital, as it plays a role in many of the lifesaving events i.e. 50m manikin rescue, 100m manikin tow with fins, 100m manikin tow with fins, super lifesaver, 100m combined rescue medley, 4 x 50m rescue tube relay and 4 x 25m manikin relay.

In International competition the most common techniques used to tow manikins are;

1. Single arm freestyle where the manikin is carried using the non-swimming arm.
2. Carrying the manikin whilst on back using combinations of breaststroke, freestyle or dolphin kick and the free arm to pull through the water.

There is no "best" carrying technique. The most appropriate technique will be dependent on an individual athlete's characteristic e.g. excellent breaststroke kick, strong freestyle kick and body shape. Athletes should trial a number of methods to determine what best suits them. Swimmers should use the arm that they consider their stronger arm to pull themselves through the water.

When learning to carry a manikin, swimmers will stop and start because it is a difficult skill. Once the manikin is moving, the momentum of the manikin and the buoyancy of the water make it easier to keep the manikin moving. Every time the swimmer stops, the manikin sinks in the water and an extra effort is required to get the manikin back into the towing position.

1. One arm Freestyle

- Lay horizontally in the water as if you were swimming standard freestyle.
- The swimmer holds the manikin by the back of the head or behind the neck using their non-favoured arm. The exact location of the grip can depend on the strength and size of a person's hand.
- The towing arm is positioned so that it is slightly bent, pulling the manikin towards the midline of the body and up towards the swimmer's head.
- Using the free arm and a strong freestyle kick the athlete swims with a modified freestyle technique. The shoulder reach is taken out of the swimming technique and the stroke is short with a high rating.



The optimum carrying position is difficult to maintain. The manikin often drifts away from the body creating a greater surface area to push through the water. This is because it is an easier position to maintain as it places less stress on the towing arm.

The correct arm position is slightly bent, pulling the manikin towards the body and up towards your head. This is an uncomfortable position but is more effective for two reasons. Firstly this is a more streamlined position with less surface area exposed to the water. Secondly, this position allows the manikin to sit higher in the water, which will make disqualification less likely due to the face being elevated out of the water.

It is important to go hard into the wall – if you don't, the manikin will sink due to a falling off of speed and it takes a huge effort to get it going again.

A competitor should not be disqualified if the nose and mouth get submerged during part (less than 50%) of the event. But the swimmer needs to make every attempt to keep the manikin's head above water at all times.

2. Carrying the manikin on your back

- The swimmer is positioned laying on their back
- The swimmer holds the manikin by the back of the head, behind the neck, with a pistol grip, or with one arm over the manikin's chest using their non-favoured arm. The exact location of the grip can depend on the strength and size of a person's hand.



- Towing arm is extended, holding manikin over the top of the legs.
- The non-towing arm is used to swim as if you were doing backstroke
- Legs are used to do either a breaststroke or a freestyle kick depending on the athlete's strengths. If using this technique when carrying a manikin with fins the swimmer has the choice of doing either a freestyle or dolphin kick.

Common Mistakes

As the swimmer tires they let the manikin slip towards their feet. Keep the manikin's head on your chest to aid its buoyancy, not get in the way of your kicking action and so the head is not submerged at any time.

Swimming with fins

Swimming with fins is used in stillwater lifesaving events such as the Super lifesaver, 100m Manikin carry with fins and, manikin tow with fins. Swimming with the approved competition fins is not the same as the rubber fins used in everyday swimming training. The fins used in pool lifesaving events can measure up to 65cm in length with a maximum width of 30cm. The fins are of rigid construction and can be used to create powerful propulsion both on the surface and beneath the water.

The dimensions and construction of each competitor's fins will depend on their leg strength and kicking style. Swimmers who have a lot of leg strength may use fins with a wider blade and more rigid construction, as they are able to use their strength to generate greater propulsion. Swimmers who use a rapid kicking technique may choose to use smaller bladed fins, which have a little more flexibility allowing them to generate greater kicking speed and in turn greater speed through the water.

