Surf Life Saving GB

SLSGB Discipline Specific Coaching

A technical Coaching resource for
Surf Life Saving Sport

Contents

SURF SWIMMING

Introduction

Participants in surf swimming, as with any sport, are always looking to improve their performance. Most individuals think of physical training as the only way to improve. Although a well thought out training plan can be very effective in creating the correct physiological adaptations, it is also important to consider the many other skills, techniques and variables which significantly enhance overall performance. Each aspect of skill, technique or knowledge may only seem to provide the participant with an extra second or two, but each of those seconds adds up. Improving skills and technique provide the participant with the opportunity to get a step ahead before even starting physical training or putting in extra effort. If skill and knowledge levels are particularly low to begin with, it is possible to gain minutes even over a short 400m surf swim race.

The beauty of surf life saving is that there are so many areas in a race where an advantage can be gained. Swimmers who swim a 4:30 400m in a pool have the potential to compete with and even beat 4 min 400m swimmers. I have seen this happen even with experienced competitors on a day with only knee high surf. Skill development is extremely beneficial!

You should not look at any one of the areas mentioned in this booklet as 'the key' to success, but look at every possible area for improvement and make all of those refinements add up.

The following skills will be covered in this booklet and can be practised individually or grouped together:

- The start
- Sprint
- Wade/ dive on short steep bank
- Porpoise/dolphin dive
- Duck dives
- Swimming/pack swimming
- Turns around the cans/buoys
- Swimming into chop
- Swimming with chop/swells
- Catching waves (from swimming and standing)
- Other ways to tackle big surf
- When to dolphin/wade again
- Get over the final wave and finish

As explained previously, even an elite competitor averaging a half second improvement on each section of the race will be 6.5 seconds or one wave faster than before. However for most it will be much more.

The Start

A good start allows the participant to move clear of the other competitors - avoiding trips, inevitable bumps from rivals or getting stuck behind a group when wading or dolphin diving.

It is possible to make small angled blocks in the sand with your feet to grip with, and allow more power in the intended direction of motion (figure 1). Your legs should be slightly flexed with your body weight over your front foot. Body weight should be far enough forward that you participant would begin falling/ running forward with any slight anterior movement. The opposite arm and leg should be forward when poised for the start (figure 2) This allows for correct timing, balance and power in the first few steps of acceleration.

Figure 1. Foot positioning

Figure 2. The start position

Tips

Figure 1

Angled foot blocks in the sand

Figure2

Eyes looking forward assessing conditions.

Opposite arm and leg forward in start position.

Knees bent ready for explosive start.

Body weight low and over the front foot.

Safety Point!

Clear the area in front of the start line from rocks and potential hazards.

Sprinting

Movement on the start is initiated as the body's centre of gravity moves beyond the front foot, with an alternating arm to leg action. This is a natural movement for most individuals (to run with an alternating arm and leg action), however, some participants appear to have difficulty when co-ordinating this alternating movement for a sprinting start, especially into water.

It is important to ensure that if the left foot and right arm are forward in the start position, the first movements are the right leg and left arm moving forwards and vice-versa. For initial acceleration the body stays low and becomes increasingly upright as maximum desired speed is reached (see figure 3.1-3.4). From here your body angle, speed of foot release from the floor and ability to avoid unwanted vertical movement of the body will determine maximum speed reached. (For more detailed analysis on running technique see the SLSA Surf Sports Beach Event Manuals).

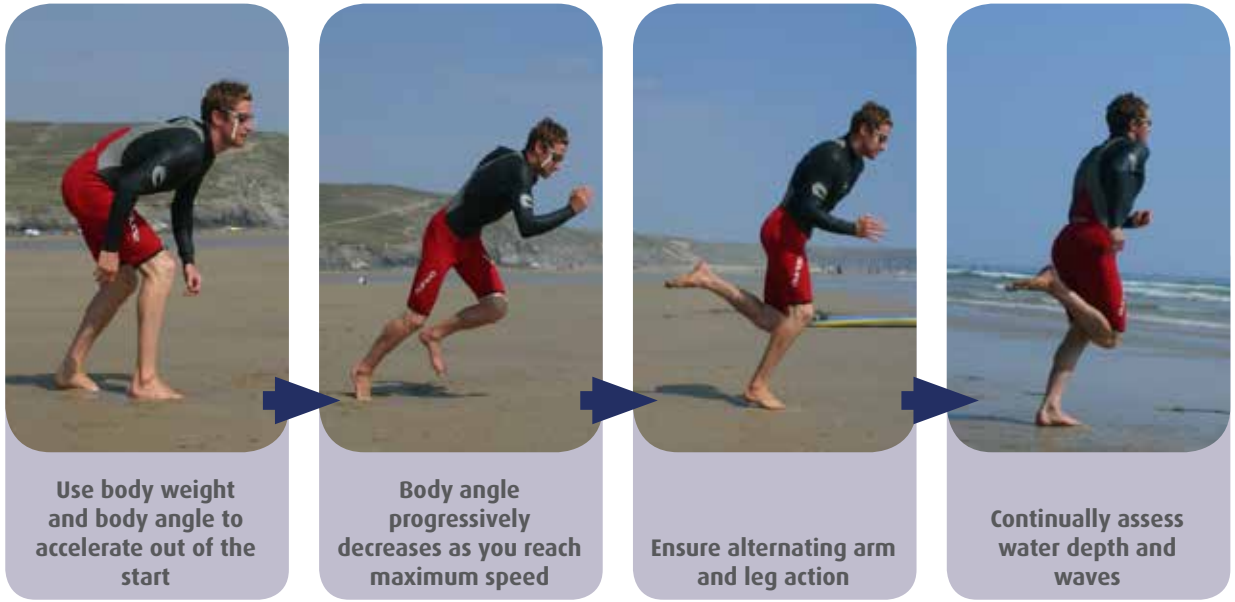


Figure 3. The sprinting start

Safety Point!

Ensure that participants are fully warmed up prior to the start of training or a race.

Tips

Many people think that they should not go too hard at the start of a race.
It is important to understand that the body's energy systems allow maximum speed/effort for approximately 3-4 seconds without any adverse effect upon the latter part of the race. Speed gained here also helps with momentum needed for the wading section of the race. The participant should not continue at maximum speed for extended duration, as instigating an early oxygen debt can negatively effect swimming performance.

Running Dive or Wade?

Depending upon conditions/beach type there are two options when reaching just above ankle depth water; a running dive or wading (figures 4 and 5).

It is up to the coach and participants to assess conditions prior to the start of a training session to clarify how deep the water is and which technique is appropriate. The majority of beaches in the UK have very shallow gradient into the water (mainly due to our large tidal range) and wading is therefore an essential component of surf swimming skills training. However, many beaches used for competing abroad have much steeper inclines into the water and for effective entry a running dive is the preferred option. The two techniques are covered in more detail on pages 6 – 8.

Figure 4. A Running dive into the water.

Figure 5. Start wading

Running Dive

On a beach with a very steep gradient into deep water, wading is inappropriate and a running dive is the most effective means to enter. After the initial sprint, momentum must be maintained into a continuous launching dive (do not stop and then dive!) . Notice at the start of the dive that although the shoulders are abducted elbows remain flexed. On entry hands should be outstretched above the head and pulled in tight to the ears. The body should be straight with the knees extended, feet plantar-flexed (pointed), chin tucked into the chest and eyes looking downwards before making contact with the water (figure 6). The dive should be shallow enough to gain maximum motion forward and avoid contact with the sea bed below. Ideally diving to about 0.5-0.75 metres below the surface. Initial running speed and effective transfer of the speed into the dive can take you up to 10m without even having to take a single stroke!

Figure 6. Performing a running dive into the water

Figure 7. Clearing a wave on a shorebreak

Safety Point!

Before performing this type of dive, check that the water is deep enough and that there isn't a sand bank just off the shore that you may hit if the dive is too deep.

Tips

Figure 6

- **Do not dive too deep. Keep the dive long and shallow.**
- **When transferring running speed into the dive, ensure that body weight is launched upwards and forwards.**
- **Make sure the head is down, hands tucked in tight and body out stretched and streamlined on entry.**

Figure 7

- **On a shore break the start should be timed, so you can effectively clear.**

Wading

Good wading can provide a greater advantage than any other single skill used on a surf swim course in most UK conditions (other than body surfing in good sized waves). It is often the deciding factor between winning and losing races. This is mainly due to the fact that running is approximately 5-6 times faster than swimming. Wading is as close to running as we can get in the water and therefore every extra step taken in wading is crucial. Wading is performed on beaches with a shallow gradient into the water where you cannot use the running dive technique. It involves running with abduction of the leg, slight lateral flexion of the spine on leg lift and a very pronounced arm action to maintain balance and momentum (see figure 8 and page 8).

Figure 8. Wading

Tips

It is always faster to wade or run than to swim or dolphin dive (if water depth is correct). Wading should be used as a tool wherever possible. This is especially important when swimming across a gully and reaching a shallow sand bank or at any time the participant finds them self in water below mid-thigh depth.

- **Arm used for balance, rhythm and power.**
- **Abduction of the hips and slight lateral spine flexion with a flexed knee allow the leg to clear the water effectively.**
- **Continue wading up to mid-thigh depth.**

Safety Point!

Be aware of pot holes, check the area intended for entry before wading or a race.

Wading *(continued)*

Effective Wading Pointers

1) Maintain alternating arm and leg actions as with the sprint start.
2) Maintain momentum and rhythm by keeping timing of strides the same (Do not perform 'hop skips' momentum is lost immediately).
3) As the water gets deeper, strides will slow down but hip abduction should be increased without effecting rhythm.
4) Always try and take one more stride than you think is possible, as the most common mistake is to stop wading too early in water that is too shallow and fall into a dolphin dive or walk. This makes it difficult to get started again.
5) Wading should be continued until mid-thigh depth or until the legs no longer clear the water (figure 8).
6) Attempt to wade and get a step on the other side of any wave, as the water level behind the wave is always lower than the wave itself.

Figure 9. Wading across a sandbank

Tips

Ensure that you always run, wade, dolphin dive or swim. Never walk and never stop.

Figure 10. Wading over a wave

Safety Point!

Weaver fish stings are common at low tide so have some hot water ready and ensure that participants with known allergies have the required medication at hand.

Dolphin Dives

The fastest way to progress through water from mid-thigh depth to just below the rib cage is dolphin diving. This involves launching dives forward into the water (figure 11). The first stage is the same as a running dive with the hands at the chest (abducted shoulders and flexed elbows) A large spring off the seabed is required and the participant must aim to achieve streamlined position (as in the running dive). The head, hips, knees and feet enter the water, in that order, through the same point as the hands entered. As soon as the participant begins to lose speed in the water from the dive and glide, they must to spring off the bottom again immediately . On the average UK beach 4 to 5 dolphin dives will take you to the correct depth, but on some beaches you may have to continue up to 20 times before reaching rib cage depth water.

Figure 11. Dolphin diving

Safety Point!

Some beaches have stones or rocks under the water so check for these prior to starting training or a race.

Tips

The most common mistakes when performing dolphin dives are:

- **Not jumping into the dive but just falling into it. It may feel like energy is being saved by falling into a dive, but less progress is made and more dives are required to gain the same ground.**
- **Walking or bouncing on tip toes and then trying to do dolphin dives in water that is too deep. If the body remains in a vertical position for more than a split second the participant is probably too deep to dolphin dive.**
- **Swimming in too shallow water instead of dolphin diving. Dolphin diving is a faster means of movement forward than swimming, make it count!**

Dolphin Dives *(continued)*

When tackling a very heavy shore break or large waves it may be necessary to get low to the sea bed, grip onto the sand with the hands and feet, and walk along the bottom against the flow. This will help prevent being sucked backwards in the flow of water (figure 12).

Tips

12.1 Dive under the wave away from turbulent areas.

12.2 Grab the bottom with hands to prevent from being dragged backwards.

12.3 Try and move forward and step into the hand positions if possible.

12.4 Push off the bottom and surface diagonally in a streamlined position.

Aim for areas of least turbulence when surfacing.

Safety Point!

Always surface hands first just in case an unexpected object is on the surface.

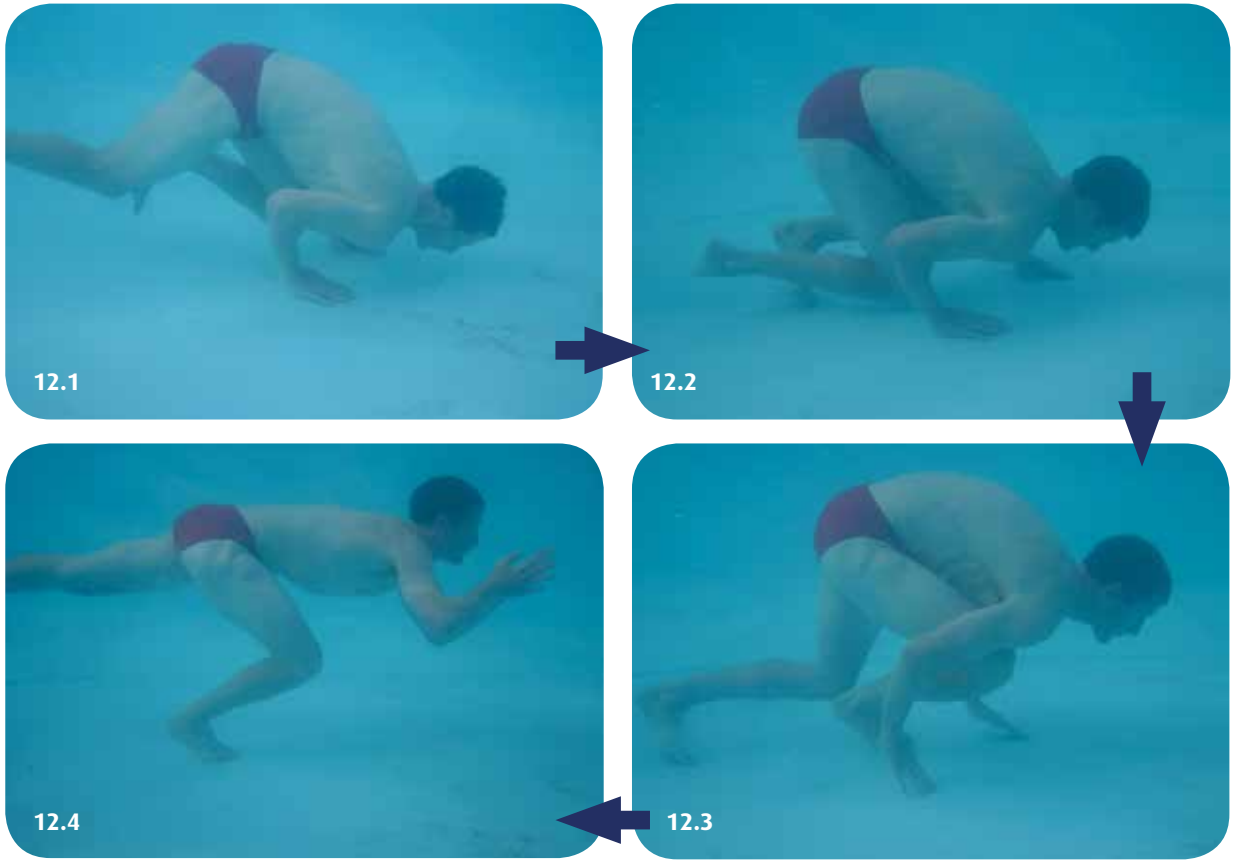


Figure 12. Walking along the sea bed

Surface Dives

When swimming and meeting oncoming waves, it is necessary to perform a surface dive (figure 13). Before the wave reaches the participant, they must dive at a shallow angle to reach a depth about half the height of the wave. This will help to avoid turbulent water. On very powerful waves breaking on a shallow bank, it may be necessary to perform the technique shown in figure 12.

When underwater the participant should continue kicking and surface at an angle that allows the participant to go straight into their next stroke (not vertically out). Some people find it effective to look up at the turbulent white water and surface in the area with least bubbles. The bubbles consist of air which provides less buoyancy for the body, thus making it slower to reach the surface and begin swimming again.

Tips

Figure 13

The higher the hips and legs, the steeper the angle of the dive and the deeper the participant will be pushed down on the dive.

A shallow angle is good for a small wave.

Figure 13. Surface dive under a wave

Safety Point!

Turbulent water with lots of bubbles makes it difficult to get your head above the surface to breathe.

It is now time to start swimming. The participant should assess their position in relation to other competitors and personal ability level. A quality swimmer is able to extend their lead here, others may just choose to stay with the pack and get dragged with the drafting effect, or an individual may want to keep clear of the rough and tumble.

Either way it is necessary to find a path to the buoy, in as straight a line as possible, by continually checking alignment with the turning buoy about every six to eight strokes. This is achieved by looking forward on one stroke as the participant breathes (figure 14). At all other times the individual should keep their head down and swim as they would in pool conditions.

In surf,participants should check alignment and buoy position when swimming over or through waves/ swells. This gives the individual extra height and a better vantage point to see where they are going (figure 15 page 13).

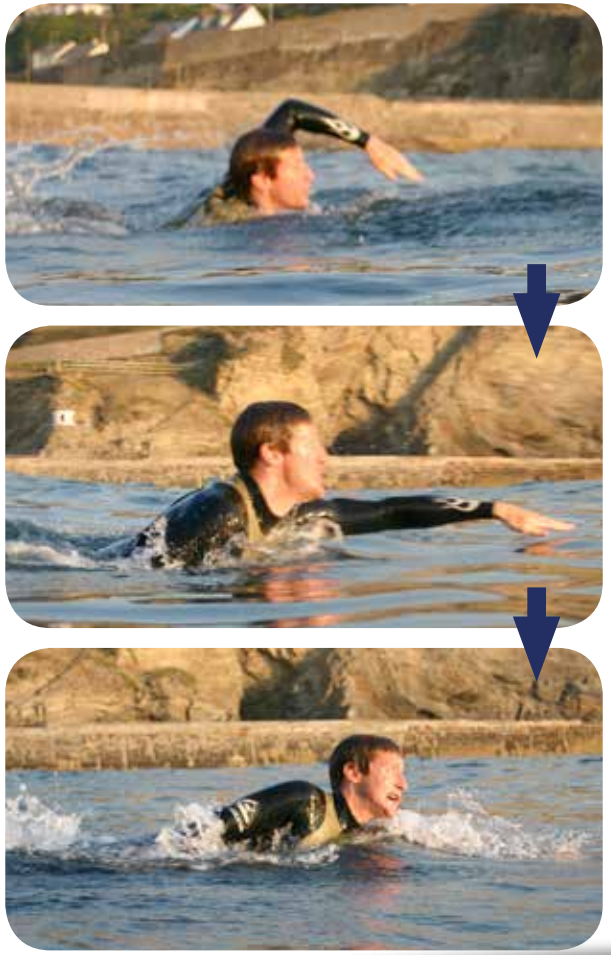


Figure 14. Checking positioning

Tips

Don't be a sheep! People make mistakes and take the wrong line or even swim to the wrong buoys. Participants should take responsibility for making sure they are heading in the correct direction.

Ensure that swimmers do not begin swimming with a flat body position when looking forward and checking position. They should maintain body roll and normal stroke rhythm for effective application of power.

Check alignment every 6-8 strokes

Figure 15. Checking positioning when going over a wave

Figure 16. Wash riding behind a competitor

Figure 17. Wash riding to the side of a competitor

Swimming Technique

The technique of swimming in itself needs to be developed through pool swimming sessions with an experienced coach. Remember, in each stroke cycle the individual should be aiming to: use the body and its levers as efficiently as possible; get the best possible grip on the water to pull against; and keep the body in the most hydrodynamic position. If they can do this and then also increase their stroke rating, they will then travel even faster. Individuals should take advice from a trained swim coach but ensure that they consider how the help provided achieves these points, rather than for just aesthetic purposes, this will help avoid sessions being counter productive.

Tips

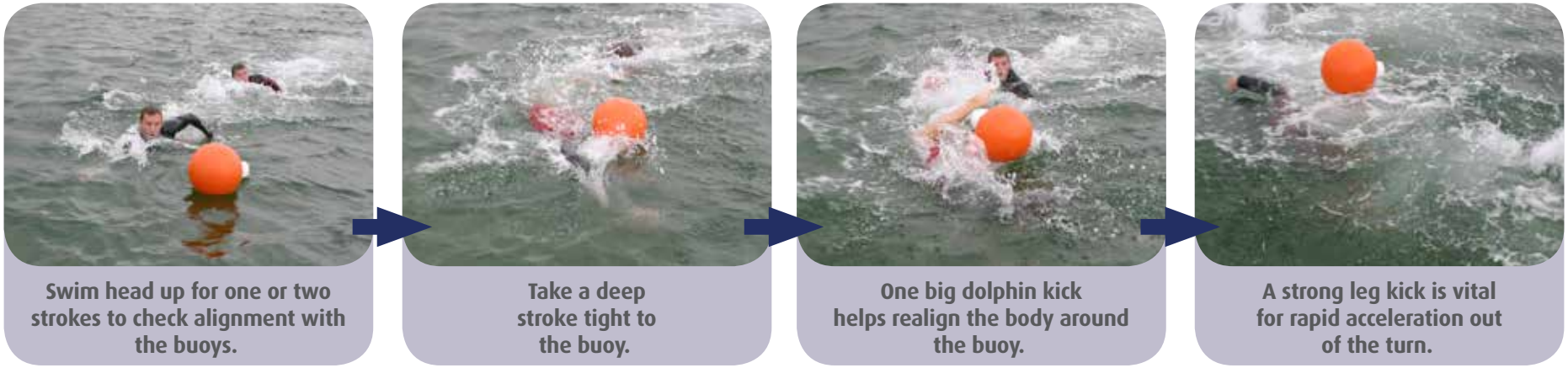
- **Many people find it hard to maintain rhythm and timing in the surf. Sometimes it is better to time strokes to punch through swells/chop rather than go over every little bit of rough water.**
- **When swimming in a pack individuals will get dragged along faster with less energy per stroke (if they stay relaxed). The two main positions for drafting off a swimmer can be seen in figures 16 & 17.**
- **Try to avoid knocking and bumping into other competitors, it slows you down!**
- **There are inevitable knocks and bumps associated with swimming in a pack, but purposely knocking others can slow an individual down and outbursts can result in missed strokes. If an individual can't take the knocks, then they should get to the edge of the pack and swim under their own.**

Safety Point!

Some beaches have stones or rocks under the water so check for these prior to starting training or a race.

Buoy Turns

Figure 18. Turning the buoy



Swim head up for one or two strokes to check alignment with the buoys.

Take a deep stroke tight to the buoy.

One big dolphin kick helps realign the body around the buoy.

A strong leg kick is vital for rapid acceleration out of the turn.

The turn is where the field usually starts to settle from a pack into a line of people. So reaching the buoys in a good position and maintaining position through the turn is important. It can be a daunting part of the race to the less experienced swimmer.

On turning the buoys it is best to take the turn as tight as possible. Participants should be reminded to take any drift or swell movements into account as they may wash the individual wide or the wrong side of the buoy. On larger marker buoys it is usually best to perform the turn with one big/long stroke. Then kick very hard to realign the body to the new angle and accelerate back into the front crawl stroke (figure 18). This kicking also helps avoid people climbing onto your legs and grabbing hold as they turn the buoy.

Tips

Unfortunately, there is a saying some surf swimmers use (usually the ones who aren't good enough to win with skill) 'no buddies at the buoys' meaning that anything goes. It is best to avoid this kind of attitude as it is dangerous, it slows the pack down and lets the leaders get further away. The lead swimmers often appreciate that this kind of behaviour will only slow them down, so usually give each other space. The rest of the swimmers therefore need to show similar courtesy to each other. At times taking a wider line to avoid trouble and going around the pack can be faster than fighting for the tightest turn.

Safety Point!

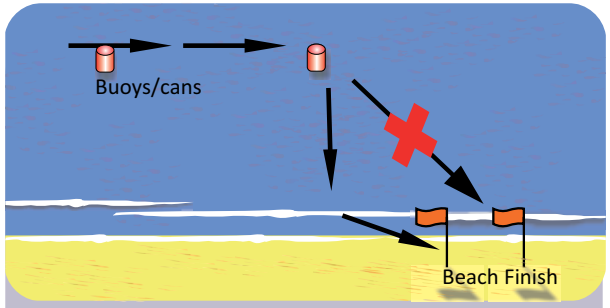
Sometimes people end up under the water and unable to surface at this point of the race. If this occurs get clear by staying relaxed and swimming under water to the side of everyone above. ALWAYS stop to help someone in trouble!

Returning to Shore

After performing the buoy turns it is time to start the return journey to the beach. The straightest line possible should be sighted and swam. The participant should aim for a fixed stationary object in line with the finish flags and final buoy. This object should have been chosen prior to entering the water and not be a person or vehicle as these can move. If the individual swims off course from this line they should not correct by swimming diagonally to this point or the finish, but should swim the straightest line to shore from their location. The best route is always to swim as short a distance as possible and then run across to the finish point (figure 19). Swimming diagonally may cause you to swim up to an extra 50m which for most people is going to take at least 30 seconds and in some cases about a minute extra.

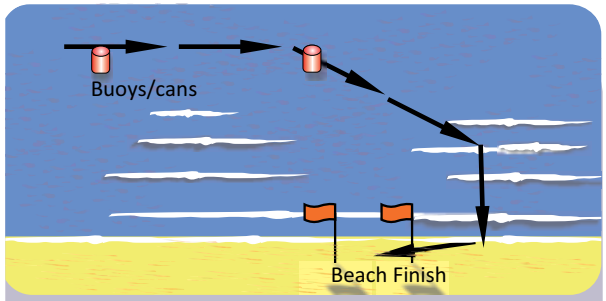
The only time an individual would not pick the straightest line to the beach is if a rip is in their path or if waves either side of a rip are close enough to warrant swimming across to try and catch one for bodysurfing to shore. This is a personal judgment call and is up to the individual to assess conditions and ability before and during the swim as to whether this move is warranted. Figure 20 illustrates how an advantage may be gained by this manoeuvre.

Figure 19. Path to shore on a flat day



Swim straight to the shore and then run across to the flags. Do not swim diagonally

Figure 20. Swimming off course to catch a wave



From the last buoy turn you may choose to swim off course to avoid a rip and seize the opportunity to try and catch a wave.

Tips

Make the most of each forward motion of a swell or chop, accelerate the stroke as each swell arrives at the feet and begins to lift them.

A good time to assess position in relation to the shore is when swimming on the highest point of a swell as it comes past. Do so with a forward looking, higher stroke than normal (as shown on pages 12 and 13).

Safety Point!

To the inexperienced swimmer rips can seem dangerous. Remember to stay relaxed, don't panic and swim across out of the rip to where the waves are breaking. If in trouble wave one arm and shout for help.

Bodysurfing

Perfecting the art of body surfing will provide the largest advantage out of all aspects of surf swimming (as long as there is surf) and can potentially give you a free ride past many competitors all the way to the shore. The option to use this skill in the surf gives the opportunity for any swimmer to come through and win a race, or give an even more extensive lead to a swimmer already at the front.

When approaching the wave area, swimmers must become attuned to feeling each swell that comes past becoming more pronounced, lifting them progressively higher and forward with each stroke. They must anticipate when a wave that is possible to catch is near. When very close to this area the individual may feel as if they area being sucked backwards into the trough just before the wave is about to break. The individual needs to continue to look under their arm backwards with each 3-4 strokes and optimise their timing and positioning in the most critical part of a green wave just before it breaks. Ideally the individual wants to catch the wave just before it breaks to have the greatest chance of holding it for any distance (figure 21).

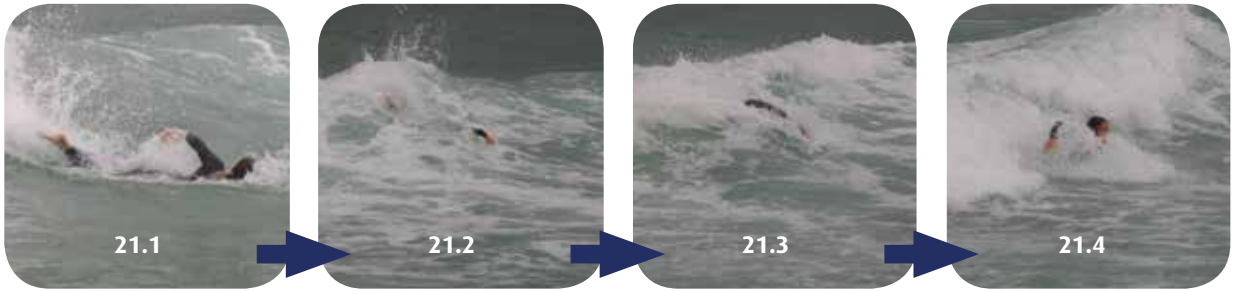


Figure 21. Catching an unbroken wave

Catching a Wave

Initially accelerate the stroke as much as possible, kick to keep the feet higher than the head and angle the body down the wave face. The head must stay down in the water the entire time. Once the feeling of being sucked down the face of the wave is sensed, the body needs to be stiff as a board. Arms should be outstretched and pulled tight into the ears, keeping the head down at all times until you are completely on the wave and beyond the most powerful section (figure 22). As soon as the head is lifted, it causes the hips and therefore legs to drop, causing the participant to lose the wave (sequence 23).

Tips

21.1 **Accelerate as fast as possible.**

21.2 **Ensure positioning in the most critical part of the wave just before it breaks.**

21.3 **Keep the head down hands pushing onto the surface of the water, body as stiff as a board and legs kicking hard.**

21.4 **Continue until just beyond the white water of the broken wave, take a breath and then get the head back down again.**

Larger waves allow a breath to be taken when dropping down the face.

Safety Point!

Participants should assess whether there are people in front of them to avoid any potential collisions as they drop down the wave face.

Bodysurfing *(continued)*

Breathing

Once you are on the wave it is crucial to keep the head low with the hands and body outstretched and stiff (figure 22.4). To breathe and hold the wave whilst maintaining propulsion (on smaller waves) leave one hand outstretched with the other arm performing short chopping strokes from behind the line of the head (see sequence 22.1-22.3). Do not perform long, complete strokes as they cannot be performed fast enough to be of benefit. Breathe between strokes whilst angling the head to the side but still maintain a low overall head position (figure22.3).

Figure 22. Propulsion and breathing on a wave

Safety Point!

Participants should keep checking that the path is clear to ensure they don't body surf into other water users.

Figure 23. The effect of lifting the head upon body positioning

Tips

The competitor should almost never wait for a wave when swimming. If this is done it should only be for a second to aid with critical timing to ensure the wave is caught.

22.1 Obtain a position out of the white water.

22.2 Continue with the propulsive technique.

22.3 Breath to the side and upwards while keeping the head in the water and maintaining propulsive strokes.

22.4 Then continue with the head down and body outstretched.

Bodysurfing *(continued)*

Catching a broken wave when swimming

Even with much practice, this is the most difficult of all surf swimming skills to master. To catch a broken wave (figure 24) you must swim at maximum speed with a very strong leg kick to raise the body and legs up high in the water and try to get picked up by the coming wave. If the wave is not too powerful, it is possible to escape to a position in front of the white water and continue propulsion and breathing as previously explained. If the white water is too big, it may just push the participant straight under the water, but still drag them forward. This method may therefore have aided the participant to gain some ground, but will probably leave them breathless or sap their energy.

Alternative approach

For both experienced and less experienced swimmers alike, attempting to catch too big a wave can be daunting and potentially energy sapping, especially if you are already short of breath. Keep looking behind under the shoulder when swimming and when a wave approaches do a surface dive deep enough to clear the main turbulence of the wave. The individual should let the wave pass, surface again and continue swimming behind it in the 'wash' that the wave creates. This will save energy and still make some use of the power of the wave that came past.

Figure 24. Catching a broken wave

Tips

24.1 Accelerate as fast as possible when swimming.

24.2 Keep the body stiff and maintain a powerful kick.

24.3 Head is kept down until sucked out in front of white water.

24.4 Then start propulsive strokes.

Some surf swimmers find it useful to perform 2 or 3 butterfly strokes to escape the mass of white water.

Safety Point!

Individuals will get thrown around under water in the 'washing machine effect' at times. Encourage them to stay relaxed, do not fight the water and do not try to swim to the surface. If disorientated, participants should let themselves float up to the surface naturally.

Wading to Shore

When reaching shallower water again it is usually necessary to begin dolphin diving and wading (in that order) to exit as fast as possible. A good 'rule of thumb' to tell if it is deep enough to stand and start these techniques is by performing an extra deep stroke to test the depth. If the fingers touch the bottom (figure 25) it is time to start dolphin diving . This is also the same when body surfing in on a wave close to shore - if a deep stroke when riding the wave allows the fingers to touch the bottom then the individual should begin wading. It is faster to wade than to continue to ride a wave. The participant must do a quick deep stroke, test the depth and immediately explode out of the water over the wave they were riding.

It is advisable for individuals to wade extra hard if a wave is just in front of them. If they get over it, it will be much shallower the other side and take considerably less energy to wade, making it well worth the extra effort! (Figure 26).

Safety Point!

Be aware of small inshore holes when wading, they could cause participants to trip.

Figure 25. Touching the sand with your fingers before wading

Figure 26. Wading over a wave into shallower water

Tips

Figure 25. Wading or dolphin diving should not be attempted until it is possible to touch the sand with a deep stroke.

Figure 26. Always try to wade over a wave as the water is much shallower on the shore other side of it.

Contents

Introduction

Participants in any sport are always looking for ways to obtain an edge over their competitors and better their personal performance. Most people think of physical training as the only way to improve these performance levels. Although a well thought out training plan can be very effective in causing the correct physiological adaptations, it is also important to consider the many other skills, techniques and variables which can have a significant effect upon overall performance. Each aspect of skill, technique or knowledge may only seem to give an extra second or two, but each of those seconds adds up.

Board paddling expands upon a number of skills learnt from surf swimming, but is highly dependent upon effective weight transfer through the board. Whether the paddler is balancing, negotiating surf, paddling or performing starts, it is always necessary to effectively transfer weight to maintain forward. Many hours of practice are required to master the skills needed to perform to full potential. A skilled coach can help direct and accelerate this learning according to each individual's needs.

The following skills will be covered in this booklet and can be practised individually or grouped together:

- Safety considerations
- Prone or knee paddling
- The start
- Bunny hopping/launching starts
- Popping waves on the knees
- Sitting and popping waves
- Paddling in packs and drafting
- Buoy turns
- Chasing swells
- Catching and riding waves
- Catching broken waves
- Finishing

As explained previously, even if you are an elite competitor and only averaged half a second improvement on each section of the race, you will be six seconds - or one wave faster - than before. However, for most of us it will be considerably more.

Prone Technique

Figure 1. Prone paddling

Catch
Arched lower back. Hands enter around the front straps with an alternating action.

Pull
Hands exit around the hip area with slight rotation of the torso.

Recovery
Fingers just clear the water on recovery with a flexed arm.

Lying prone on a board is the easiest way to balance and is a good technique for beginners and under-developed paddlers. This position is also useful for paddlers lacking confidence on their knees when turning the buoys in large groups. Although there have been excepetions, very few elite paddlers have succeeded using the prone technique as their primary method of paddling.

The prone technique (figure 1) is much like the front crawl stroke with a board underneath, but with more arch in the lower back. This raises the shoulders enabling the arms to clear the water thereby reducing the risk of injury.

The paddler's hands should enter and catch the water approximately in line with the front straps (figure 1.1). Arms should be slightly bent and pulled strongly against the water. The hand should exit in line with the hip area (figure 1.2). On recovery, arms are bent with fingers just clearing the surface of the water before the next stroke takes place (figure 1.3). It is preferable to have the knees bent when paddling as this aids balance and timing.

Safety Point!

Do not use both arms repetitively in a simultaneous over arm action. The movement needed to undertake this puts extra pressure on the shoulder joint, and is a potential cause of injury.

Kneeling Technique

Figure 2. Knee paddling

Catch
Hands enter at the front straps. Body weight aids a deep powerful stroke.

Pull
High hip and low chin position is maintained. Arms enter up to the elbows. Hands exit approximately level with the hips.

Recovery
Fingers just clear the water and move forward parallel to the rails of the board, using flexed arms.

With a few exceptions, paddling on the knees has been by far the most effective and widely us chin position sets up the stroke. Hand entry should reach out around the front straps, but without compromising balance (figure 2.1). The chest drops, allowing the arms to enter elbow depth. A deep pull is then performed to propel the board forward and the hands exit level with the hips (figure 2.2). On recovery, the arms need to be flexed and kept close to the water (figure 2.3). This enables the arms to move forward and parallel with the rails of the board rather than circling out wide. The paddler should aim to keep the board running as smoothly as possible, without snaking, bouncing or wobbling while applying fast, powerful strokes.

Safety Point!

Alternating between prone and kneeling is a viable option to prevent fatigue in each position. This can also reduce soreness on the knees.

Starts

There are three options for carrying a paddleboard into the water at speed. All involve a sprint start and wading as explained in the surf-swimming module.

Hip Carry

The main method used for starts is carrying the board on the hip (figure. 3). The board is held tightly on the hip and pushed in just below the ribs. Co-ordinating movement whilst keeping a grip and balancing the board can take time to master. It is the most effective technique when entering on steep beaches where there is very little option to undertake 'bunny hops'. It is not such an effective technique in very windy conditions or for finishes.

Under-arm Carry

Carrying the board under the arm (figure 4) is a common practice. Although this method generally is not as quick as hip carrying it is more effective than dragging the board and a quicker transition into paddling is possible. It also prevents unwanted damage caused by dragging.

Drag Starts

Dragging the board by one of the front straps (figure 5) is generally the option chosen by smaller individuals unable to perform an under-arm or hip carry at speed. It is also effective in very windy conditions, sprint finishes and ironman transitions. This method is not recommended on stony beaches as damage to the board can occur. This technique does not allow the paddler to jump straight on the board making the transition from running to paddling slower.

Tips

Carrying the board tight on the hip is the most commonly used technique for board starts.

Learning to carry the board on the hips is crucial when undertaking effective launching board starts.

Under-arm carrying is easier than the hip carry but not as effective for a fast transition into paddling.

Drag starts are great for smaller paddlers and commonly used for sprint finishes and Oceanman transitions.

Figure 3. Hip Carry

Figure 4. Under-arm Carry

Figure 5. Dragging the board for sprint finishes and starts

Safety Point!

Check the water depth and seabed for unexpected holes or objects prior to undertaking starts.

Bunny Hops

On a beach with a long, shallow gradient the individual should carry their board and wade until knee depth. At this point the board is placed on the water with both hands on the rails and bunny hopping is undertaken (figure. 6.1). This involves the body weight resting completely on the board through the hands, with the shoulders vertically above them (figure. 7). A push with both legs off the bottom propels the person and board forward. Immediately after pushing, the legs are lifted above the water for a short glide (Fig. 6.2). As soon as speed begins to decrease another bunny hop is performed. This should be continued until thigh depth water. On most British beaches approximately 3-6 bunny hops will enable the correct depth to be reached. On the final bunny hop, as the legs exit the water the paddler continues straight into the prone or kneeling position without stopping (Fig. 6.4). The momentum from bunny hopping should be carried directly onto the board and into the first stroke.

Figure 7. Bunny hopping

Figure 6. Bunny hopping

Tips

Bunny hopping can be used on long shallow banks at any point in the race, including finishes.

Shoulders are in vertical alignment with the hands.

With the torso horizontal, flex the hips and knees.

Transfer body weight through the arms ,onto the board, so it can be used as a platform to glide on while the legs are in the air.

It is important to maintain momentum from the run into dropping the board to the water. DO NOT STOP to do this action. Practice until the action can be performed without hesitation.

Safety Point!

Be aware of holes or sudden changes in water depth.

Launching Starts

On a steep beach with sudden deep water, a launching start is Figure 8. Launching start sequence essential to achieve fast entry. The aim of the launching start is to carry maximum momentum from a fast sprinting start directly into skimming across the surface of the water on the board. Before attempting this technique bunny hopping and jumping onto the board with momentum needs to be mastered. Within one or two steps of entering the water the board will need to be held in two hands (figure 8.1). The board is brought forwards and down towards the water. As soon as the board touches the water the weight is transferred through the arms onto the board, the knees should be lifted simultaneously and swung through onto the board (figure 8.2). A short glide may be needed if travelling faster than it is possible to paddle (figure 8.3). On reaching a suitable reduction in speed, then paddling should commence immediately.

Figure 8. Launching start sequence

Tips

Progressive practice from standing and launching, through slow jogs and faster runs are essential to become competent in this technique.

Safety Point!

Check the water depth is adequate before performing the start thus preventing the board catching on the bottom in shallow water or tripping in deep water.

Negotiating the Break

Unless paddling on a lake, it is very likely the next step of the race will be negotiating the waves. It is important to get through the wave area as quick as possible and avoid being knocked backwards. There are four main techniques used to negotiate broken waves on a paddleboard and each are dependent on wave size and competency level.

Prone through waves

The first technique is used on smaller waves when prone. Although it is possible to attempt to paddle straight through or over smaller waves there is a more comfortable option. The body can act as a natural shock absorber by placing the hands on the rails and lifting the body up off the board, while leaving the knees and lower legs in contact with the board. This action allows the wave to pass between the paddler and the board and impact of the wave to be taken through bent arms (figure. 9). This is not the best method for tackling surf and it is advised to learn and practise knee paddling with the techniques explained in the following pages.