The type of event to be contested also plays a role in selection of the size and rigidity of the fins to be used. Longer events such as the Super Lifesaver, which require sustained leg drive over 200m metres, and in particular over the last 50m where competitors tow a manikin in a rescue tube, may require smaller and more flexible fins so that the competitor does not overload the muscles early in the event. In a short race, such as the 50m underwater leg in the Rescue Tube relay, you may use larger fins so that maximum power can be generated over the shorter distance and time. Kicking techniques using fins can be divided into two styles, freestyle kick and dolphin kick. The technique used is dependent on the individual's leg strength and leg speed.

Freestyle kick – A fast shallow kicking action where the movement of the fins comes from the ankle.

Dolphin kick – A dolphin kicking motion where the movement comes from the hip so that the fins are an extension of the body.

If competing in an event that requires fins to be put on during the event such as the 200m Super Lifesaver, a lubricant can be placed into the fin so that it is easier and faster to put them on during the race.

Common Mistake

Competitors often use whatever fins are available to them on the competition day. Often these fins have a blade which is too big and requires strength that the swimmer does not possess. This will result in increased effort and slower times. It is advisable to have access to fins that are suited to the swimmer and that they have trained with them.

Starts

Starting in still water lifesaving events is a skill, which many "surf" swimmers work on in their early development as a swimmer, but don't continue as they focus on surf based events. It is essential that the swimmer has practiced their starting position prior to competition. This section will not go into detail on starting technique as it is covered in various swimming specific manuals. The variations to a regular swimming start are with a tube and/or fins.



Starting with a tube

1. Rescue tube on your back

- Place the sash of the tube over the shoulder as normal
- On the starter's instruction mount the starting blocks with the tube in the swimmer's hand.
- On the command "take your marks" the tube can be placed so that it lays vertically on the swimmer's back. At this stage the swimmer is in a bent over position that the tube can be balanced
- On the starter's signal the swimmer dives into the pool. The tube is allowed to drag behind the swimmer as they leave the starting blocks and enter the water.



2. Rescue Tube by your side

- Place the sash of the tube over the shoulder as normal
- On the starter's instruction mount the starting blocks with the rescue tube held in the swimmer's hand at their side.
- On the starting signal, dive as per a normal start letting the tube fall to the side and behind the swimmer.

Starting with Fins

- Place as much of the fin over the edge of the block so that the swimmer almost feels off balance.
- Dive off the block in a streamlined position and then bend the knees so the fins enter the water with a clean entry for the fins.
- Aim for a minimal surface area of water being broken by the entry of the fins.

Manikin Pick Ups

Picking up the manikin is a skill used in many events. A mistake in this area could result in a poor result or event disqualification. There are two types of manikin pick-ups.

1. Picking up manikin from the centre of the pool i.e. away from the pool ends.

- This skill is required in the 50m Manikin rescue, 100m Rescue Medley and 200m Super Lifesaver. The manikin is positioned on the bottom of the pool, face up with the head pointed in the direction that the swimmer is going.
- At approximately 1-2m from the manikin the swimmer takes their last stroke and dives steeply towards the bottom of the pool aiming for approximately the middle of the manikin.
- As the swimmer arrives at the manikin they should grab it by the throat or shoulder and give it a short, sharp lift to start the manikin moving from the bottom of the pool.
- Once the manikin is rising from the bottom the swimmer manoeuvres the manikin into the position that they use for carrying.
- The swimmer uses their legs to push from the bottom and perform a strong kicking action to rise to the surface. The angle of ascent is very important. If the swimmer ascends too steeply they will be in a near vertical position on breaking the surface
- This will decrease momentum and make it more difficult for the swimmer to get their optimum towing speed. Likewise if the swimmer's return to the surface is too shallow they will lose speed and have greater energy costs associated with being underwater for a longer period.