Figure 9. Prone through surf.

Tips

Place the hands on the rails and lift the body up off the board.

Water can pass between the paddler and board.

Safety Point!

Use this technique only for small waves.

Popping on the knees

Figure 10. Popping the wave.

Smaller waves are best tackled while knee paddling. The wave should be paddled at with speed (figure 10.1). At approximately half to a full board length before the wave the body weight should be to the tail of the board by sitting back on the heels (figure 10.2). This will lift the nose of the board up. At this stage the arms should be used for balance and be preparing for the next stroke. As the nose of the board hits the oncoming wave, it is lifted up over it. The body weight should be thrown forward to counteract the power of the surf and the arms should start the next stroke on the other side of the wave.

After much practice it is possible to tackle relatively large waves with this technique as seen in figure11.

Figure 11. An experienced paddler popping a large wave

Tips

Fig 10.1 Paddle with speed at the wave.

Fig 10.2 Shift body weight through toes to the tail of board and prepare for turbulence of wave.

Fig. 10.3 As the nose hits, body weight moves forwards and arms start a stroke on other side of the wave.

Fig 11. When popping larger waves the body has to act as a natural shock absorber upon landing the other side.

Safety Point!

Care should be taken to avoid the board being pushed into the paddler by the power of the wave.

Sitting and Popping

On larger waves it is more difficult and risky to try and pop a wave on the knees. The paddler is likely to fall off or even lose the board. A safer, but slightly slower option is to sit and pop (figure 12). This again involves paddling at the wave with speed. About two board lengths before the wave the paddler must suddenly stop, straddle the board and shift the weight to the tail through their rear (figure 12.1). This lifts the nose above the white water height. Just before the wave hits the nose of the board the body weight should already be thrown forward and upwards. This is achieved by gripping the board with the inner thighs and pushing the body upwards (figure 12.2). The dominant hand should be gripping the back strap and the nondominant hand reaching forward to the grab the front strap, allowing increased control to push over the wave (figure. 12.3).

Figure 12. Sitting and popping

Safety Point!

It is essential to have the non-dominant hand reaching forward and pushing the board to prevent the board being thrown into the paddler's face.

Rolling

Just before the wave breaks, prepare to roll the board by grabbing the front straps.

Ensure that body weight is pulled completely through the straps before the white water hits the upturned paddleboard. Hold on tight!

Figure 13. Rolling

The most effective method of tackling a wave too large or powerful for popping is to roll under it. After paddling at the wave with speed, the paddler must grab the front straps and roll off the board into the water (figure 13.1). It is essential to pull down as hard as possible while the wave passes over the top of the board. It is inevitable that the wave will drag the paddler back towards shore using this technique. Therefore, mastering popping larger waves is recommended. This technique can also be extremely energy sapping, as the paddler has to repeatedly hold their breath and jump back on to the board. However, using this energy is far better than letting go of the board and having to swim back to shore!

Tips

Getting back onto the board with speed, and accelerating between waves is a deciding factor for breaking through a gap in large surf.

Safety Point!

Hold on tight to the board to prevent it washing into other competitors. Bending the arms slightly helps prevent excessive strain on the joints.

Do not roll directly behind another competitor who is rolling, as they can be washed backwards. Move to either side of them.

Alternative Wave Negotiation

When rolling, it can prove very difficult to hold onto the board. For those not confident of maintaining grip, there is an alternative option. The following method is far slower and causes the paddler to be dragged towards shore but it enables the paddler to hang on to the board. However, this technique is not advisable for high level competition. The technique involves sitting up and straddling the board, turning it around with an egg beater leg kick (figure 14) so that the paddler's back is to the wave (an egg beater leg kick involves the feet swirling in circular motion under the water, one leg after the other). The tail is pushed down as far as possible and the nose of the board held in the air. While holding onto the back straps the paddler leans backwards into the wave and has to hang on tight (figure 15).

Safety Point!

Ensure that there are not any water users in your path that you may be washed into.

Figure 15. An alternative approach to negotiating the surf

Figure 14. Egg beater leg kick spinning the board

Tips

Fig. 15.1 Use an egg beater leg kick to turn the board quickly so the back is to the wave. Push the tail into the water.

Fig 15.2 Lean back and hang on tight to the back straps.

Fig 15.3 Let the wave pass by.

Wash Riding

When in flat conditions or beyond the break, it is possible to use the wash (miniwaves) created by other competitors' boards. Done correctly, this can save a lot of energy, leaving more for later parts of the race or for later rounds of a competition.

Side Wash

The best position to ride is the side wash as it gives the option of taking the lead. It is ridden with the nose of the board in approximate alignment with the knees of the leading paddler and within half a metre from the side of the board.

Tail Wash

The easiest wash to ride is by keeping the nose of the board within from the tail of the leading paddler's board.

'V' wash

The wash that requires the least energy to ride is the 'V' wash, but it can take time to learn how to ride it well.

Figure 16 shows a group wash riding. The paddler at the rear is paddling up hill to break through onto the 'V'

wash for an easier ride.

Figure 16. Wash riding in a pack, with the paddler at the back on the purple board attempting to reach the 'v' wash

Tips

As with surf swimming it is a good idea to check your positioning with respect to the buoys while going over the crest of a wave.

Do not attempt to wash ride when chasing runs or catching runs. It is here where the paddler must do his/her own work.

Safety Point!

Avoid wash riding close behind competitors through surf or very choppy conditions as they can be washed backwards. It is also probable that when a wave hits, the trailing paddler may run into the front paddler's board if they suddenly lose momentum.

Buoy Turn

Ideally, it is best to be in front at the turn as all other competitors will have to turn at the speed of the leader. It is also harder for lower placed paddlers to accelerate back onto the leader's wash if a gap opens up. When turning the last buoy, the lead paddler has the first attack at any waves coming through and a chance to break away.

Prone paddling is the safest turning option, as it is easier to avoid being knocked off during the chaos that often occurs with many people reaching the same turning point together. Some people choose to drop the inside/right leg in the water to act as a pivot to turn more quickly (figure 17).

For those confident in their ability, it can be a faster option to kneel and turn around the can (figure 18). This is done by slightly shifting the weight to the tail through the heels just before the buoy (figure 18.2). Simultaneously, the paddler needs to lean the tail and rail closer into the water and then put in a short powerful stroke. Repeating this technique,

each stroke shifts the tail around in to alignment whilst still maintaining some momentum. From here it is important to accelerate fast out of the turn to straighten the board up and avoid trouble (figure. 18.3).

Figure 17. Prone using a leg to pivot around the bouy.

Figure 18. Kneeling around the buoy turn.

Figure 18.

Shift weight through heels.

Lean the tail and rail into the water.

Short sharp stroke to realign the board.

Tips

While paddling across the back of the buoy line, keep an eye out for a set of waves coming. It may be worth putting the extra effort in to sneak around the final can and catch a wave straight away.

Safety Point!

Do not paddle at speed into other competitors who are already turning in front.

Chasing Runs

Chasing runs (wind chop or swells) is a skill that is commonly the deciding factor for the final result between high level board paddlers. Many races are decided in the wave area paddling back to shore. It is important to make the most of every swell or wave available, as they travel faster than it is possible to paddle. When the paddler feels the tail of the board begin to lift, the stroke rating and power has to be increased to propel the board fast enough to be pushed forward with the swell/runner (figure 19). Some paddlers find that following the highest point in front of the trough being ridden, is the best way to hold a run as far as possible. It is a personal judgement call whether to expend every last effort into trying to hold the run until it turns into a wave. Knowing when to continue or reduce paddling to achieve this is a skill learnt from experience, but it is vitally important.

Figure 10. Accelerating when chasing a runner.

Tips

As the tail of the board begins to lift, stroke rating and power is increased.

Try to get every last extra metre from the run while saving every as much energy as possible.

Catching and Riding Waves

Once a swell is caught, it is likely that the paddler may hold it until the wave breaks. If it is a small wave or still has a green face, it is fine to remain kneeling. To control the board the paddler needs to shift his/her weight backwards over the fin (figure. 20.1). On large waves, it is necessary to move body weight backwards to prevent the nose going under water and to gain control of the board (figure 21). The broken white water in a larger wave can be very powerful and turbulent. Before being caught by the white water it is advisable to drop to a prone position and hang onto the back straps with the chest near the tail of the board (figure 20.2 to 20.4). As the wave reduces in size, it will be necessary to shift body weight forwards again on the board to stay on the wave.

Weight is shifted backwards along the board to prevent nose

The board is controlled with weight over the fin.

Grab the back straps and prepare to go prone

Hold on tight and ride out the turbulence.

Tips

Riding a wave on the knees gives more options to shift body weight, change direction and apply powerful strokes needed to stay on the wave.

Once paddling is no longer needed to be pulled down the wave face, the paddler should shift backwards to enable better control of the board (figure 20).

Safety Point!

Make sure the path in front of the wave is clear and avoid any potential collisions.

If a paddler is paddling out to sea, both paddlers can avoid each other by the wave rider making a definite change in direction.

Catching Broken Waves

When the paddler is caught in 'no man's land' and a larger broken wave is approaching from behind, it is best to catch the wave from a prone position. This is done by sliding to the back straps and hanging on tight (figure 22). Attempting to catch it kneeling will result in the paddler being knocked off due to the turbulence of the white water. Loss of contact with the board may result.

If the paddle board is lost it is possible to body surf towards shore as explained in the surf swimming module and pick up the paddle board without losing the wave.

It is sometimes possible to catch up and overtake an already broken small wave with some very powerful strokes (figure 23). This can help to gain an advantage both in the form of rest and extra distance gained.

Figure 22. Catching a broken wave

Tips

In larger waves adopt a prone position, slide to the back straps and hang on tight.

The legs can be used to aid steering and the weight is over the fin, which aids control.

Positioning should be changed when the wave becomes smaller and the paddler pulls themself forward to hold the wave.

When the opportunity arises, try to overtake any wave possible.

Figure 23. Breaking over a small white water

Finishes

Most British beaches require the paddler to stay on the wave, relax and prepare for a wade and sprint up the beach. When getting close to shore it is best to return to the knees to to get ready for the finish. When waist or knee depth water is reached, paddling hard to try and get out in front of the wave can gain a little advantage (figure 24). This also gives clearer water to stand in for running/wading. The paddler needs to jump off and stay in front of the white water of the wave being ridden. Touching the sand with the fingers on a deep stroke can indicate that it is shallow enough to jump off and wade effectively. To dismount, the paddler must place a hand on each rail, rock the weight through the arms and jump off. The hands stay in contact with the board at all times and should slide towards the front straps (figure 25.1-25.2). The dominant hand pushes the far rail down, the non-dominant hand then supports the closest rail of the board with the dominant hand sliding up to grab the handle (figure 25.3). The whole is a smooth, fluid process that takes split seconds. Like all skills the finish should be practised regularly to master it.

After jumping off, the hands begin to slide to the front straps.

Dominant hand pushes the far rail down, non-dominant hand lifts closest rail.

Non-dominant hand then supports closest rail and the dominant hand slides up to grab the handle.

Sprint for the finish.

Tips

Do not lose momentum from riding the wave. Ensure that running or wading is started in front of the white water. If behind the white water, every effort should be made to get back shore side of it as the water is shallower and therefore faster for running.

Paddle hard to get out in front of the wave.

If, at the point of jumping off, the water is slightly too deep to wade, then bunny hoping should be undertaken.

Mastering these finish techniques are vital on steep beaches with a shorebreak.

Safety Point!

Remember, when crossing the line, to continue to jog approximately 10metres past it. This is to ensure that competitors who may sprinting behind do not run through the finish line at full speed and collide with others in front.

Contents

Introduction

In the right hands the racing ski is the fastest piece of man-powered life saving craft in the surf. However, learning the initial skills to enable its use can be difficult. The paddler requires considerable balance to remain seated even in flat conditions. Good technique allows the effective application of power to generate speed on the craft. When racing in surf there are numerous skills that need to be obtained to complete the course successfully. Improving balance, technique and skills can aid a participant's personal performance dramatically before any structured physical training is introduced to a training programme. Any skill or technique should be practised in flat conditions and progression in increasingly difficult surf will be necessary to develop to higher levels. If each aspect of technique and skill are developed so that they produce a half second improvement each, then the athlete could already be a wave ahead of his/her previous performances.

Balance and Deep Water Mounting

Balance

Balance is maintained on a ski by keeping the torso and head over the centre of gravity (C of G). The paddler must learn to keep the body and head in this position by flexing the trunk sideways and lifting the hips on the higher side of the ski. This, combined with dropping the angle of the shoulders, takes the C of G over the balance point of the ski (figure 1). Correcting balance by leaning with the entire body without flexing at the hips and trunk will result in the paddler becoming off balance and, eventually, falling into the water (figure. 2).

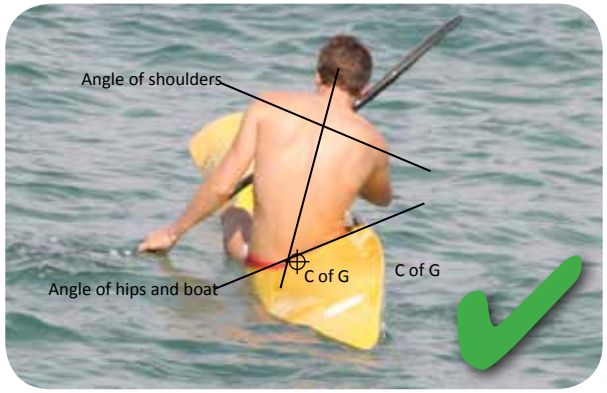


Figure 1. Maintaining balance

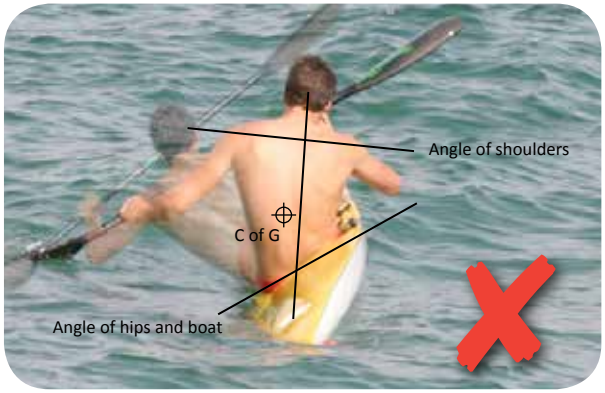


Figure 2. Unbalanced

Mounting the ski

In deep water the novice paddler may have some difficulty getting back onto the ski. Once in the water, the first step is to get hold of both the paddle and ski, ensuring that the ski is upright. The paddle should be placed across the deck and held along with the front foot strap. The other hand that is not holding the paddle is placed on the far rail across the seat (figure. 3.1). The body is then pulled across the deck (figure. 3.2). From a lying position the body is swivelled around to enable the ski to be straddled (Fig 3.3). From this position the paddler shuffles into the seat and swings the feet around into the foot-wells (figure. 3.4).

Figure 3.

Explaining the entirety of paddling technique is a very lengthy process. Opportunity to examine ski technique further is offered at level 3. However, general pointers for ski paddling technique are explained in terms of catch, pull, exit and recovery (figures 4 and 5). The fundamental point is that paddling is not purely an arm-orientated activity, it is an integration of movements throughout the body utilising the knees, hips, torso, shoulders and the associated muscle groups.

Figure 4. Phases of the ski stroke

4.1

Catch - The blade is planted firmly in the water and enters near the feet. The knee on the side of entry should be bent with the trunk rotated and the shoulder in a forward position. The arm must be slightly flexed to enable a powerful pull phase.

4.2

Pull - The pull is the power phase of the stroke and is initiated from straightening the leg and a backward movement of the hip. Rotation of the trunk initiates the shoulder and flexed arm to move in a powerful backward direction.

4.3

Exit - An effective exit prevents the paddle being left in the water too long, which can slow the ski. When the hand reaches the hip, the leg is in an extended position and the trunk is fully rotated. Flexing the arm causes the paddle to exit from the water thereby raising the hand towards the ear.

4.4

Recovery - During recovery the trunk rotates back to its original position ready to initiate the next catch. The knee is flexed and the hip rotates forward slightly. The hand also returns back to the catch position with the elbow below hand height at all times.

5.1

5.2

5.3

5.4

Jump Starts

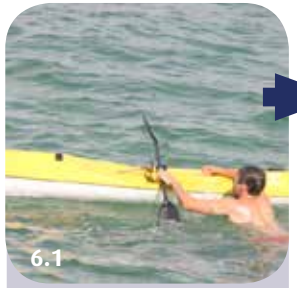
A jump-start is undertaken in approximately knee-depth water. This allows the paddler to jump forwards and still clear the water with their feet. The paddles are held in the dominant hand (the hand holding the twist grip of the paddle), while gripping the rail of the ski by the seat area. The forward part of the paddle is angled so that it clears the water and rests on the ski with the scooped part of the blade facing upwards (figure 5). The non-dominant hand grips the rail by the footwell on the paddler's side. The ski is pulled back with the paddler in a crouched position ready to jump (figure 6.1). The ski is pushed forward and the paddler simultaneously jumps forward and swings the legs through the arms with bent knees (figure 6.2). At this point the weight is placed through the arms on the rails of the ski and the shoulders are vertical alignment above the hands. Ideally, the feet should strike the foot-wells powerfully, carrying the momentum of the jump forward into the ski (figure 6.3). As the feet strike, the paddle is instantly brought across the body to be gripped by the non-dominant hand and the first paddle stroke is taken (figure 6.4).

Figure 5. Start

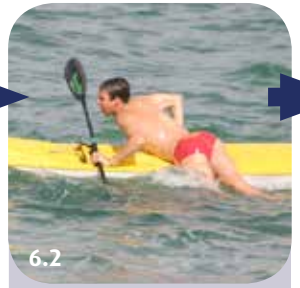
Tips

Fig. 6

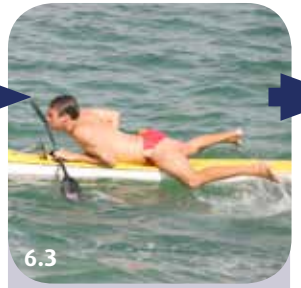
- **Ensure the ski is at a right angle to the oncoming waves.**
- **Ensure eyes are focussed on the foot-wells, but still have an awareness of oncoming waves.**
- **Hand grabs the paddle and seat rail, with both scoops of the paddle facing upwards and out of the water.**
- **In a shore dump it is necessary to lift the ski over waves.**
- **Generally, paddlers learn to jump start effectively but only strike a foot-well adequately with one foot while the second foot drags across the water . Performing 'double footers' with both feet striking simultaneously thereby avoiding the dragging effect, can give that extra advantage on a start.**



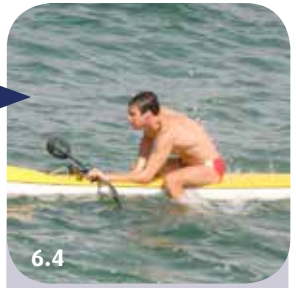
Pull the ski back and stand in a crouched position in preparation to push forward



Weight is transferred through the arms on rails. Shoulders are vertically above the hands.



Feet strike the foot-wells powerfully, carrying momentum from the jump into the ski.



As the feet strike, the paddle is instantly brought across the body for the first stroke.

Safety Point!

When learning, avoid performing too many starts in one session. Repeatedly catching the bony points on the side of the ankles on the foot-wells can cause them to become sore and bruised.

Negotiating Surf

Small waves

An unbroken wave, or white water that is at about the height of the wave deflector or less, does not require an adjustment to paddling technique. The paddler should continue to accelerate through the oncoming wave.

Larger waves

Waves higher than the wave deflector may require the paddler to change the angle of the body to both balance the ski and help push it over and through the wave. Initially, the paddler must shift their body weight slightly backwards, allowing the nose of the ski to go through the wave. At this point, the paddler must prepare for a stroke to be taken behind the wave (figure 7.1).

Safety Point!

Ensure the craft is perpendicular to the oncoming waves to prevent being pushed sideways, which may result in the loss of the ski.

As the wave passes under the nose towards the seat area, the paddler should punch through the wave angling the body forwards and place a stroke behind the wave (figure 7.2). This stroke provides two key benefits: a point to grip the water aiding balance, and a point from which the paddler can begin accelerating the ski forward. This first stroke after the wave can be particularly important.

The paddler should keep paddling through the turbulence after the wave to the best of their ability (figure 7.3). Stopping paddling will reduce the stability of the craft and will result in the paddler being dragged backwards by the turbulence.

Tips

The ability to maintain momentum through waves and accelerate the craft between waves is key.

Fig 7.1 Lean back to lift the nose of the ski and prepare for a support stroke.

Fig 7.2 Grip the water behind the wave with a support stroke to maintain balance.