Common Mistakes

- Swimmers often let themselves float to the surface after picking up the manikin.
- The swimmer must return to the surface within 5m of the pick up zone. If the competitor does not surface by this point it will result in disqualification

2. Picking up the manikin at the end of the pool

The second type of manikin pick up is used in the 100m Manikin Carry with Fins. In this event the manikin is positioned at the 50m mark. It is positioned face up with the head pointed towards the finishing wall.

- The swimmer approaches the manikin at a fast speed because they have fins on.
- As the swimmer approaches the turning wall the swimmer submerges and swims the last section underwater.

- The swimmer grabs the manikin by the throat or shoulder and gives it a short, sharp lift to start the manikin moving from the bottom of the pool.
- The swimmer turns around, pushing off the wall with their feet, captures the manikin with two hands around the head or arms, and streamlines to the surface.
- The swimmer changes to the carrying position on the way to the surface. The swimmer must surface before going 10m.
- The swimmer uses a strong kick to accelerate up to towing speed, which lifts the tail of the manikin reducing drag.

The competitor's hands do not have to touch the wall during the turn.

Common Mistakes

- Because the swimmer has the ability to generate a lot of power with the fins used in the event that this pick up is used for, it is common that the swimmer does not surface with the manikin within the 10m allowed. If the competitor does not surface by this point it will result in disqualification.
- Swimmers must maintain speed right until they touch the wall, as any reduction in speed will cause the manikin to sink, making it more difficult to tow

Placing the tube on the manikin

In the 100m Manikin Rescue with Tube and the 200m Super Lifesaver the competitor is required to swim with a tube before placing it around a manikin and then towing it to the finish. The manikin is positioned at the end of the pool in a vertical position with approximately half of the manikin above the water line. It is facing the wall and is held by a teammate of the competitor.

There are various ways to attach the tube around the manikin:

- After touching the wall, grab the manikin and lay it on your chest, then grab the tube with the other hand and place it on the manikin's chest, then remove your hand from the manikin and grab the end of the tube and clip it together
- After touching the wall and the swimmer pulls the tube by the rope towards themselves. They place the tube around the manikin by either placing it over its head or around the side. The clip is fastened and the competitor commences swimming.

Competitors can start moving off the wall while clipping the tube as long as they don't go outside the 5m zone.



Common Mistakes

- The tube is not done up correctly, resulting in the tube falling off the manikin once the swimmer has commenced the swim to the finish wall. The tube is not positioned evenly under the arms of the manikin resulting in the manikin twisting in the tube and being face down. Either situation will result in disqualification.
- Competitors not looking at what they are doing underwater while securing the clip.
- Not securing the clip by the 5m mark
- Competitors not giving the rope a tug as they begin swimming after clipping the manikin. This helps to pull the manikin securely in position to effectively tow

Training / Drills

Competition in stillwater lifesaving events is irregular for most surf lifesaving competitors. It is rare to see competitors practising the skills for stillwater lifesaving events at any other time than in a build up to a world championship. These biannual bursts of training do not create optimal skill development.

It would be more beneficial for the swimmer's development if skill practice was integrated into the regular yearly training plan allowing adaptation and development of these unique skills.

The fundamental skill required to be successful in stillwater lifesaving events is the ability to swim well. However, in order to become proficient in stillwater lifesaving events it is not only essential that you swim well but also can perform the specific lifesaving skills under the pressure of race conditions. This therefore places a greater emphasis on event specific training, and in particular race simulation. Both the individual skills in isolation and in combination with events need to be practiced.

There are two training options for pool lifesaving skills. The first option is to combine practice into a regular swimming program. That is, the coach may design lifesaving skill practice into swimming sessions. This would be rare, as there are only a small number of swimming coaches who have experience in lifesaving competition skills. Alternately you could undertake specialised sessions for pool lifesaving events where you concentrate solely on lifesaving competition skills.