Fig 7.3 Accelerate through the turbulence to gain momentum to tackle the next white water.

Figure 7. Negotiating surf

Rolling

Figure 8. Rolling

Depending on the paddler's ability, some waves will be too large to paddle over and therefore rolling will be necessary. The paddler needs to accelerate towards the wave and approximately half a ski length before the wave hits the ski, the paddler must roll. This involves taking a deep breath and, in one motion, leaning sideways and pulling the ski upside down (figure 8.1), while leaning forwards, holding onto the paddle (in one or two hands) and grabbing the foot-straps with both hands (figure 9.2.). Once the ski has been rolled and the paddler is in the water underneath it, it is important to hang on extremely tight as the wave will pull the ski considerably (figure 9.3). While holding onto the foot-straps, the paddler should have slightly bent arms to absorb the impact and pull of the wave. To successfully let the wave pass with least drag, it is essential that the ski is at 90 degrees to the wave when rolling.

Tips

Ensure the ski is at 90 degree angle to the wave to make holding it easier.

Safety Point!

When training in large surf it is especially important to ensure practice is undertaken in areas away from other water users.

Wash Riding

Figure 9. Riding the side wash

Figure 10. Riding the tail wash

Figure 11. Riding the 'V' wash

The ski creates a considerable wash (mini wave) that can aid other paddlers around the course. Riding the wash can result in reduced energy expenditure at greater speeds for the paddler skilful enough to use it effectively. The main positions to ride are the side wash, the tail wash and the 'V' wash, each with its own advantages.

Side Wash

The side wash places the paddler in the most forward position to try and pass the opponent when needed. To be in this position, the nose of the ski needs to be level with the seat of the paddler in front, leaving enough room so the leading paddler can still complete their full stroke without being impeded. (figure 9, yellow and blue ski).

Tail Wash

Riding the tail wash is the easiest to master, and a fail-safe method if the side wash is lost. This involves the nose of the ski being directly behind the ski in front and not more than half a metre away. (figure 10, blue ski)

'V' Wash

The 'V' wash is the most energy efficient place for a paddler to travel at the greatest speed with least effort, but can result in the paddler being boxed in and left unable to pass opponents.

Tips

Avoid knocking other competitors paddles;.if it slows them down, it will slow you down thereby allowing other competitors to pass.

Safety Point!

When paddling through waves, do not attempt to ride the tail or 'v' wash. The paddler in front can be knocked backwards, which may result in injury or damaged equipment.

Buoy Turns

For the lead paddlers, both the first and last buoy can be taken as tightly as the paddler wishes. For the apex turn, most skilled paddlers will take a wide line of approach ensuring that the turn is begun before reaching the buoy. The paddler may be facing slightly back to shore as they pass the buoy, rather than paddle the straightest line to the buoy and turn after it (figure 12, option 1). A good line allows the lead paddler to attempt to catch swells or runners sooner and is the shortest distance to paddle. The second option (figure 12 option 2) can also be taken by paddlers who wish to paddle straight to shore with the runners/swells after turning the final buoy.

The best line for all competitors is to follow the course of the paddler in front or parallel to them, rather than try to cut across others. The first buoy turn (figure. 13) illustrates how the lead paddler takes a good line around the buoy and all others in the pack follow suit.

Regrettably, buoy turns on the ski can be notoriously chaotic. If one paddler in a pack decides they want to take a different line to all others, it can cause everyone in the pack to collide. This in turn results in competitors being unable to get their paddles in the water and slow down or fall off. This inevitably allows other competitors to paddle around the slowing pack and the front runners to extend their lead (see the blue ski in figure 13). For this reason, it is also best to avoid knocking competitors paddles or mounting other skis.

When returning to shore in large surf, head for the edge of a rip (if one is close). Waves break less powerfully in the deeper water and it is therefore easier to ride straight to shore (figure 14).

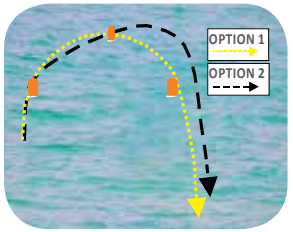


Figure 12. Approach options around the buoys

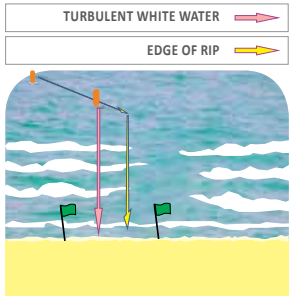


Figure 14. Riding large waves through the edge of a rip

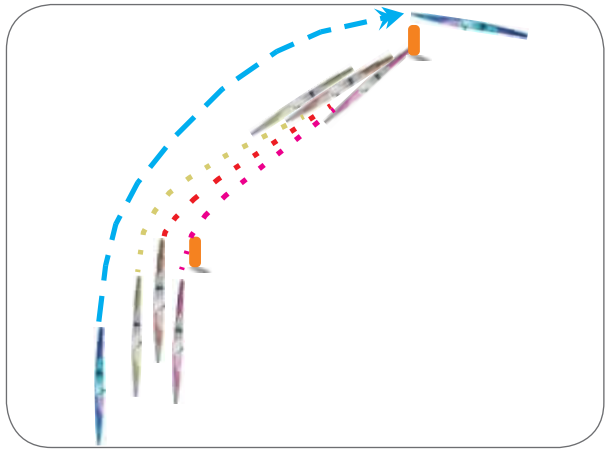


Figure 13. Collision at the buoy, enabling outside paddler to pass

Safety Point!

Do not attempt to continue paddling across other skis or into competitors themselves when turning. This could result in injury or damage to equipment.

Tips

It is better to be one of the lead two paddlers at the point of turning to avoid any problems and have the first opportunity to catch waves.

- **For paddlers in the pack, the inside line may be the fastest line geometrically. However, becoming boxed in at the buoys may make the outside line a faster option.**
- **Avoid knocking other competitors' paddles.**
- **When riding a wash remain in that position throughout the turn.**
- **Give room to paddlers who are riding the side wash.**

Riding Waves

Holding a wave all the way to shore on a ski is possibly the most difficult skill to learn of all life saving disciplines. The best way to hold a wave to shore is by preventing the ski from beginning to go sideways (known as slewing). After the ski begins to drift one way it is very difficult to bring it back into alignment. Ideally waves should be caught unbroken, as the tail rises and the nose drops the paddler must accelerate onto the green face (figure. 15.1). The ski must be held at 90 degrees to the wave and the paddler should push down on both pedals to keep the rudder straight (fig.15.2 and 16). As the paddler accelerates down the face, it may be necessary to lean backwards to try and avoid nose-diving (figure 15.3). It is important to keep paddling and accelerate out in front of the white water before it breaks behind the ski (figure 15.4). This prevents the ski from being pushed sideways in the turbulence, and keeps the rudder in the clearest water possible. If at any point the ski begins to turn off from 90 degrees then the rudder can be used, but avoid over-correction.

Figure 5. Start

Tips

Fig. 16

- **Push down on both pedals when holding the ski straight. Continue to paddle at all times.**
- **If the ski begins to drift off to the left the right pedal is pushed down (or vice versa). An additional technique to aid straightening a slewing sk, is to lean the rail opposite to the pedal that is being pushed down (in this case left rail) towards the water.**
- **In larger surf conditions aim to catch a wave on the edge of a rip where available. Waves in rips will break less powerfully due to the deeper water. This enables the paddler to maintain better control of the ski.**
- **Remain perpendicular to the wave not the shoreline.**

15.1 Catch the wave unbroken, as the tail rises or nose drops, the paddler must continue to accelerate onto the green face.

15.2 Continue paddling at all times and remain perpendicular to the wave.

15.3 As the paddler accelerates down the face it may be necessary to lean backwards to prevent the ski from nose diving.

15.4 Accelerate out in front of the white water before it breaks behind the ski.

Safety Point!

If a paddler falls off when wave riding, every attempt should be made to ensure that the ski is not lost. If contact is lost, the paddler should surface whilst protecting the head and face. Swimming to the craft can commence once certain that the ski does not present any potential harm.

Slewing

There will be times where the paddler is unable to hold the ski straight on the wave. Once the ski begins to turn too far, it is likely to slew completely sideways. Although this situation is not ideal, the paddler can adopt strategies to maintain control until the wave becomes small enough to bring the ski back around. There are several methods used to maintain control when slewing.

Method 1

This method involves the paddler remaining seated on the ski and placing the leg closest to the wave in to the water for stability and even wrapping it around under the ski for extra support. The remaining leg can be used to push the pedal to turn the ski back onto the wave. A supporting paddle stroke is used to grip the water and the ski is angled so that the rail closest to the wave is closer to the water, which allows the ski to slide sideways and eventually turn back onto the wave.

Safety Point!

Always make every effort to maintain contact with the equipment.

Training sessions for practice should be organised with consideration of other water users.

Method 2

Another common technique is to put the leg furthest from the wave over the side of the ski for extra stability and use the paddle to grip the water. This technique is not as desirable as the correct pedal cannot be pushed down to realign the ski (figure 17).

Method 3

On larger waves there is a probability that the paddler may come off the ski completely. In this situation the paddler should maintain contact with the ski and attempt to be dragged along by the wave and attain a position lying sideways across the ski. The skilled paddler will eventually be able to remount the ski while riding the wave sideways and continue back onto the same wave without losing any time.

Tips

Spending many hours 'playing' in the surf experimenting with ways to maintain contact with the ski and continue to progress to shore is the only way to improve your slewing recovery.

Figure 17. Controlling slewing- method 2

Finishes

Finishes on a ski are different to other disciplines as they finish in the water and do not require wading or running. In most cases there will be at least a small wave or runner aiding the paddler to the finish. Timing is crucial as the wave can be used to give a final burst of acceleration. If timed correctly, the paddler can use the momentum from the wave to pull in front of the white water for a final short sprint to the line (figure 18).

When returning to shore there will be times when it is possible to overtake the wave in front of the one being ridden. Every effort should be made to do this as it can gain extra ground.

Safety Point!

After crossing the line, move away from the finish line immediately. This makes way for other paddlers that may be coming in and avoids any collisions.

Figure 18. Sprinting for the finish

Contents

BEACH

Relay

Outgoing Runner

Ready for the Changeover

Outgoing runner stands well back from the change line allowing acceleration onto the baton.

The Outgoing runner forms a 'V' with hands and looks through the 'V'at the baton.

Focus only on the baton, not on other teams or runners.

All training for baton changes should be done standing at the position as per competition. If there is a back line, stand on the back line.

Running onto the Baton

Accelerate onto the baton.

Try to take at top speed.

Take baton as close to the changeover line as possible.

The 'V' is just a guide. The outgoing runner will end up with the baton in one hand.

If it is possible to select teams which compete each week, determine running orders and train the changeovers as per the running order. In this way, runners become familiar with each other and can better determine when to start their run. All changeover training needs to be done at pace.

Relay

Incoming Runner

Incoming runner holds baton up early.

The baton is held at the base.

Hold steady so outgoing runner can focus on the baton.

Incoming keeps slightly to one side of the track on changeover (the left side).

The outgoing runner is accelerating so will take the baton quite low. The incoming runner must hold the baton accordingly. If the baton is taken too high the outgoing runner cannot be accelerating and thus the change is slow.

Relay

The Changeover

Incoming runner allows the outgoing runner to take the baton.

Incoming runners arm is relaxed and swings back as the outgoing runner takes a firm hold.

Outgoing runner uses the 'V as a guide and runs onto the baton.

Outgoing runner must focus. Forget what is happening in the other lanes and with other teams. Concentrate on your own race!

Completing the Changeover

At some point in the run to the next change, the outgoing runner may need to rearrange the grip on the baton so it is held at the base.

The outgoing runner is accelerating so will take the baton quite low. The incoming runner must hold the baton accordingly. If the baton is taken too high the outgoing runner cannot be accelerating and thus the change is slow.

Sprints

Standing Start

Under 8 to Under 10 Years

Toes on line

Dig small foot chocks for both feet

Body leaning forward, weight on front foot

Knees slightly bent

On 'go' spring forward from front foot

Crouch Start

Under 11 to Under 14 Years

Clear top layer of softer sand.

The runner then takes the "on your mark"position in the newly cleared sand to determine foot positions dig small chocks for feet (dig sand forward).

On Your Mark

Hand positions slightly more than shoulder width apart.

Thumb and forefingers (form a bridge) on start line

Front foot approx 30cm back from start line.

On Your Mark.... Which foot forward?

Commonly, the left foot is the front foot

Correct settings for the front and rear feet?

A simple approach is to place the knee of the rear leg opposite the instep of the front foot and to move forward with the hands until the body weight is directly over the hands and the arms are vertical

Set

Lift hips to slightly higher than the shoulder height and rotate shoulder forward.

Most weight is on the arms & hands...not the legs.

Eyes looking 20-30 centimetres down track

Listen solely for the gun.

The angles of the legs in the "set" position are (approximately):

Leading knee angle -90 degrees

Rear knee angle -120 degrees

Related to left or right handedness... but not necessarily so. Allow the athlete to test for both left and right foot forward.

Sprints

Crouch Start

Go

Drive the arms fast.

Drive the back leg forward into a high knee action

Extend the body so there is a straight line through the head, spine and extended rear leg.

Acceleration

Eyes focus ahead, 2 to 3 metres.

First 10 metres keep low, pumping legs hard and fast with eyes down for maximum acceleration.

Gradual transition to a more upright running position at about 30 metres from the start line.

Running

Eyes focused at the end of the lane.

Head in line with spine, held high.

Shoulders held down.

Smooth forward backward action of the arms, not across the body.

Drive back with elbows - hands move from shoulder height to hips.

Elbows approx. 90 degrees.

Hands relaxed, fingers loosely curled or can be held straight.

Legs - fully extended, rear leg pushing off the sand and drive forward with a high knee action.

No tension in the face, neck and shoulders.

Sprints

Finish

Head back, lean forward from hip so chest crosses the line first.

Do not dive across line.

Beach Flags

Competitors Ready

Lie straight, toes on starting line

Feet together

Bodies 1.5m apart

Elbows forward

Heads Down

Chin on hands

Concentrate and listen for the whistle blast

Go! (The whistle blast)

On the whistle blast there are three simultaneous movements;

1. The head bobs up.
2. The hands move out from under chin and back towards hips, palms flat on sand in preparation for push up form sand.
3. The free leg bends, raises and moves up and back away from starting line.

The turning leg foot remains in the starting line and turns in the sand.

Turning Leg

The athlete needs to understand which way they will naturally turn.

If the athlete turns to the left, the turning leg is the left leg, the free leg the right (and vice versa).This correlates somewhat to the sprint start. Which leg forward?

A simple rule is, if right handed, there may be a natural tendency to turn left. When you turn left in the beach flags the left foot remains fixed and at the initial movement into the acceleration phase, the left foot is at the front as per the sprint start.

Start early sessions without any instruction allowing athletes to naturally select which direction they turn.

Beach Flags

The Turn

Body is pushed upwards from sand to commence body turn or twist motion in chosen turn direction

Head and shoulders are kept low throughout the turn.

Use vigorous leg and arm action.

The turn leg knee sometimes drags in the sand. This squirreling around on one knee should be minimised.

Acceleration Phase

At completion of the turn, the free leg is planted in sand for the initial push.

Body turn twist is completed so that athlete is running at 90 degrees to start line (or face on to the flags).Keep low to sand for maximum acceleration.

If the turn is incomplete, or over-complete (ie. not explosive enough, or too explosive), the athlete may commence the run at less than, or more than, 90 degrees to start line.

In this case, the athlete will need to correct body angle to 90 degrees resulting in a slower start or even a stumble.

Running for the Flag

Beach Flags

Low body position

Leaning forward

Early decision which flag to run for.

Beach Flags

The Dive

Dive low for the baton (flag)

Eyes on the Prize (flag)

Hands extended

Grasp firmly and bring to body.

Positively claim the flag to disallow others from grasping your flag the raising possibility of a disputed win and thus causing a run-off

Phases

Turn

Acceleration and run for Flag

Dive

The Turn is itself is a number of phases.

1. The initial push up from sand.
2. Twisting of the body, turning leg foot remains fixed in starting line and foot turns in sand.

3. The initial push with the free leg and the move into the acceleration phase.

All this needs to be completed smoothly without any discernible start of transition form one to the other.

Contents

Equipment and Generic Skills

Sport is an intrinsic part of Surf Life Saving Great Britain (SLSGB). It helps develop our lifesaver's skills, knowledge and techniques. Lifesaving sport plays an essential role in bringing clubs and regions together on a regular basis to share information and experiences and maintain the social side of the organisation.

The pool lifesaving events are a growing area of the Surf Life Saving sport movement. These events require skill and technique as well as fitness. Often seen as more accessible than the surf aspect of sport, more and more people are getting involved each year, so it is important that athletes and lifesavers are correctly taught these skills and drills to hone their techniques.

All events discussed in this manual are based on events held in a 50m, 8 lane swimming pool.

figure 1.1 Equipment needed for pool lifesaving events

Equipment and Generic Skills *(continued)*

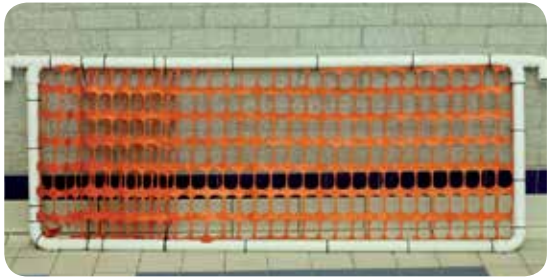


figure 1.1

Obstacles

For the 200m obstacle race, there are two obstacles per length of the pool. They are generally a plastic rectangular frame with netting forming the barrier, 70cm high. Obstacles are fixed at right angles onto lane ropes in a straight line across all lanes. The first obstacle is located 12.5m from the starting wall, with the second obstacle located 12.5m from the opposite end. The distance between the two obstacles is 25m. The obstacle can either have hooks to drop over the lane rope, or string to attach it with.

Manikins

These are International Life Saving (ILS) approved manikins; 1m tall, orange in colour with a white horizontal stripe and white back of head and two or three bungs in them, enabling the manikin to be filled up with water and emptied again after a race. When completely full of water the manikin will weigh around 80kgs. A manikin can be half filled so that it floats during the manikin tow with fins race and for youth events. In nipper events (the youngest age group, up to 13years old) the manikin will have no water in it and will float on the surface.

figure 1.2

Rescue tube

A yellow rescue tube made of soft bendy foam with a length of red rope and an across chest harness. There are metal ring clips each end of the tube to attach it around a patient or manikin.

figure 1.3

Fins

The use of fibreglass fins is permitted in competition. These come in a wide variety of widths, strengths and stiffness. Softer rubber fins can also be used.

figure 1.4

Throw line

The throw line must be between 16.5m and 17.5m in length. Competitors must use the throw lines supplied by event organisers.

figure 1.5

Skill Streamlined swimming

It is extremely important to encourage participants to keep their bodies as streamlined as possible while swimming. Maintaining a streamlined body position will help swimmers move through the water with minimal resistance, making them swim faster. There are various ways to ensure streamlined movement through the water. Head positioning is vitally important, as is hand and arm positioning. When taking a stroke the participant should strive to get their hands to enter the water centrally in front of their head, not wide apart. The hand should enter thumb first, with the hand turned at an inward pointing angle, rather than flat onto the water. This creates a spearheaded approach, enabling the swimmer to glide through the water easier. Figure 1.6 shows how if an object is narrower in the front it will create less resistance than if it is wide at the front, creating more surface area to break through the water.

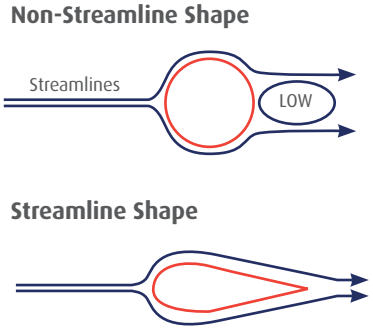


figure 1.6

A good way to do this is to tell participants to imagine there is a length of rope running down their spine, coming out of the top of their head and out the tips of their toes. They should swim as if someone is pulling on the rope at all times, keeping them taught, as shown in figure 1.7.

figure 1.7

figure 1.8

Keeping feet flexed at the ankle rather than at a right angle to the leg, as shown in figure 1.8, will cause less drag and give a more powerful leg kick action.

Head positioning is also very important. The average weight of an adult human head is about 7kg, so if the head is moving around it will create massive resistance. Participants should try to swim with their head pointing downwards, only moving marginally to the side to breathe. Swimming with the head up will lift the chest and cause resistance. The rest of the body will also move in the direction of the swimmer's head, so if it moves around the whole body will snake down the pool. This snaking movement will again cause drag and will slow them down.

figure 1.9

Fin Skills

Diving with fins on

Despite swimming undoubtedly forming the basis of any lifesavers fitness and skill, it is not the aim of this manual to teach lifesavers how to swim, or how to execute a standard dive start. The dive start wearing fins however is worth a mention as it is used in a number of events and is something that should be practiced in order to perform correctly.