Swimming under obstacles

The skill of swimming under obstacles requires training sessions to be undertaken in the pool. Training or drills will consist of sets, which are specifically the drill of swimming under the obstacles and also sets, which combine swimming under obstacles within repetitions of set distances e.g. 10 x 50m with obstacles or 8 x 100m with obstacles

Swimming with Fins

Use of competition fins requires specific development of muscles to accommodate the workload that is placed on them. Competitors who do not undertake sufficient specific training with fins prior to competition will find it extremely painful to finish the events at the required intensity due to a rapid and large build up of lactic acid. Therefore it is essential to incorporate training with fins into the regular training program. As with any program the training load should be progressively increased. As this is often a skill that is Pool Events Training / Drills - Competition new to a swimmer or not practised on a regular basis the coach needs to be careful not to overload the muscles and joints which are placed under increased stress during this skill.

As events that contain swimming with fins vary from short intense efforts such as 50m underwater to efforts, which come at the end of 200m such as in the Super lifesaver, it is essential to utilise the principle of specificity. Competitors should perform training sets which replicate the type of event they will be competing. 25m and 50m efforts to simulate the short events or 200m repetitions building the pace to maximum effort in the last 50m to simulate the effort in a 200m Super Lifesaver.

Carrying a manikin

As mentioned previously there are a number of techniques, which can be used to carry a manikin. Once the competitor is happy with the method they have chosen it is essential to practice this technique. The most effective way to develop the skill of carrying a manikin is to practice the skill in its entirety. At first the training may consist of sets of 10-15m intervals of towing the manikin. With refinement of the skill these intervals can be increased to 25m and longer. Also as the skill develops, simulation of actual events can be introduced e.g. including the swimming and pick up portions of events into the practice to make the training more specific.

The training for other skills that have been mentioned such as: starts, manikin pick ups, relay changeovers and putting a rescue tube on a manikin; will require practise firstly as an independent skill. Once they are mastered the skills should be practised as a part of a specific event.

Competition

Warm Up

Warming up and maintaining this state of readiness can be extremely difficult in stillwater lifesaving events. In many cases the swimmer is only able to warm up prior to the commencement of the competition session and then has to wait until it is time for their event. In this case it is important that the swimmer tries to retain their readiness by performing light exercises/stretching between the conclusion of their

warm up and the commencement of their race. In some competitions the event venue will have a secondary pool, which can be used as a warm up pool. If this is the case it is preferable to time a warm up so that there is minimal time between warming up and commencing the event.

A comprehensive warm up can include:

- Stretching / flexibility exercises
- Skill practice
- Aerobic swimming to promote increased blood flow
- Short / intense efforts
- Massage

Warm Down

Whether it be between events, or at the conclusion of a day's competition, warming down can assist in the swimmer's recovery for either their next event, to prepare for the next day's competition or to get back to normal training.

A warm down will assist the swimmer to remove any build up of lactic acid and is more efficient than a sedentary recovery, assisting to decrease post event soreness.

Relays and Change Overs

4 x 25 Manikin Tow

To be successful at this event the athlete needs compatible changeovers in terms of towing style and the hand each competitor uses to tow. Fast, efficient changeovers are essential, especially the critical second and third changeover.

The order of towing is usually determined by the hand the competitor chooses to tow.

- The starting position for swimmer #1 requires support of the manikin in a horizontal position using one leg as support under the manikin.
- One hand touches the wall while the other grabs the manikin in the position of the tow.
- The changeover between swimmer #1 and swimmer #2 involves the swimmer #1 really thrusting the manikin hard towards the swimmer #2 on their last stroke.
- Swimmer #2 is waiting at the 25m mark on the side of the lane that is compatible with each others swimming arm.
- Swimmer #1 slightly lifts the tail of the manikin as swimmer #2 takes the manikin
- Swimmer #2 may come from under the water's surface to affect a smooth, fast handover.
- The changeover must take place between 23m to 27m or 73m to 77m markers. The stronger of the two at towing should try to tow longer, where possible.
- The changeover between swimmer #2 and swimmer #3 involves swimmer #2 touching the wall.
- As swimmer #2 touches the wall, they push the head of the Manikin towards swimmer #3.
- Swimmer #3 keeps the end of the manikin in a horizontal position by pushing its tail up with one hand taking care not to render assistance by pushing the manikin
- Swimmer #3 must remain in contact with the wall until swimmer #2 touches
- Swimmer #3 then grabs the manikin in the correct head position for their tow and tows the manikin to affect a changeover the same as between swimmers #1 and #2.