The start is important so it is imperative to practice until the participant is completely competent and dive entry becomes second nature. The dive start is a relatively straightforward skill that can become the secret weapon for a competitor. It must be powerful and fast to give the necessary momentum needed to continue the race.

Skill overview

The most important thing when diving with fins on is maintaining balance. Fibreglass fins are wide and long and can be clumsy out of the water as they take up so much space on the starting blocks. Regular wearing of the fins will help with the comfort factor. There are two ways to maintain balance while on the blocks at the start of a race.

Option 1 Holding the side of the dive block

In this option the participant will hold the sides of the start block either side of their feet. This prevents participants wobbling from side to side and keeps them balanced and ready.

figure 2.1

Option 2 Hands in the middle of the feet

The other option is to hold the hands between the feet at the front of the block. The problem with this method can be the limited space available due to the width of the fins, as mentioned. The advantage is the hands are already at an arrow point, ready for a streamlined entry into the water.

It is up to coaches to teach the different starting positions so participants can decide which they feel is best for them.

The feet must be further forward on the blocks than they would normally be in a standard dive start, with the fibreglass part of the fin off the block. This is to ensure that the fins do not catch or get damaged on the dive entry. Bending at the knees will ensure utmost power of acceleration into the pool, and maintaining a streamlined body position will help this.

figure 2.2

Fin Skills *(continued)*

figure 2.3

Special attention should also be paid to dive takeovers during relay races. This is when one participant is waiting for another participant to touch the wall before they can leave. The difference between this dive and a normal race start is that the participant begins winding up their arms and leaning forward to the point where they are about to fall in, timing it so their feet leave the blocks as the other participant touches. Get this timing wrong and the team will be disqualified. Squads should practice these starts together. This will help participants learn how fast each other approaches the wall, to gauge their own dive. Practicing in the order they will swim in the relay itself is also helpful.

Diving and relay take over sessions can be used during weeks when the training load is particularly high, or in sessions following competitions when swimmers need some recovery time. These sessions shouldn't physically tire participants out but will prove to be essential come race day. Technical diving sessions can also be included in the final 15/30 minutes of a particularly intense session, again to aid recovery. The variation from the normal program will generally be greatly welcomed.

Fin Skills *(continued)*

Skill

Swimming with fins on

Swimming with fins on is difficult and can be painful for the inexperienced or poorly coached swimmer. Fin swimming puts the body under a great deal of stress, especially the back, legs, ankles and feet. Injuries can easily result if training is not approached sensibly or poor technique is allowed to develop, this is something for coaches to remember. Swimming with fins also requires a high degree of core body strength as well as strong legs. The majority of the power generated when using fins comes from the stomach and the back. Knees should not intentionally bend, as this will reduce the power being delivered by the core.

Figure 2.4 and figure 2.5 shows a poor fin swimming technique. With the knees bending this much the swimmer is overloading their lower legs, not transferring power from the core. This will result in a weaker stroke and leave the swimmer susceptible to injury. This could indicate the participant is using fins which are too stiff or big for them.

figure 2.4

While the hands, arms and head are in the perfect position, the legs are splayed. Splaying the legs apart like this will also reduce the power being generated through the body and ruin streamlining.

figure 2.5

Holding a streamlined body position, specifically keeping the upper body rigid and tight together, is of optimal importance.

Participants should always train in fins before attempting to race in them. It is recommended to only train a minimal amount in fibreglass fins, to reduce strain on the body, and instead do the larger majority of training wearing standard rubber fins. This enables participants to practice the technique and complete longer training sessions without the risk of injury. The most effective method is to thrust the bum upwards and the hips downwards while swimming. This will ensure that the participant is bending at the hip, not the knee, and is generating power from the correct muscles, as shown to the left.

Fin Skills *(continued)*

Fins used in competition are generally fibreglass or carbon fibre and come in varying sizes, styles and degree of stiffness. The maximum length allowed for use under ILS rules is 65cm, including the extended ankle strap. The maximum width allowed is 30cm. As mentioned they come in different shapes and a wide variety of degrees of stiffness, often female or less accomplished participants will use softer, more flexible fins than their male counterparts, relinquishing some of the strain on their body. The harder the fin, the quicker the swimmer will become tired. The hardest type of fin will not be appropriate for general club use, as only the very strongest of men will ever use them, and even then they are not widely circulated. When a club is looking to buy fins this is something to be taken into account, as well as the price, which can be quite high. Clubs should consider buying a range of fins, starting at the lower end of the scale and working their way up to the harder, wider fins.

figure 2.6

figure 2.8

figure 2.9

figure 2.7

Safety Tip

Children should not be encouraged to swim wearing fins until they are developed enough to cope with the demands fins put on the body. This is believed to be around the age of 11 for girls and 13 for boys. Training in rubber fins will be quite sufficient for the younger members of a squad until their bodies develop enough for them to handle the extra stress.

Fin Skills *(continued)*

While wearing fins the legs become significantly more powerful than they would be normally, which in turn reduces the efficiency of the upper body. Arm stroke rate could be increased to match the power being produced by the legs, although this will not feel comfortable and will affect the rhythm of the stroke. The arms may feel redundant as they whirl around trying to match the speed and power being produced in the lower body. Partly for this reason many people choose to swim underwater when wearing fins. This means the arms can be held tightly in an arrowhead in front of the head, maintaining a streamlined body position and reducing resistance. Swimming underwater, keeping up a continuous kicking rhythm, is generally faster than swimming on the surface with fins. It is worth noting that in the 100m manikin carry with fins race competitors will generally swim the whole of the first 50m under the water. Coaches should include underwater swimming in their sessions (see drills section). They should also time participants to judge whether they are indeed faster underwater than on the surface.

figure 2.10

figure 2.11

What stroke to swim with fins?

The most efficient kick for swimming with fins is generally agreed to be the butterfly, or double leg kick. This means both legs are moving together, getting double the power than if they were using a front crawl kick. People preferring the butterfly kick will use the normal width fins and swim with their legs slightly splayed apart to stop them from catching.

Core strength

Core strength is imperative when swimming with fins and something that needs to be included in the training programme of any serious competitor. As mentioned, the majority of the power during fin swimming is generated in the stomach and the back, i.e. the core, so the core strength must be developed to minimize the risk of injury. Without a strong core the effectiveness and safety of fin swimming will rapidly decrease. Coaches can include core stability and strength training into the start of a pool session, or have a focused independent session, depending what suits their squad. Again this will add variation to the training program. To read more about core training, see Section 13 Drills and Skills.

Carrying the Manikin

Participants will carry the manikin in almost all events so it is an essential skill to master. The carry is when the manikin is 'rescued' by the participant without any aids. There are a few strokes which can be used to carry the manikin, the choice of which ultimately comes down to what the individual feels most comfortable with. This may vary for different events depending on whether the participant is wearing fins or not and how quickly he tires.

Option 1 Freestyle

The freestyle carry is certainly the fastest method of carrying the manikin, as demonstrated by the top international athletes in recent years. In previous years there would have been a mixture of strokes used but now the fastest participants will be swimming freestyle to carry the manikin.

However, although fast, the freestyle carry is by no means easy. Generally speaking, the freestyle carry is only employed by the elite in the sport; extremely strong swimmers who spend many hours training. For the average person this technique will probably prove difficult, painful and possibly slow; it is also easy for the manikin's face to become submerged in the water, which can result in disqualification, per ILS rules. It is worth noting that the ILS is currently in talks about banning the freestyle technique from competitions.

Securing a firm hold on the manikin is important. There are two ways to do this.

Carrying position 1 Bent arm carry

There are two ways of positioning the manikin in the bent arm carrying position.

figure 3.1

figure 3.2

Carrying the Manikin *(continued)*

figure 3.3

figure 3.4

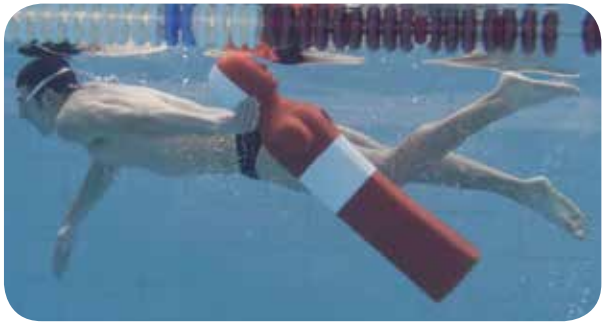


figure 3.5

figure 3.6

Method 1 Losing contact

Having taken hold of the manikin the participant pushes off the bottom of the pool and kicks towards the surface, with one arm outstretched, leading the way, head in neutral alignment and kicking the legs hard to propel them to the surface. For more details see Section 5 50m Manikin Carry and Pick-up at 25m Point.

Nearing the surface the participant will give the manikin a sharp pull to increase its speed, which will give him enough time to bend his arm and catch it in the position with his hand just below and in between the shoulder blades.

The participant should grip the back of the manikin's neck in his carrying hand and hold the manikin high up on his back. From here he is ready to continue swimming with the manikin in the correct position to be carried.

In this method the participant will lose all contact with the manikin for a short period of time. This method is risky for that reason but with practice it is extremely fast. Getting a secure grip can be difficult for people with small hands, especially girls. This technique also involves a degree of flexibility, which some people may not have.

Carrying the Manikin *(continued)*

Method 2 The twist

After the surface dive to retrieve the manikin the participant holds the manikin under the neck with his carrying hand and the near shoulder with his non-carrying hand. As he pushes off the bottom and moves towards the surface he rotates the manikin 45 degrees away from his body so that the back of the manikin is facing him. At the same time the participant rotates 45 degrees in the opposite direction so that the back of the manikin and the back of the participant are next to each other. Still holding on to the manikin with the carrying hand, the participant should rotate his hand 180 degrees so that the thumb is facing upwards. He can then move the manikin to the top of his back. The advantage is that the participant never lets go of the manikin.

Carrying position 2 The straight-arm carry

The arm holding the manikin can be held out straight behind the participant, over the legs or slightly to the side, although this is not recommended as it is less streamlined and causes more bow wash, which in turn puts great stress on the arm, specifically the shoulder and elbow joints, as the participant still needs to hold the manikin high enough to keep its face clear of the water. From here the participant is ready to begin the carry. The technique itself is quite simple; once he has a firm grip on the manikin he uses a one-armed freestyle stroke to move down the pool.

The difference between normal freestyle swimming and freestyle manikin carrying is that as the person is only using one arm, that arm must stroke at a higher rate than it would normally. Owing to the weight being carried on one arm, if the swimmer's arm strokes slowly then his speed will decrease rapidly. He must maintain as high a stroke rate as possible, rather than the glide used in normal freestyle, which would slow him down. A fast, strong leg kick is also very important to maintain momentum and buoyancy.

While swimming the freestyle carry it must be remembered that in the ILS rule book the manikin's face (mouth and nose) must be kept above the surface at all times during the carry, as shown in Figure 3.8. This means holding the manikin very high

figure 3.7

figure 3.8

on the back while swimming freestyle. It is difficult and tiring so coaches must keep a close eye on participants during training.

To prevent muscle imbalance participants should also train carrying the manikin in both hands. This will stop the muscles on one side of the body being put under repeated strain and will balance the two sides out, helping to prevent injury. By training carrying the manikin on both sides participants will also learn which is more comfortable for them or whether they have a 'dominant' arm, for either the carry or the one-armed swimming. Often if a person feels he has a dominant arm that is the one he will use to swim with, using the perceived weaker one to carry the manikin.

Safety Point

The freestyle technique for manikin carrying is not appropriate for children. Carrying a full-sized ILS manikin in such a way will put enormous, dangerous, strain on their bodies and can lead to injuries. Learning the more conventional styles is recommended, until they are physically strong enough to try the freestyle technique.

Carrying the Manikin *(continued)*

Option 2 The conventional carry

The conventional carry is widely used, although it is not as popular in the international field as the freestyle as it is slower. A breaststroke kick will most often be used, or the scissor kick, depending on the carrying position. The participant will hold the manikin in one hand generally pulled in close or sometimes an extended arm carry will be used. There are a variety of grips for holding the manikin, as described below.

Method 1 Chin carry

If using the chin carry it is a good idea to hold the fingers well clear of the manikin's throat, as this may result in disqualification; thus the technique shown in Figure 3.9 may result in disqualification. While some people like this method, many find that they do not have a strong enough grip on the manikin and prefer one where they hold on to a more solid surface area, such as the neck.

Method 2 Behind-the-neck carry

The behind-the-neck carry is probably the most popular option as it allows the manikin to be held high in the water, keeping its face clear of the water. It can also be more streamlined than other styles if the participant holds his carrying arm close to his body. The higher up on the chest the manikin is held the less chance the swimmer will catch his legs on it as he kicks. The other arm should be used for pulling through the water in a sculling motion. As with the freestyle carry any time spent gliding is only going to slow the swimmer down, so short rapid arm pulls should be used. Combining these arm pulls with the scissor/breaststroke kick can initially affect the swimmer's rhythm, but when developed will prove fast. When carrying wearing fins, most swimmers will choose to hold their non-carrying arm outstretched in a superman pose.

figure 3.9

figure 3.10

figure 3.11

Tip

Younger or weaker participants can rest some of the weight of the manikin on their chest, which will keep the manikin high in the water and its face clear.

Carrying the Manikin *(continued)*

Method 3 Cross-chest carry

The across-chest and under-arm carries are traditional rescue carrying techniques and are likely to be used when rescuing a live casualty, the main difference being that a live casualty has natural buoyancy and a larger physical presence than a manikin. A manikin does not naturally float and will sink if the swimmer allows it to. For the cross-chest carry the participant will have his carrying arm over the outside shoulder of the manikin, gripping under the arm of the inside shoulder. This allows him to keep the manikin close to him and high out of the water. The problem with this carry is that the manikin may bob slightly during the leg kick which risks the manikin's face being submerged. The scissor kick is generally recommended for this carrying technique.

figure 3.13

Skill

The scissor kick for the sidestroke carry

During sidestroke the kick used is the scissor kick. The body is sideways in the water, with the head facing the wall opposite and the non-carrying arm outstretched towards the finishing wall, in line with the side of the head. During this kick one leg will kick backwards, while the other will kick forwards, and both legs then whip back together in the middle. It can be very powerful.

figure 3.14

figure 3.12

Tip

The chin carry is not the best technique to teach young children, as the chin is a small area so more often than not their hand will slip over the manikin's throat. The across-chest carry can also be difficult for younger swimmers to master as the manikin's weight may swamp them, making them struggle to catch their breath. They may also not be familiar with the scissor kick and may prefer the sidestroke.

Carrying the Manikin *(continued)*

Option 3 Backstroke carrying the manikin (while wearing fins)

This technique is relatively easy to teach newcomers to pool lifesaving sport, although it is not widely used by the faster competitors, except during the 100m manikin carry with fins. Unless it is performed very powerfully when not wearing fins, it may be slower than the other Options.

One arm will hold the manikin and the other arm can be used to pull through the water. To maintain a streamlined position the swimmer should hold the manikin in line with his body and be careful not to move the head around too much. Participants should resist the urge to constantly look for the wall behind them or to look at the manikin, as this will disrupt their streamlined position. Training and counting strokes will enable swimmers to gain a good idea of when they are likely to be nearing the finish wall without looking for it. Keeping a firm and lifting grip on the manikin will make sure its face is clearly out of the water without the need to check this.

Option 4 Double-handed carry

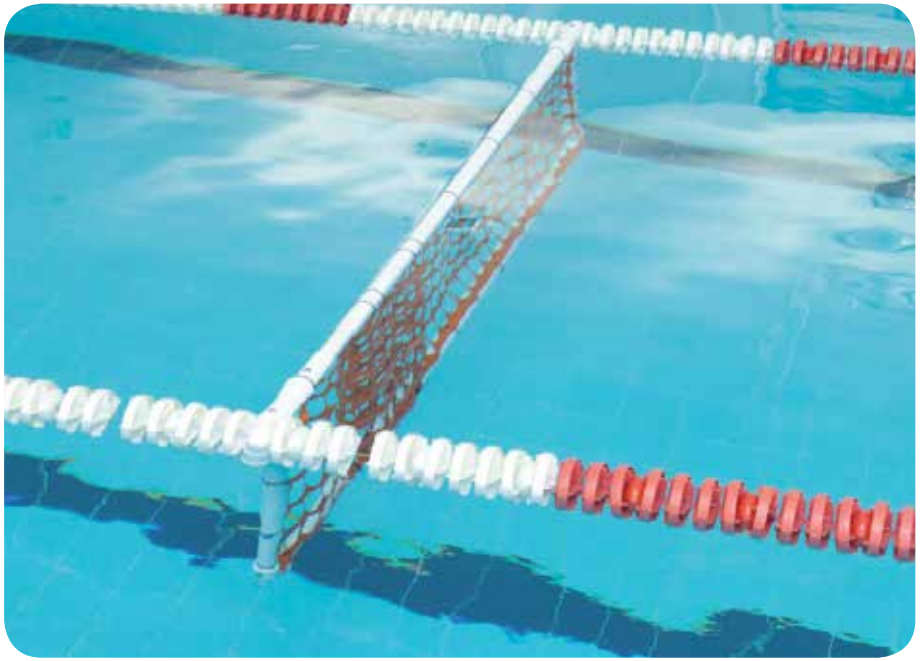
Very young children (nippers) should be taught a double-handed carry when they first learn to carry the manikin. Juniors (13+ years) will race carrying a full-sized ILS manikin so it is important not to put their bodies under too much stress. The double-handed carry means they can have both hands holding the manikin, one hand under each shoulder. They should swim on their backs, either using breaststroke or backstroke kick, whichever they feel works better for them. As they grow stronger they can begin to take one hand off the manikin and start developing other carrying techniques.

figure 3.14

figure 3.13

200m Obstacle Race

This is a 200m freestyle race, during which the competitor swims under 8 obstacles, 2 per length in a 50m swimming pool. The participant must surface between the dive entry into the pool and the first obstacle and each obstacle thereafter.



Skill

- Diving under, clearing the obstacle and resurfacing.

Skill overview

The obstacle event is by far the most accessible for the new or young lifesaver, as it is predominantly a freestyle swim. The only real lifesaving skill involved is negotiating the obstacles, which hang 70cm below the surface of the water. This can be likened to dolphin diving under waves in the ocean, and is good practice for that.

There are two main methods for this skill: diving down and pushing off the bottom to resurface, or diving down and kicking back to the surface. Both are effective and allowed under ILS rules, the method used depends on which works better for the individual.

200m Obstacle Race *(continued)*

Option 1 Push off the bottom with the feet

In the first scenario the participant will do a surface dive when approaching the obstacle, then squat down underneath it (without contact with the obstacle) and use the feet to push off the bottom of the pool to resurface.

Stage 1 The dive

Body positioning is important here; it is more streamlined to dive with both hands held out in front, rather than with one arm by the side. On approaching the obstacle participants should aim to dive down at a gradual angle of around 45 degrees, around 1-2m before the obstacle. They should time the dive so they are bringing an arm over ready to take a stroke; instead they will throw the arm into the dive, giving them momentum. Both arms should be held outstretched in front of the head; the head itself should be looking down, held between the two biceps. Timing the dive early enough is important to avoid diving mid stroke or the participant hitting their head on the bottom of the obstacle and so the feet or legs don't catch on it while resurfacing.

figure 4.1

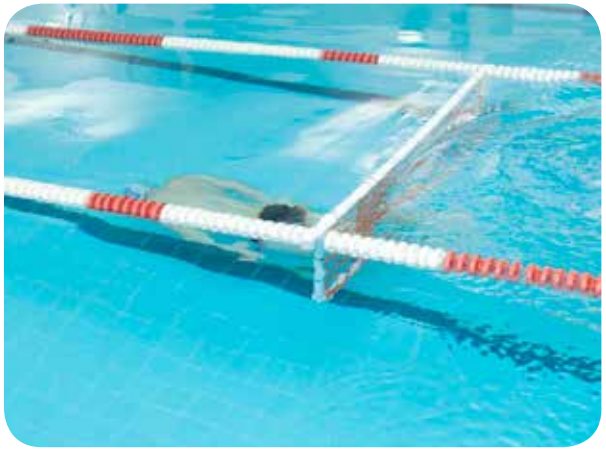


figure 4.2

Stage 2 The push off

Ideally enough momentum will have been thrown into the dive to not need any leg kicks at this stage, but a butterfly or breaststroke leg kick can be added if necessary. Once under the obstacle the participant will squat down under it, with their legs compressed underneath them and feet flat on the bottom of the pool. They should keep their head in neutral alignment with the body, which will help them to resurface at the correct angle. They will drive through the legs and push off the bottom, aiming to resurface at a slow angle, rather than an abrupt angle, this helps them resurface with the body in position ready to continue swimming.

figure 4.3

figure 4.4

Stage 3 Resurfacing

As mentioned, at this stage the arms are held out in front of the head, holding the head in tight alignment, looking down. The participant will have pushed off at a gradual angle which enables him to continue swimming as soon as his arm breaks the surface, covering the distance in the pool before the next obstacle.

Option 2 Swimming underneath the obstacle

The second method is where the participant does a shallow surface dive as they approach the obstacle, kicks their way under it and continues to kick to the surface. They can use either butterfly or breaststroke kick, whichever is preferred.

At this point the participant will often take a breaststroke arm pull to help them under the obstacle.

Timing both methods in training will show which is fastest for individual swimmers. The dive should be timed to minimise disruption to the stroke rhythm and ensure correct positioning in the water, as mentioned earlier. Otherwise they may need to change direction under the water, slowing them down.

figure 4.5

figure 4.6

200m Obstacle Race *(continued)*

The depth of the pool should be checked before all races, as this can impact upon which technique the participant chooses. Most pools are between 1.8 and 2m deep, although some pools are up to 3m deep. Both techniques should be practiced in training, working at a depth of 2m, and timed to see which is fastest for each individual. Generally speaking if the pool is deeper than 2m then the advantage of pushing off the bottom of the pool with the feet is cancelled out and kicking to the surface is faster. If the pool depth is 2m or less then squatting and pushing off the bottom should be fastest. The surface of the bottom of the pool should also be considered. If the bottom is slippery then splitting the feet apart will give better purchase when pushing off the bottom than having both feet together.

figure 4.6

figure 4.7

figure 4.8

Tip

Set aside time in training to practice the timing of the surface dive on the approach to the obstacle, this will help participants know what position their body and arms should be and where in the stroke they should aim to dive. This will also help them gauge the correct angle to dive at. Making a homemade obstacle is pretty easy and cheap and will be very useful in training or for more alternatives look in the drills section of this manual.

50m Manikin Carry

Participants swim 25m freestyle before diving to recover a submerged manikin, surfacing within 5m of the manikin pick-up line; they then carry the manikin 25m to the finish.

Skills

- Retrieving a submerged manikin from the 25m point (in a 50m pool)
- Carrying a manikin – see Section 3 Carrying the Manikin

Skill overview

Picking the manikin up at the 25m point takes place in the **50m manikin carry** event and also in the **200m super lifesaver event**.

The participant must first decide which carrying stroke to use, selecting the one he feels most comfortable with following the training. The style of stroke used alters the approach to the manikin pick up.

Option 1 The freestyle pick up

In general only the elite performers in the sport use the freestyle carrying technique: it can be very complicated, painful and difficult to perform at speed without getting disqualified. However, due to its proven speed more and more club participants are now learning this technique.

The important element of this event is to make the transition from a freestyle sprint to a manikin carry with minimal delay or loss of momentum. This is a vital component to the overall event and can add or lose seconds from the overall time. For this reason it should be practised repeatedly to ensure minimal mistakes.

Stage 1 Surface dive

The participant aims to surface dive approximately 1-2m before the manikin. During training, coaches can encourage stroke counting to help him judge this dive accurately on race day. On the approach he should aim to dive with both hands held out in front

figure 5.1

of the face, breaking the surface of the water like a spearhead. The head should be held firmly between the arms, looking down, not forwards. The body should be held straight and streamlined. Depending on the pool depth, and the individual's preference, a fly or breaststroke kick can be added into the surface dive. The surface dive should be approached at a gradual angle; the 45degree mark is good. The participant does not want to overshoot the dive and have to backpedal to the manikin.

50m Manikin Carry *(continued)*

Stage 2 Pick up

The participant will take hold of the manikin with one hand and /or place a hand on the bottom of the pool, which will help pull the body down into position. The feet should be firmly planted on the bottom, split apart if necessary for more grip, with legs compressed into a squat.

There are two options for lifting the manikin into the freestyle carry from here.

figure 5.2

figure 5.3

Method 1 Losing contact

In this method the participant will actually lose contact with the manikin briefly and has been described in more detail earlier in this manual; See Section 3 Carrying the Manikin. This is the fastest technique, but requires practice and confidence in timing.

figure 5.4

figure 5.5

figure 5.6

figure 5.7

50m Manikin Carry *(continued)*

figure 5.8

figure 5.9

figure 5.10

Correct hand positioning

With enough speed and power put into the push off from the bottom of the pool the manikin should have enough speed to surface by its self, without deviating from its course. This actually means the participant does not need to be in direct contact with the manikin at all times; although they will be right next to it and moving at the same speed. As the participant surfaces he will take a stroke before giving the manikin a sharp pull upwards with his carrying hand. As the manikin is pulled upwards the participant will have time to let go and re-position his hand ready to catch the manikin again and continue swimming. The manikin is now in the carrying position as shown in figure 5.7.

Method 2 Holding the shoulders

The participant uses both hands to take hold of the manikin's shoulders, ready to push off the bottom of the pool, driving hard through the legs. The participant keeps his hands on the manikin's shoulders and moves underneath the back of the manikin, then repositioning the hands to the back of the neck. This is the safest way to get into position ready to carry.

Stage 3 Surfacing

As the legs extend out they should begin kicking to the surface. The arm is held straight out pointing towards the surface, in the 'superman' pose, maintaining a strong body position. The head should be tucked into the chest, not looking up to the surface. As soon as the extended arm breaks the surface, the participant begins a one-armed front crawl.

This should be performed rapidly to maintain speed. It is advisable, where possible, not to breathe on the initial 1-2 strokes so that a rhythm can be established. According to ILS rules the participant must surface with the manikin within 5m of the manikin pick up line. They should push off the bottom at an angle so they are covering distance and ready to swim as they reach the surface, rather than abruptly trying to lift the dead weight of the manikin. Surfacing at an angle helps momentum into the first stroke.

figure 5.11

figure 5.12

Option 2 Conventional manikin pickup

This is the pick up generally taught for club level competition.

Stage 1 Surface dive

The participant will surface dive using the freestyle pickup method, this time diving to one side of the manikin, the side of the carrying hand.

figure 5.13

Stage 2 Lifting the manikin and getting it into carrying position

There are two options for this method.

figure 5.14

Method 1 Conventional pick up from a surface dive (during the 50m manikin carry)

The Participant can use one hand to lift the manikin up by a shoulder to position it ready for the carry, positioned in a squat with feet planted firmly on the pool bottom, in line with the manikin's shoulders, or split apart for more grip.
At this point the body has twisted to face the manikin but points in the direction he will be swimming, not where he has come from.

He should rotate the manikin 45 degrees so that it moves into position for carrying. On the journey up to the surface, after pushing off the bottom, he should bring the manikin to his side so that his hip is on the back of the manikin. The hip then adds support to the manikin and keeps it out the water during the carry phase.

figure 5.15

figure 5.16

figure 5.17

50m Manikin Carry *(continued)*

figure 5.18

figure 5.19

figure 5.20

While manoeuvring the manikin into position the participant should push off the bottom of the pool forcefully. On push off the bottom they will rotate the hips towards his carrying side; practice will make this a fluid movement. Ideally he should extend the non-carrying hand out in a superman pose, keeping the body streamlined, as shown in figure 5.17. The participant's head should be tucked in, looking forward, which will be at the wall, or lane next door, not to the end of the pool.

figure 5.21

figure 5.22

Method 2 Conventional manikin pick up from an underwater approach (in the rescue medley)

The participant approaches the manikin the same way as he would in the one-handed pick up, this time taking hold of both the manikin's shoulders.

50m Manikin Carry *(continued)*

As the participant takes hold of the manikin he will push off the bottom of the pool. He then twists the manikin away from his body and turns his own body so he is sideways in the water, with the manikin's back against his hip and in the carry position.

Stage 3 Push off the bottom

On the push-off from the bottom the legs will extend out, enabling them to begin kicking. The outstretched non-carrying arm can begin pulling in a sculling motion as soon as it breaks the surface. Travelling back to the surface the manikin should be held tightly into the chest to reduce resistance.

figure 5.23

Option 3 Backstroke manikin carry

The backstroke pick up is similar to the sidestroke pick up. The difference is that the participant will continue to twist until he is fully underneath the manikin, with his back to the finishing wall, rather than stop in the sideways position. From here he will be ready to begin either backstroke or breaststroke kicking and sculling with the non-carrying hand.

Tip

It is a good idea to stagger the legs on the push-off from the bottom of the pool to make sure the feet do not slip. Participants should test the surface of the pool bottom before competing to prepare for this.

100m Rescue Medley

The participant swims 50m freestyle to tumble or push turn before swimming underwater to a submerged manikin located 17.5m away. The participant surfaces with the manikin within 5m of the manikin pick-up then carries it the remaining distance to the finish.

Skills

- Picking up a manikin from the bottom of the pool – see Section 5 50m manikin carry and pick up at 25m point
- Swimming under water
- Carrying a manikin – see Section 3 Carrying the manikin

Swimming underwater

Skill overview

Swimming underwater may seem like a straight forward task, but holding your breath for 17.5m after swimming a flat-out freestyle 50m is very hard.

There is no skill in this as such; it is something which needs to be practised. There are two main ways to approach the turn after the 50m sprint.

Option 1 The tumble turn

Participants must choose whether or not to tumble turn when they touch the wall after the 50m sprint. Many will normally tumble turn at the end of the pool; thus maintaining speed into the turn and a securing a good push off from the wall.

Option 2 Non tumble-turn

Weaker or less experienced swimmers may find that they do not have enough breath left after the 50m sprint to tumble turn straight into the underwater swim. Some may find it easier to touch the wall and take a deep breath before turning and pushing off into the underwater swim. This will allow more oxygen to be taken in, but will take more time. For weaker swimmers it is worth weighing up whether it is better to lose a second or so on the turn, but still have enough oxygen to complete the underwater swim, rather than try to tumble and not make the underwater section. Most swimmers will naturally breathe out when they tumble too, so if the tumble technique is chosen they must remember to retain that last intake of air.

Tactical Tip

In the 100m rescue medley the first 50m freestyle sprint is crucial. High level performers swim at full pace during this sprint and advise practising frequently to then perform at almost maximum speed throughout the event.

100m Rescue Medley *(continued)*

100m Manikin Carry with Fins

The participant swims 50m freestyle wearing fins, which can be underwater, and then dives to recover a submerged manikin, surfacing carrying the manikin within 10m of the turning edge. The manikin is then carried to the finish edge of the pool.

If the participant is fit enough the fastest option is to swim the whole of the first 50m underwater as there is no requirement to surface until he has turned and taken hold of the manikin. A common misconception is the need to touch the wall on the 50m turn before being allowed to touch the manikin, so take advantage of this point, as it is not an ILS rule.

Skills

- Diving with fins – see Section 2
- Swimming with fins – see Section 2
- Carrying the manikin with fins

Skill overview

When carrying the manikin with fins there are two options for stroke technique: freestyle and butterfly. The backstroke position with breaststroke leg kick is not effective with fins on and should be avoided.

Option 1 Freestyle

The freestyle carry wearing fins is much the same as the normal freestyle carry, explained previously, except that the legs are much more powerful than they are without fins. The added power of the fins will help participants keep up a fast leg kick, which will keep them buoyant in the water, reducing the chances of the manikin's face being covered. Owing to the increased power of the leg kick with fins, it is argued that the arm pull will not feel as effective but is still important to use. If using the freestyle kick the legs will need to be splayed slightly apart so they don't catch on each other, and also lie lower in the water so they don't catch the manikin.

Participants must remember to kick lower in the water so as not to catch the fins on the manikin too much.

Option 2 Sidestroke

The only real difference with the sidestroke technique from the freestyle is the body positioning in the water. In sidestroke the body is sideways in the water with one arm outstretched.

figure 6.1

figure 6.2

100m Rescue Medley *(continued)*

figure 6.3

Option 3 Backstroke

This is very fast and it was a long time before it was beaten by the freestyle technique on the international stage. While using the backstroke leg kick the swimmer can also add the one armed backstroke pull, or keep the arm outstretched in the superman pose. This will put a lot of pressure on the legs, which will tire more quickly. In this position either the behind-the-neck or cross-chest carry are preferred.

Skill

Picking up the manikin with fins.

Skill overview

During this race the manikin is picked up from the 50m mark, at the end of the pool, rather than at the 25m mark described in the 50m manikin carry event. This means the participant has to turn at the end before swimming back. The fins worn may be long and wide so this can be quite cumbersome.

Option 1 The space creator

Many people struggle to turn with fins on as there is already reduced space with the manikin in the way. Taller people especially will struggle to have sufficient space to manoeuvre.

Stage 1 Approaching the manikin

Wearing fins means participants will cover the ground much faster than in other events without fins. For that reason they are allowed 10m in which to surface with the manikin, rather than the 5m in other events. Whereas in the 50m manikin carry participants should aim to surface dive about 1-2m before the manikin, in this event they should surface dive at least 5-10m before the manikin. This will give an appropriate angle to level out and approach the manikin parallel to the bottom of the pool. The surface dive is the same as described earlier in the manual. If the dive is not approached at the appropriate angle to level out the participant risks approaching the manikin with his feet still pointing upwards or breaking the surface, which will make the turn awkward. For this reason the earlier the dive the better.

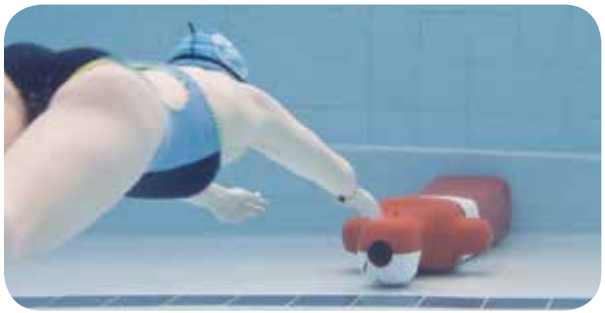


figure 6.4

100m Rescue Medley *(continued)*

figure 6.5

figure 6.6

figure 6.7

Stage 2 Moving the manikin

On approaching the manikin the participant should take hold of the manikin's head and/or shoulders and pull it towards him, away from the wall. He must be careful to pull it straight so that it does not drift into the next lane. Pulling the manikin away from the wall will give more room to turn around.

Stage 3 Feet positioning on the wall

It is vitally important to lead into the turn heel first; this will stop the fins from bending underneath the feet and getting in the way or being damaged. By leading into the turn correctly participants will be able to place their feet flat against the wall, ready for a strong push off. With the manikin pulled away from the wall there is also now more room to move.

Stage 4 The push off

The participant will now be able to take hold of the manikin, with both hands, and push hard off the wall. From this position he can then move to one side and change his grip to the one-handed grip he will use to carry, as discussed in Section 3 Carrying the manikin.

figure 6.8

figure 6.9

figure 6.10

100m Rescue Medley *(continued)*

Option 2 Classic touch and turn

This is the traditional way of picking up the manikin, involving touching the wall before turning and taking hold of the manikin.

Stage 1 Preparation

The approach to the manikin is the same as for Option 1. On the approach the participant must keep his head streamlined with his body; but as he swims over the manikin he can lift his head to look at the wall and prepare to turn.

Stage 2 Pick up

Although the rules do not require participants to actually touch the wall on the turn, it can help new participants execute the turn without tangling themselves up. A step-by-step method is normally the best way to learn this method. Whether participants are turning left or right, they should decide which hand to touch the wall with; for this example we will use the right hand.

figure 6.11

Tactical Tip

Some high level performers train so that they can swim underwater from the push off the wall, rather than surfacing, until completing the pick up of the manikin.

Using the right hand to touch and fend off from the wall will draw the body into the turn. It is important that the legs follow the body into the turn, rather than try to lead it. If the legs try to lead the turn the fins will get bent the wrong way and the swimmer will be unable to place his feet flat on the wall. Once turned the participant should plant his feet firmly on the wall, ready to push off.

If the participant chooses he can use one hand to lift the manikin up slightly by its head or shoulder, on the approach.

figure 6.12

figure 6.13

figure 6.14

100m Rescue Medley *(continued)*

Stage 3 Surfacing

The participant can now reach forward to take a grip on the manikin; in this example this is the freestyle carry. With enough force driven through the legs, and followed by some strong freestyle kicks, the lift off the bottom of the pool will be smooth. The participant should again aim to surface at a gradual angle, rather than an abruptly angle, preparing him to continue swimming. he must also make sure he surfaces within the 10m.

As soon as the manikin's face clears the surface of the water it must be kept clear of it, so the carrying arm must be held high.

figure 6.18

Option 3 Sidestroke pick up

Stage 1 is the same as for Stage 1 of Options 1 and 2.

Stage 2 The pick up

The turn is the same as for Options 1 and 2.

The difference in this pick up is that the participant takes hold of the manikin in both hands and turns it away from him. He will also turn sideways in the water, so the back of the manikin is against the participant's hip.

Stage 3 Surfacing

From here the participant can take hold of the manikin in whichever grip he chooses, push off the wall and begin swimming kicking to the surface, again keeping the head in neutral alignment with the body and with the non-carrying arm outstretched for streamlining.

figure 6.16

figure 6.17

figure 6.19

figure 6.20

figure 6.21

figure 6.22

100m Manikin Tow with Fins

The participant swims 50m freestyle wearing fins and with the rescue tube harness around his body, trailing the rescue tube behind him. A handler holds a half-filled manikin in the water at the other end. The handler will let go of the manikin when the participant touches the wall. After touching the edge of the pool to turn, the participant secures the rescue tube around the manikin, which must be towed, with its face clear of the water, to the finish.

Skills

- Diving with fins and a rescue tube
- Swimming with a rescue tube and wearing fins
- Clipping the half-filled manikin into the rescue tube
- Towing the manikin in the rescue tube, wearing fins
- Diving wearing the rescue tube and fins.

Skill overview

It is important to position the rescue tube in a safe place when attempting to dive while wearing a rescue tube. The participant could be seriously injured if the rope becomes tangled around something such as the dive blocks or false start rope.

There are five ways to do this safely.

Option 1 Start in the water

New or younger participants in this race may feel more confident starting in the water, to eliminate the worry of the rescue tube rope becoming tangled up with anything on their dive entry. ILS considered changing the start of this race to an in water start, rather than a dive start, for safety reasons, although at the time of writing the dive start is still in place. However, the majority of participants do choose to dive, as it is much faster.

figure 7.1

Option 2 Dive with the tube balanced on participant's back

This technique can be difficult as the participant needs to place the rescue tube in a balanced position on his back while on the diving block waiting for the starter gun. This means the rope that attaches the rescue tube to the harness is out of the way of the block itself, improving safety. If the tube is balanced it does mean that the swimmer cannot stand upright again once it is in position.

To get the tube in position hold the tube by the metal ring at one end and hold it hanging over the shoulder. It should balance there, allowing participants to lean forward ready to dive, with the tube in place on their back. They can also check that the rope is clear of their feet.

The risk factor of the rope led the ILS to consider taking the dive start out of this race. The dive has been retained but the ILS now allows the rope to be tucked or wrapped up and shortened on the start, but it must be fully extended on the return swim, for the tow itself. This also means the participant can stand on the dive block and walk around with the tube securely in position, see figure 7.4.

figure 7.2

figure 7.3

Option 3 Dive with the tube held between the legs

In this technique participants hold the tube between his legs or knees. He should make sure he turns the tube around so that the rope end is towards the pool, minimising the chance of it becoming tangled up with anything. On the dive into the pool the tube will fly out behind him. This is a reliable way of holding the tube in place at the start.

Option 4 Dive with the tube on the diving block or poolside

Some participants may choose to place the tube on the side of the pool, next to the diving block, again with the rope end pointing down the pool away from the starting wall. As the participant dives in the tube will be dragged in behind him. The problem with this method is that the tube may act as a break or reduce momentum.

figure 7.4

figure 7.5

figure 7.6

figure 7.7

Option 5 Hold the tube with one hand

This is probably the safest method for ensuring that the tube rope does not get caught around anything on entry. Participants will hold the tube in one hand and throw it out behind him on diving into the pool. By doing so the participant ensures it is not going to become tangled in anything. The problem with this is that the participants' hands may not be in the best position ready to dive. The participant must practise and time all the different techniques to see which is the fastest and which he feels is most comfortable for him.

Skill

Swimming with the rescue tube and wearing fins.

Skill overview

While swimming with fins on can be extremely powerful and much faster than swimming without fins, the rescue tube will add resistance and slow the participant down. There are two options for swimming with the rescue tube.

figure 7.8

Option 1 Swimming on the surface

This method is not very different from swimming on the surface wearing fins. It is generally thought that swimming with the tube on the surface creates less drag than swimming with it underwater. Now that it is permitted to wrap or tuck up the rope many participants will wrap it so short that the tube is almost resting on their backs, half out of the water. This means the tube is hardly creating any drag and will not be bent.