4 x 50m Medley Relay

Swimmer #1 swims flat out 50m freestyle

Swimmer #2 swims underwater with fins. They may swim the whole 50m underwater (streamline with fly kick)

- Swimmer #3 swims 50m with rescue tube over one shoulder – the rescue tube is fully extended (not looped and clipped) throughout all 4 legs of the event
- Care must be taken by swimmer #3 to touch the wall with the hand on the opposite side to the shoulder with the rescue tube strap.
- Swimmer #4 takes the strap off swimmer #3, puts it on their shoulder and starts swimming.
- Swimmer #3 lunges forward for the rescue tube, grabbing it halfway along the tube, to provide some security if the tube slips out of your hands to regrab it.
- Swimmer #3 is on their stomach or back, head underwater as much as possible and kicking vigorously to assist swimmer #4 to the finish.

Line Throw

The rescuer stands on edge of pool holding one end of the 8mm, 17m long rope. The patient in the water holds the throw line with one hand and the 12m crossover line (a rigid rope between the lanes at 12m out from pool end) with the other hand. On the start signal the patient releases the throw line while the rescuer retrieves it and throws it back to the patient, who grabs the line and is pulled through the water to the edge of the pool. There is a 30 second time limit for the event.

There are many different methods of retrieving and throwing the rope. Accuracy and speed are essential to win, but if the club is looking for points, they may sacrifice speed for accuracy, as there are often competitors that don't make the time limit.

- The rescuer must stand to attention.
- On the signal, the rescuer puts one leg forward and rests their wrist on their thigh.
- The wrist is kept still as it receives the loops from the other hand, which is pulling on the rope.
- The loops are quite loose – four loops for accuracy and three for speed. (It is easier to throw the smaller coils accurately). If the decision is made to throw overarm, concentrate on throwing the coils with a straight arm action. If an underarm action is taken, the throwing arm is lightly bent.
- The patient must still be holding the middle marker on the crossover line. With the other hand they grab the rope end either in the air or on the water surface. They cannot submerge to retrieve the rope
- The rescuer then pulls the patient in, who is on their stomach, holding the rope with both hands, head under water and kicking vigorously.

Equipment

Stillwater lifesaving competitions are similar to surf swimming and require very little equipment other than a competitor's swimming attire. The competition cap or swimming cap (swimming caps are allowed rather than a traditional competition cap), swimming costume and goggles are the basic equipment required. In addition to this the only piece of equipment that a swimmer is required to have with them when racing would be a pair of fins if competing in a race that requires these. All other equipment is standardised and will be supplied by the competition organiser i.e. manikins, rescue tubes and obstacles. It is essential that a swimmer have access to this equipment for training.

Your equipment should be checked prior to competition. Swimming caps should be checked to ensure they are not perished and likely to break. If wearing goggles the strap should be checked to ensure it is not likely to break and the rubber seal is good. It is suggested that you do not utilise new goggles for the first time in a race. Goggles should be used in training to ensure a suitable fit, and ensure that they do not leak. It is also essential that if swimming a relay that team costumes are uniform as per the surf sports manual. If using fins these should be checked to ensure that there are no fractures in the blade and that the foot strap is not perished or likely to break.

Equipment Checklist	Yes	No
Swimming caps are not perished or torn		
Correct club costume worn		
Goggle strap not likely to break (if required)		
Blade of fins doesn't have any fractures which are likely to break		
Foot strap of fins is not perished and likely to break		
Swimming cap not perished or likely to tear		