Tip

Coaches should provide opportunities for participants to learn the full variety of techniques so they can choose which is the best or quickest for them. Teaching only one method will limit skill development.

Option 2 Swimming underwater

Some participants may decide that swimming underwater, with the tube behind them, is the fastest method. This choice depends entirely on the participants' strength, style and speed. Generally speaking the tube will generate less drag on the surface, as it floats. Participants with a particularly strong leg kick may prefer to go under the water, although this is not widely recommended. The participant must ensure he dives in deep enough for the tube to be pulled underwater behind them, rather than floating on the surface. When the participant does surface, whether it is straight after the dive entry or some way down the pool, he should aim to swim at least six strokes before taking a breath, in order to reduce disruption to the stroke rhythm. When approaching the turning wall participants should not take a breath for three strokes before the turn, and preferably three strokes after the turn.

figure 7.10

figure 7.9

100m Manikin Tow with Fins *(continued)*

Clipping the manikin into the rescue tube

figure 7.11

Skill overview

Clipping the manikin into the rescue tube is a skill used in both the 100m manikin tow with fins and in the 200m super lifesaver event. It is a relatively straightforward skill, which can add seconds to the participant's race time if not performed effectively. There are a couple of methods of clipping.

Option 1 The slam

The handler holds the manikin in place with its face pointing towards the wall, as shown in figure 7.11.

Stage 1 Approaching the manikin

The participant should swim towards the manikin, aiming to touch the wall to one side of it. As the participant touches the wall the handler will release the manikin, which is left to bob in the water. With the other arm he should reach behind and pull the rescue tube towards him, using the rope to pull the tube in closer. Very competent, fast clippers will not take hold of the manikin, but will leave it to bob.

figure 7.12

figure 7.13

figure 7.14

Stage 2 Positioning the rescue tube

The participant must now position the rescue tube over the manikin's body. In the slam participants take hold of both ends of the tube, bend it into a semi-circle and throw it over the manikin's body, slamming it onto the water and into position around the manikin.

figure 7.15

figure 7.16

100m Manikin Tow with Fins *(continued)*

Stage 3 Clipping the tube

The two ends of the tube are then brought together behind the manikin and the clip fastened into the ring.

Stage 4 Swimming away

Now that the tube is secured around the manikin the participant is ready to begin swimming back down the pool, towing the manikin. He should remember that the manikin will drag to the side that the rope attaches to the body harness, causing more drag. To stop the manikin and tube catching on the lane ropes the participant should swim slightly off-centre, opposite the side the manikin is leaning.

The participant must make sure the manikin is in the tube properly, with its shoulders above the tube, so that it will stay secure. If one or more shoulder is not properly in the tube it may slip and fall through and the participant will lose his manikin, risking disqualification. Participants should be careful not to get the rope tangled around either themselves or the manikin's body during the clip. Figures 7.20 – 7.23 shows how the rope can easily become tangled and the impact this will have on the manikin's position in the tube.

figure 7.17

figure 7.18

figure 7.19

100m Manikin Tow with Fins *(continued)*

figure 7.20

figure 7.21

figure 7.22

figure 7.23

The slamming technique can be very fast for many participants but it is also unreliable. With insufficient practice it is a hit-and-miss technique and there is an increased risk of becoming tangled in the tube rope. Many people also believe that when it comes to the clipping element of the slam looks are deceptive. If carried out properly it certainly looks slick; in actual fact the participant is stationary during the clip-up and will need to start towing a deadweight manikin. Participants may in fact lose time using this method, rather than an alternative method where they are in motion. Another problem is that participants may be too tired by this stage in the race (especially in the 200m super lifesaver event) to slam the tube properly. If the participant were to miss the manikin may not be secured effectively and could fall out, or he may spend even more time adjusting the tube positioning.

Tip

Participants should practise the clipping skill often and even try it with their eyes closed to make sure they can do it quickly, especially when fatigued.

100m Manikin Tow with Fins *(continued)*

Option 2 The pass around

Stage 1 is the same as in Option 1

Stage 2 Positioning the rescue tube

As the participant touches the wall the handler will let go of the manikin. Participants then take hold of the manikin, either by its head or shoulder, to stop it from bobbing around in the water and turning the wrong way. As they take hold of the manikin they will reach behind with the other hand and use the rope to pull the tube towards them, pulling the two together.

figure 7.24

The participant can then let go of the manikin, having pulled it into his chest and place the tube over the manikin's body with his other hand.

Once the tube is in place over the manikin's body the participant must pull the two ends together and fasten the clip.

figure 7.25

figure 7.26

During this time the participant is slowly moving away from the wall, until he is ready to turn and swim, just before the 5m point.

figure 7.27

figure 7.28

figure 7.29

figure 7.30

100m Manikin Tow with Fins *(continued)*

This clipping technique is much more reliable than the slam. It may seem slower but will be worth it to make sure the tube is secured in place correctly each time. The participant is also in motion in this clip up, saving time. In both methods the participant will get better with practice and coaches should teach both methods.

Towing the manikin in the rescue tube

Skill Overview

Once the manikin has been secured in the tube the participant can turn around and begin to swim back down to the finish wall. If the manikin has been securely clipped in it will stay put and there is no need for the participant to turn around to check this. He should continue to swim the rest of the race, until reaching the finish. If the participant tucked or wrapped part of the rope up when starting he must make sure that it is now fully extended.

figure 7.31

Tip

Participants will be supplied with ILS-specification rescue tubes to use during races, so it is up to the individual to check that the tube is intact and good condition. Participants should check the rope for damage and make sure the metal ring and clip are in working order. Many participants bend the tube a few times before the race to check it bends easily, as the foam may be quite solid in new tubes. The participants will straighten them out again before racing to minimise resistance during the first 50m swim to the manikin, as shown in figure 7.31.

figure 7.32

figure 7.33

200m Super Lifesaver

The participant swims 75m freestyle then dives to recover a submerged manikin. The participant must surface within 5m of the manikin pick-up and carry the manikin to the end of the pool. After touching the wall the participant releases the manikin. He then picks up fins and a rescue tube, which he will have placed on the poolside earlier. Fins and rescue tube are donned in the water, within 5m of the wall and a 50m freestyle swim is completed wearing the fins and tube. After touching the wall the participant clips the rescue tube around a half-filled manikin, held in place by a handler, within 5m of the turning edge and tows it to touch the finishing wall.

Skills

The super lifesaver has been described as 'the ironman of the pool', encompassing all the skills used in the other events and combining them into one endurance race. Participants must practise the individual skills to avoid making mistakes when tired.

- Freestyle swimming
- Retrieving a submerged manikin from the 25m mark (in a 50m pool)
- Carrying a manikin without fins
- Putting on fins and rescue tube harness in the water
- Swimming with fins and tube
- Clipping the half filled manikin into the rescue tube
- Towing the manikin in a rescue tube, with fins

Most of these skills have already been discussed throughout this manual, so please refer to the relevant sections.

Skill

Donning fins and rescue tube in the water.

Prior to the start of the race participants will have placed their fins and rescue tube on the poolside ready for this change over. As the participant touches the wall after the manikin carry section of the event he can let go of the manikin, which will sink out of the way.

Stage 1 Preparation of equipment

The fins should be placed one on top of the other, with the ankle straps fully extended and facing the water. The rescue tube should be positioned on top of the fins, with the rope well out of the way. The harness loop should fall over the ankle straps of the fins.

figure 8.1

200m Super Lifesaver *(continued)*

Stage 2 Donning the rescue tube in the water

The participant should be facing the wall at the end of the pool. With the dominant arm he should take hold of the fins by the ankle straps, putting his hand through the loop of the tube harness. As he falls back into the water the participant should use the other hand to pull the harness over his body and into position.

figure 8.2

figure 8.3

Stage 3 Donning the fins and swimming

The swimmer then puts the fins on, making sure they are within the 5m mark off the end of the pool before he turns and starts swimming. Most participants in this race will use some sort of lubrication, such as Vaseline or hair conditioner, to grease up the inside of the fins before the race starts. This will help get them on to the feet quickly in the water.

figure 8.4

figure 8.5

figure 8.6

Stage 4 Swimming away

With the fins and tube in place the participant is ready to begin swimming back down the lane towards the manikin.

figure 8.7

Tip

Often participants will tire out in this race, both because of its intensity and because it often comes at the end of the programme of events on race day. Participants who normally use the freestyle carry may want to consider another carrying technique to conserve energy. This is something to practise and discuss with coaches to ensure the best time possible can be achieved in line with current fitness and skill levels.

Line Throw

This is a timed event in which one participant, acting as rescuer, throws an un-weighted line to another participant who is acting as patient and waiting in the water, 12m off the poolside. The rescuing participant then use the line to pull the patient back to the poolside.

Starting position

The rescuer

At the start of the line throw event the rescuer must be in the start position. He should stand facing the pool with his feet together and arms relaxed by his side, holding one end of the line in his hand. The line should be held straight with no slack between him and the patient.

The patient

There will be a rope across all lanes in the pool marking 12m from the starting end, where the rescuer stands. The patient will be in the water holding on to this rope with one hand (as shown in figure 9.2); in his other hand he will have a loose hold on the throw line which the rescuer is also holding on the poolside. On the starting signal the patient will immediately let go of the throw line so the rescuer can begin to coil it in. The patient should then raise one hand in the air making himself an obvious as a target for the rescuer participant, as shown in figure 9.3.

Skills

- Coiling the line
- Throwing the line
- Reeling in the patient

Coiling the line

Once the starting signal has been given and the race begins the rescuer has to coil the line in as fast as he can, before then throwing it out to his patient. There are two ways of coiling and throwing the line; underarm or over arm.

Option 1 Underarm

Stage 1 Coiling the line in

This method is the more commonly seen and easier to master than Option 2. It is generally more accurate and therefore reliable.

figure 9.1

figure 9.2

At the starting signal the rescuer turns side on to the pool and begins to rapidly coil the line in. Once the rescuer has coiled the rope into loops he should hold the loops in his throwing hand. In his other hand he should keep a tight hold of the other end of the rope; if he lets go he will lose all the rope and be out of the race.

figure 9.3

figure 9.4

figure 9.5

Line Throw *(continued)*

Stage 2 The swing

The rescuer turns back to face the patient. The patient should now have his catching hand held high in the air as a target for the rescuer to aim for. The rescuer should swing his arm holding the line back and forward to gain momentum, while keeping his eyes and aim focused on the patient's hand. When he has enough momentum he will throw the line forward, towards the patient waiting in the water. This should only take a few swings; remember this event is often won in only a matter of 12 seconds or less. It is important the rescuer keeps the coils of line inline with his body, not wavering from side to side, as this may risk the line getting caught or knotted up. The arm holding the line should be straight but relaxed.

Stage 3 The throw

When the rescuer's arm, carrying the coils of line, is lifted parallel to the floor, at a right angle to the body, he should open his hand and release the line with a fast burst of force. Again, it is important to remember to hold the other end of the line in the other hand.

Stage 4 The reel back in

Once the patient has caught hold of the throw line and signaled so, the rescuer must pull him back to the poolside. The patient is not to let go of the rope depicting the 12m mark until he has a tight hold on the rescuers throw line.

The rescuer must be careful not to run or step back too far as there is a 1.5m line marked behind him which he is not permitted to cross. The patient should take hold of the throw line with both hands, put his head down tightly held between his arms for streamlining and kick as hard as he can to help the rescuer reel him in.

The rescuer should have his feet stood apart to help balance and take long but fast pulls on the line, to bring it back in. As the patient nears the poolside the rescuer should crouch down and continue pulling in. This will pull the patient towards the wall, not out of the water. Once the patient reaches the wall he must reach out and tag it which will stop the timer.

Tip

Many top line throwers will not even bother with the swing but literally go from coiling into one fast whip-like throw forwards.

figure 9.6

figure 9.7

figure 9.8

Line Throw *(continued)*

Option 2 Over arm

The over arm throw is more difficult and unreliable, but it can be faster than the under arm style for some participants. If timed wrong the line will merely drop into the pool in front of the rescuer rather than reaching the patient.

Stage 1 Coiling

Some participants chose to use an over arm style of coiling the line too. This involves a wide circular motion with the back hand taking hold of a new loop each time it comes forwards, while the front hand holds the line up out of the water ready to be collected.

Tip

Rescuers wanting to achieve good results in the line throw event should practise the coiling and throwing of the line often as it is likely they will only get one chance to get it right in a race. If the participant misses the patient with the first throw, someone else probably will, and thus win. This event is so fast there is no time for mistakes or second attempts.

Stage 2 Body positioning for the throw

As with Option 1, once the rescuer has coiled the rope and has it held in his hand ready to throw, he should turn to face the patient in the water. He will hold the hand with the line low behind them, with the other arm, holding the end of the line, pointing upwards and away from the body. The feet should be apart to keep balance.

Stage 3 The throw

From that position the rescuer throws his arm holding the throw line over and sends the line towards the patient in the water. At the same time he will lower the hand holding the end of the rope, still keeping his eyes on the patient.

figure 9.9

Tip

The patient should ideally be as light as possible and have long limbs which will help him reach for the line when it is thrown. He will need to kick as hard as possible once he has hold of the line and is being reeled in.

4x25m Manikin Relay & the 4x50m Obstacle Relay

Four participants take turns at carrying a manikin approximately 25m each before handing over to the next participant. The manikin must be moved forwards at all times and must not have its nose and/or mouth submerged at any point during the carrying. At the start and during changeovers there is a 5m zone in which the rules allow that the manikin's nose and/or mouth may dip below the surface of the water; this will not result in disqualification

Skills

- Starting in the water with the manikin
- Carrying the manikin (see previous pages)
- Manikin changeover at the 25m mark
- Manikin changeover at the 50m mark (on the wall)

Skill overview

Starting in the water with the manikin

All participants will start in the water with the manikin already in position ready to be carried; the carrying stroke will dictate participant body position. The manikin itself does not need to be touching the wall and there is a 5m zone during which it is accepted its face may dip below the surface.

Option 1 The freestyle start

The participant will have the manikin ready in position and will be facing away from the starting wall. With one hand he should hold on to the poolside or diving block. This will compress the legs underneath the body, ready for a strong push off the wall on the starting signal, as shown in figure 10.1.

Option 2 Side or backstroke start

The participant will again have the manikin in the carrying position, and again use his other hand to hold on to the wall or diving block. In this start the difference is that both participant and manikin are facing the starting wall,
not down the pool.

Tip

In both the start positions the manikin itself should be held as horizontal as possible and pulled close in to the participant, so it is not such a dead weight to get moving. The participants can use his legs to support the manikin under the water, keeping it horizontal.

figure 10.1

figure 10.2

Skill overview

The manikin changeover at the 25m point

There is a 5m zone between the 23m and 27m points (from the start) in which the manikin changeover must be made.

Option 1 Freestyle to freestyle

Stage 1 Preparing to change over

Method 1 Treading water

When the carrying participant nears 1-2m away from the changeover zone, the receiving participant should be waiting, treading water, with his carrying hand reaching towards them.

Method 2 Pushing off the bottom

Alternatively some participants may choose to duck down under the water and push off the bottom to gain momentum.

Stage 2 The changeover

Method 1 Treading water

If the participant is waiting on the surface he should take hold of the manikin in his non-carrying hand and begin moving forwards.

Method 2 Pushing off the bottom

If the receiving participant has ducked underwater he should push off the bottom of the pool at a 45 degree angle when the carrying participant is above him, aiming to catch the manikin in his outstretched hand. The push off the bottom will have given the receiving participant momentum, so both people are now moving forwards, kicking hard. The receiving participant should now take hold of the manikin. When the carrying participant feels the other participant take hold, he should slide his hand away, leaving the receiving participant carrying the manikin alone.

figure 10.3

figure 10.4

figure 10.5

figure 10.6

Stage 3 Swimming away

Once the manikin is handed over the first participant will stop swimming. The receiving participant will then pass the manikin from his non-carrying to his carrying hand, ready in position to continue swimming. The new carrier will now kick hard and use a fast one armed stroke to keep the manikin moving.

Alternative tip for younger/weaker swimmers

If the pool is deep Method 2 can be difficult for a young or weak participant. By the time he has resurfaced he may have lost all the momentum gained from the push off. In this case he should adopt Method 1 and begin to swim alongside the participant he is taking the manikin from. This means both participants are in motion and thus the manikin will be kept moving.

Option 2 Side or backstroke to side or backstroke

Stage 1 Preparing to changeover and Stage 3 Swimming away are largely the same as in option 1.

Stage 2 The changeover

Prior to the race the participants will know which side they need to change over on, left or right, depending on which hand the receiving participant will use to take over.

As the carrying participant nears the changeover zone he will extend his carrying arm and the manikin out away from his body, leaving room for the receiving participant to get into position (see Figures 10.6 and 10.7). If the participant carrying the manikin holds it in his right hand and is passing to the left side, he will roll his body left in the water to give more room to pass the manikin over. The receiving participant will be waiting with his arm outstretched and his hand in position ready to take hold of the manikin and continue carrying for his leg of the race.

figure 10.7

figure 10.8

figure 10.9


figure 10.10


figure 10.11


figure 10.12

Option 3 Freestyle to side or backstroke

The Stages are the same as those for Option 2.

Skill overview

The changeover at the 50m point

This changeover can be difficult, as the manikin will be facing the wrong way and needs to be turned around, while at the same time not losing too much speed.

Option 1 Freestyle to freestyle

Stage 1 The approach

The participant waiting to receive the manikin should be positioned in the water, holding on to the poolside or diving blocks with one hand, reaching out towards the approaching swimmer with his other hand. His legs will be compressed into a squat position, ready to push off.

Stage 2 The changeover

The participant carrying the manikin must touch the wall before the receiving participant can take hold of the manikin and turn it around to facing the other direction. Within the 5m zone off the wall it is accepted in the rules that the manikins face, nose and/or mouth may go underwater. As the participant takes hold of the manikin he should push off from the poolside.

Tip

As the carrying participant hands the manikin over to the receiving participant he can gently support the bottom of the manikin underwater, helping to lift it slightly. This will make it easier for the next participant until he gains enough momentum. However, coaches must ensure participants do not push the manikin forwards, as this is against the rules.

figure 10.13

Stage 3 Swimming away

The receiving participant now adjusts his grip on the manikin and is ready to continue swimming down the pool while the other swimmer remains at that end. As with the changeover at the 25m point, the person who has just handed the manikin over can gently support the bottom of the manikin while it is turned, to help the new carrier gain momentum.

Option 2 Freestyle to side or backstroke

Stage 1 The approach

This stage is the same as in Option 1.

Stage 2 The changeover

In this change-over the receiving participant will take hold of the manikin in his non-carrying hand and turn the manikin around as he pushes off from the wall.

figure 10.14

figure 10.15

figure 10.16

figure 10.17

Stage 3 Swimming away

As the receiving participant turns the manikin around he can pass it into his carrying hand and is in position ready to swim his leg of the race.

4x50m Obstacle Relay

Four participants swim 50m freestyle and negotiate two obstacles before the next participant takes over with a dive start. For skill information read Section 5 the 200m obstacle event pages.

figure 10.18

Tip

The major aspect of this event is communication and interaction between team members. All participants should know which hand the next participant will be carrying in so as to approach the changeover on the correct side. Again, this is something to be included in training sessions.

4x50m Medley Relay

The first competitor swims 50m freestyle without fins. The second competitor then swims 50m freestyle with fins. The third competitor swims 50m freestyle wearing a rescue tube and on touching the wall, passes the harness of the rescue tube to the fourth competitor who is wearing fins and now acts as rescuer. The third competitor, playing the role of patient, takes hold of the rescue tube with both hands and is towed 50m by the fourth competitor to the finish.

All the skills necessary for this relay have been discussed in sections two and seven, except the rescue tube harness handover.

figure 11.1

figure 11.2

Skill

The rescue tube changeover from the third team member to the fourth team member.

If this skill if carried out poorly it may result in a tangle of rope around the two participants, adding seconds to the teams overall time. Teams should practise this often. There are two ways of doing this.

Option 1 The pass over

Stage 1 The approach

The third team member will be swimming up the pool, wearing the rescue tube harness across his body. The fourth team member, wearing fins, should be in the pool gripping the starting block with one hand. His feet should be flat against the wall ready for a good push off. His other hand should be reaching towards the third swimmer.

4x50m Medley Relay *(continued)*

Stage 2 The change over

As participant number three nears the wall he should roll his body slightly, lifting the arm wearing the harness out of the water, towards participant number four. Participants need to make sure they are on the correct side for the roll, so as not to roll away from the other participant, in the wrong direction. Number four should hold his outside hand above the harness ready to take hold. Once number three touches the wall number four should take hold of the harness with his outside hand and hold it out of the water, with the loop open. He should then simultaneously push off the wall and dive through the harness loop. The push off the wall will help force the harness over the arm and shoulder and into position, ready to swim, as shown in figure 11.4.

Stage 3 The patient taking hold of the tube

Having touched the wall participant number three must immediately turn and take hold of the rescue tube, to become the patient of number four, who is now wearing the tube harness. He should take a firm hold of the tube itself with both hands and should continue to kick hard. Kicking on the back will make breathing easier (figure 11.5) although some participants may chose to kick on their front.

figure 11.3

figure 11.4

figure 11.5

figure 11.6

4x50m Medley Relay *(continued)*

Option 2 The joined arms approach

In this option the two participants link arms to pass the tube harness from one to the other. It can take slightly longer but there is less chance of mistakes.

Stage 1 The approach

Participant number three is swimming down the pool with the harness over his body. He should count strokes and aim to touch the wall with his outside hand.

Stage 2 The joining of the swimmers arms

Having touched the wall with his outside arm participant number three must then reach out with his inside arm and take hold of number fours shoulder and vice versa, so both arms are next to each other. With his outside arm number four will then pull the harness off participant number threes body, over both participants' shoulders and arms, and over his own body. Number four is now wearing the tube and is ready to swim.

Stage 3 The patient taking hold of the tube

The rescue tube has now been successfully handed over and participant number three has again got to take hold of the rescue tube and become a patient.

Coaches should get relay teams to train in both methods and time which is fastest so that they can decide which is most appropriate for them.

SERC

The Simulated Emergency Response Competition (SERC) is one of the only competition events that involve all aspects of lifesaving; from physical fitness and skills to first aid, resuscitation and teamwork.

The event is contested by teams of four people and is an initiative test. The SERC can include patients who are drowning, unconscious, need first aid, suffering heart attacks, as well as people who do not actually need assistance but are there to distract teams. It is up to the team captain to organize the team's response to the scenario they are faced with.

The teams are kept in another room while the SERC is set up, so they do not know what they will be faced with when they are called into the arena. This reflects real life rescue situations more than the planned manikin rescue events. Each team has a designated time in which they must act to take control of the situation and will be scored on how well they do so. The team with the highest score will of course win.

Tip

Communication is vital in the SERC. Each team member must feed back to the captain what situation he is dealing with regarding his own casualties, in case he needs assistance or would be better used somewhere else in the scenario.

Skills

- Staying calm under pressure
- Teamwork
- Rescue skills
- Lifesaving skills (resuscitation and first aid)
- Organisation of team

Staying calm under pressure is something which many people are not able to do; keeping a cool head while others around panic is a characteristic necessary for a good team captain. The team captain will have been chosen prior to the event and will take the role of organizing their team. The captain will tell his team mates which casualty needs attention first, before acting them self.

Teamwork is essential for a good SERC performance. The team should practise together regularly and learn each others strengths and weaknesses. Through regular practise the team will fall into a natural pattern, where one team mate deals with the conscious casualties, another deals with the unconscious and so on. This will help the team to all know what is expected of them, despite not knowing the exact scenario they will be faced with.

Rescue skills

Rescue skills cover everything from the manikin pick up on the bottom of the pool, which may be a child sized one not an adult, to rescuing a live casualty with or without an aid.

When rescuing a live casualty it is always preferable to use a rescue aid, such as the rescue tube or a reach pole, a variety of which will be available on the poolside.

The teams' first aid and resuscitation skills will also be assessed in the SERC. There will almost certainly be an unconscious, not breathing casualty who will need CPR, or a casualty needing first aid. These vital skills are all part of the complete lifesaver/lifeguard package.

Organising the team to respond to the scenario in an appropriate manner is highly important. The scenario should be approached in a certain order, following the basic principles of rescue.

Stage 1 Mobilise the mobile.

This means any casualty who can walk or who is a weak swimmer and just needs some assistance getting to the poolside should be tended to first. This prevents them from them becoming a further problem when, for example, the weaker swimmer becomes too tired to swim and starts to drown.

Stage 2 Secure the safety of those in imminent danger

Second the team should aim to safely secure any casualties in imminent danger. This means swimmers really struggling to stay above the surface and any patients suffering from a medical or first aid condition which may prove life threatening if left untreated, such as a heart attack or severe bleed.

Stage 3 Recover and resuscitate those that need continued care

Only once all of these situations have been managed should the team then look to recovering and resuscitating any patients who need it. If the team were to go straight for an unconscious manikin on the bottom of the pool, which would need continued treatment, then they would be tied up with that incident and unable to assist with anything else in the scenario. This effectively makes the team one member down.

The teams will be timed as well as judged by officials on how they reacted and dealt with the scenario.

Nipper Events & Rule Differences

It is worth noting there are a few differences between the events contested in the nipper and older age groups. Even within the nipper age group itself the rules vary according to the age group.

Equipment

Fins

figure 13.1

As mentioned in Section 2: Swimming with fins on, it is recommended that nippers and younger juniors wear flexible rubber fins, rather than the hard fibre glass ones. This is to reduce the strain placed upon the body while they are still developing and building their strength.

Manikins

The manikins are still the same ILS specification manikins used for all other age groups, although in the nipper races they vary in weight.

For the youngest age groups the manikins remain empty. The participants carry the manikin floating on the surface, making it much easier for the young participant.

figure 13.2

figure 13.3

For the 11-12 years age group the manikins are half-filled while for those aged 13 the manikins are completely filled.

Carrying a full-weight manikin generally proves extremely hard for nippers, who often weigh less than the manikin they are attempting to carry. This is where it is important to coach participants in the correct carrying techniques. All nippers should be taught and encouraged to use the double-handed carry, until they are sufficiently strong and developed enough to attempt one-handed techniques.

Nippers who attempt the one-handed carry too young will end up under the water struggling to breathe properly, risking disqualification if the manikin also sinks, as shown in figure 13.3.

Nipper boards

Nipper boards used in pool events must meet the specifications of the recognized SLS GB Blue Nipper Board; with a maximum length of 165cm and maximum width at the widest point of 52cm, made of polyurethane covered foam or similar. Some participants will choose to add wax to the boards for grip but the texture of the boards is such that this is not actually necessary.

figure 13.4

Nipper Events & Rule Differences *(continued)*

Events

The nipper competition programme is not as comprehensive as that of the older age groups, partly due to their age and skill level but also due to participation numbers. There are nearly twice as many nippers as junior or senior competitors; accommodating that many participants is difficult and time consuming.

All nipper competitions should be held in a 25m pool, or a 50m pool shortened down to 25m.

The Obstacle race

The obstacle race follows the same rules as discussed in Section 4, except for nippers the race distance is 50m.

50m Flipper Race

For this event the participant must swim 50m wearing fins. The fins must be normal rubber, not fibre glass. As with the older age groups participants are permitted to swim underwater as far as they wish, as long as they are clearly seen to touch the turning wall.

figure 13.5

figure 13.6

50m Board Race

The participant must start in the water, with one hand holding the starting block or wall and one hand holding the nipper board.

On the starting signal the participant must climb on to the board and paddle the required distance. At the turning wall either the board or the participant must touch the wall (while still in contact with the board) and the race finishes when the nose of the board touches the finishing wall.

Take Note

In all events the 8 year old age group will only swim 25m in distance, whereas the older age groups will swim 50m.

Safety Tip

Neither goggles nor kneeling on the board are permitted during the nipper board race; for safety reasons the participant must remain in the prone position (lying) on the board.

Nipper Events & Rule Differences *(continued)*

25m Manikin Carry Race

Participants under the age of 11 will carry an empty manikin; those aged 11 and 12 carry a partially filled manikin; at 13 years they carry a full manikin.

All participants will start in the water holding the manikin with one hand and touching the starting wall with the other. The manikin must be carried not pushed.

The participant should be careful not to hold the manikin around the throat; this is particularly important if attempting the chin carry technique.

Throughout the race competitors must demonstrate every intention of maintaining the manikin's mouth and nose above the surface but should not be disqualified if water covers the manikin's mouth and nose from time to time. Officials may disqualify competitors who do not maintain the mouth and nose of the manikin above the surface for the majority of the carry.

50m Tube Rescue Race (pair event)

The rescuer starts in the water wearing a rescue tube which is in contact with the side of the pool. He must swim 25m to the patient and touch the end of the pool with the rescue tube line fully extended behind him. The patient will be in the water holding onto the wall at the turn end. Once the rescuer has touched the wall, the patient will take hold of the main body of the tube, not the rope or clip, with two hands. The pick up must be completed within the 5m line. The rescuer then tows the patient 25m to the finish.

figure 13.7

figure 13.8

figure 13.9

Nipper Events & Rule Differences *(continued)*

50m Board Rescue Race (pair event)

All rescuing participants start in the water using the same method as for the Board Race. The patient waits the other end of the pool, holding on to the side. The patient must maintain contact with the edge of the pool until the rescuer reaches him.

The rescuer will paddle 25m to the patient. He does not have to touch the turning edge of the pool before the pick up. He will pick up the patient, in any position on the board, before paddling back to the finish. The pick up must be completed within the 5m line from the wall.

The event is finished when the board, with the both patient and rescuer in contact with it, touches the edge of the pool.

4x25m Medley Relay

This event is essentially the same as the medley relay discussed in Section 11: 4x50m Medley Relay, except in this case each participant only swims 25m.

Manikin Relay

In the nippers category this event is restricted to those aged 12 and 13, because a full weight manikin is used.

Each participant carries the manikin 12.5m before changing over to the next participant. The rules of the older age groups apply here: the manikin must be moving forwards, it must be carried not pushed, the manikin's nose must be above water and there is a 5m changeover zone in which the rules do not apply.

figure 13.10

Drills for Skills

Lifesaving sport covers such a wide range of disciplines and coaches will therefore need to include endurance, speed, strength and skill sessions into their training programmes. The skill and technical sessions are particularly important as these events take such a short length of time that any mistakes can have significant consequences to the participants overall race time and result. Practising the precise detail in each skill can make all the difference, especially when a swimmer becomes fatigued. An important point to remember is swimmers can get bored with repeating the same exercises over and over again, so for this reason coaches should try to vary the programs they set.

Warm ups for race day

This should be tailored to the individual swimmer with an initial pulse raiser then further skill-based practices. Initially, continuous pace or gradually increasing pace, short sprint sets are used to increase heart rate. The event being contested and related skills should be considered and incorporated into the warm up. Special focus should be placed on specific skills that will be used, especially for younger or inexperienced swimmers. A typical example of pre-race practice may involve two or three manikin pick ups. Elements such as carrying the manikin may be limited to save energy for the actual race.

Skills

- Diving with fins on
- Swimming with fins on
- Swimming with fins on and with a rescue tube
- Diving under the obstacle and resurfacing
- Picking up the manikin at the 25m point
- Carrying the manikin – freestyle/sidestroke/ backstroke
- Picking up the manikin at the 50m point wearing fins
- Clipping the manikin into the rescue tube
- Towing the manikin in the rescue tube
- Underwater swimming
- Relay manikin changeovers
- Relay tube harness handovers
- Line throw – coiling, throwing and reeling in

Many of the skills can be practised as per the directions in the skills sections in this manual. However, some skills have specific drills or practices to aid technical skill development.

Tip

No matter how often a swimmer practises the drills and skills needed to be a competent and fast pool lifesaver, nothing will replace the essential role of straight swim training. Swimming provides the basis of all the pool lifesaving events and it is imperative anyone wanting to succeed in pool lifesaving sports events also partakes in a serious swimming program.

Skill overview

Swimming with fins on

Most coaches would not recommend undertaking large swim sets wearing fibreglass racing fins, as, due to their size and rigidity, they place the ankles, feet and legs under a lot of pressure. Repeated and/or extended use may lead to injury. Instead coaches should set sessions in which the participants wear smaller rubber fins, which are more flexible. This will allow the participants to cover more distance and skill work, while still being safe. Rubber fins are available in most sports shops, surfing shops or swimming pools and come in a variety of sizes

Coaching tip

Coaches must remember that they can not see every angle of the participant's stroke from the poolside. To get a more accurate view it can be worth getting in the pool alongside the participant, putting on a pair of goggles and watching from the water. If the kick is poor or the participant seems overloaded then the coach must make efforts to change the fins the participant is wearing; this may mean reducing the length, width or rigidity. It may also be necessary to increase the land training, such as the core and muscular strength training, to keep the participants technique safe and efficient.

Drills

Option 1 Kicking with a kick board

Kicking with a kickboard held upright in the water, rather than laying on the surface, will force the participant to kick harder against the resistance. This should only be done in short powerful bursts, however, with plenty of recovery time in between sets. Sets of 25m should be enough distance for most participants; the amount can vary depending on how advanced they are. This can be included into the fin set or a normal kick set without fins.

figure 14.1

figure 14.2

Option 2 Kicking without a kick board

Kick-only lengths will help the participant develop his kicking strength and learn where to position the body in the water for optimum streamlining. The participant should aim to thrust the stomach down and the hips upwards when kicking, ensuring he bends at the hip, not the knee. Boredom can be relieved by including kick sets of different strokes; again, this can be done with or without fins.

Option 3 Body positioning awareness

Swimming in the style the participant will use to carry the manikin, such as sidestroke or backstroke, but without actually carrying a manikin, will help him learn where the body should be positioned in the water; even trying kicking with only one leg to mix up the kick sets.

Skill overview

Negotiating obstacles

As mentioned in the skills section, obstacles are cheap and easy to make for general use in club sessions. However, it is possible to practise the skill without an obstacle.

Drills

Option 1 Obstacle practice without an obstacle

Coaches should include a dive down to the bottom of the pool during general freestyle sets, for example in 10x100m every second and fourth length can include a dive down.

Tip

Kick sets and fin work especially are fundamentally important for inclusion into any pool lifesaving training program. Kick and fin sessions are second only to swim training itself in importance.

Option 2 Hoops

Another way in which to practise the obstacle race, without an obstacle, is to use a weighted hoop; most swimming pools will have these available. They can be sunk in a lane and participants can dive down and swim through them. This will help them achieve the gradual decline and incline they need to negotiate the obstacle, rather than just diving straight down, touching the bottom and resurfacing.

Skill overview

Freestyle manikin carry

To get the technique right, participants can use a rubber diving brick instead of a manikin (available in most swimming pools and sports shops). This can be held in the manikin carrying position. As mentioned, the freestyle technique can be very hard and painful to master, so using a brick is a good way for weaker participants or those people learning the technique, to practise this skill. There are two main approaches to this practice.

Drills

Option 1 Carrying brick out of the water

Participants will hold the diving brick in their carrying hand and swim freestyle as they would with a manikin. They must try to hold the brick clear out of the water; this will strengthen the carrying arm and shoulder, without putting them under too much strain.

Option 2 Tucking the brick up on the back

In this drill the participant holds the brick in the carrying hand as high up the back as possible and between the shoulder blades. This will improve shoulder flexibility and arm and shoulder strength specific to the freestyle bent- arm carrying position.

Option 3 Kick and the brick

The participants can also try to swim holding the brick (in either position) using only the legs to kick, with the other hand holding a kickboard in front, to increase resistance. This will force him to kick harder and faster, which is necessary in the freestyle manikin carry, although it will initially be very hard to attempt.

figure 14.3

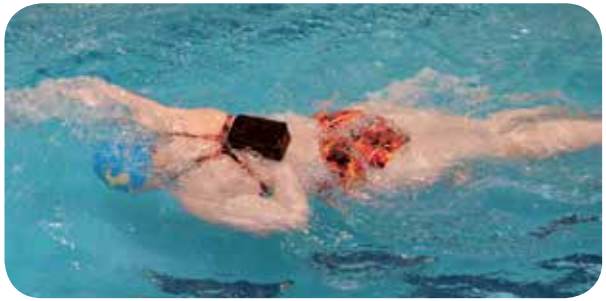


figure 14.4

Option 4 Other aids

Another variation is to have the swimmer wear a paddle on the hand he is swimming with, which will increase the strength and speed of the stroke. Again, this can be supported by a land-based training program, including lifting light weights to strengthen the upper body.

Skill overview

Towing a manikin in the rescue tube

If there are not enough manikins for everyone in the session, a simple bucket can be used instead. This is can also be useful for stronger participants who want to train with more resistance so that, come race day, the manikin then feels lighter than those used in the practice sessions. There are also a few other ways to achieve the same effect.

Tip

Coaches should make sure that swimmers regularly swap the hand in which they are carrying the manikin or brick. This will balance out the muscles on both sides of the body and reduce the chance of injuries.

Drills

Option 1 The bucket

A bucket can be clipped on to the end of the rescue tube (putting the clip on the tube itself, over the bucket handle). As the participant swims down the pool the bucket will fill up with water, creating a drag factor. The size of the bucket can be varied according to the strength of participants. Holes can be made in the bottom of the bucket so some water still flows through, allowing weak or younger participants to still try this drill.

The bucket will mimic the manikin when being towed, as it too will drift to one side of the lane. While it may not be very different to actually towing a manikin itself, this drill can provide some variation to training sessions and keep interest levels high.

figure 14.5

figure 14.6

Option 2 The bungee

Another good drill for creating drag length is to use an elastic bungee cord. A length of elastic with a harness on one end (worn by the participant) is attached to the poolside. The participant then swims as far as possible down the pool before maintaining the position for an amount of time. The elastic will try to recoil when it reaches its furthest extension so the participant needs to fight against that force. This could also form part of a kick set, wearing fins.

Option 3 The parachute

A parachute can be used in the same way. The participant wears a harness with a rope attached and a parachute hanging off the end of the rope. As with the bucket, the parachute will create drag and help the participant work hard swimming against resistance.

Skill overview

Underwater swimming

Underwater swimming is essential in one individual event and is often used in another as well as forming a leg in a relay, therefore it is vital to practise. There are a few components which go towards helping a person swim successfully underwater. The main points to consider are the person's basic lung capacity (called tidal volume), which is how much air is inhaled in each breath, and how well the participant can deal psychologically with staying underwater.

There are many ways to increase hypoxic capacity (the body's ability to work with reduced oxygen availability), enabling participants to stay underwater for longer. Exercises such as yoga can improve lung capacity, but there are also plenty of swimming drills which can help.

figure 14.7

figure 14.8

Tip

For younger participants splitting the sets into 50m, rather than 100m, or 25m instead of 50m, can help them complete the task without getting too tired or feeling inadequate.

Drills

Option 1 Under/over sprints

In this drill participants will swim the first 25m of a 50m sprint under water, with the aim of staying under for the whole 25m. If they need to surface, they should do so, but then take another breath and go back down until they complete the 25m (initially more breaths may be required for novice participants). At the 25m point they will surface and sprint the remaining 25m freestyle. The set will include a number of repetitions with a rest in between each 50m, varying depending on the participants' abilities.

This drill can also be reversed, so the participant will swim the first 25m on the surface, then dive down and swim the second 25m underwater. This reversed method is harder so coaches should reduce the number of repetitions for the set and increase the rest period.

Option 2 Quarters

This is similar to Option 1, although it is easier for younger or weaker participants to try. As it is easier, stronger participants should aim to complete more repetitions. This drill is again set over 50m sprints. The participants will swim 12.5m underwater, then surface for another 12.5m, dive and swim underwater for 12.5m and then resurface and swim for 12.5m. The freestyle surface swim should be at high speed, to achieve a maximum need for oxygen. Again this option can be reversed.

There are many variations on these drills, lengthening out to 100m drills which include 50m sprints, 25m underwater and 25m sprints. Coaches can vary the order in which they put the freestyle and underwater swims.

Other exercises in hypoxic capacity training

Team brick push

Split the participants into teams of two. Teams push a rubber diving brick along the bottom of the pool. Only one individual may ever be on the surface at any one time. They may only move forward when both team members are
on the bottom and see how far they can push the brick together. When they need to surface they must do so together. This is an exercise in team work and communication too as well as underwater swimming and hypoxic development.

Safety Point

While the aim of training is to push the participant both mentally and physically, caution must be exercised when completing underwater sessions. Coaches should keep a close eye on participants to ensure they do not become too oxygen deprived. Oxygen deprivation can lead to fitting and/or passing out and potentially the need to be rescued. Participants may need to build up the distance or quantity of underwater swims over a number of weeks or months. Safety must always be paramount and should never be compromised.

Controlling breathing

During a standard swimming session coaches can include limited breathing during sets. This means the participants can only breathe, for example, every fifth stroke. They swim 25m in this way, then the next 25m they can only breathe every seventh stroke, then every ninth stroke, until they can only have one breath per length. This can also be done in a pyramid format. Initially participants can breathe every fifth stroke, then every seventh, then every ninth and then back down to every seventh, then every fifth, and so on.

Psychological training

The participant must want to stay underwater for the set distance. If they dive under thinking 'I will never make this', then the chances are they won't. Coaches should work with their squads to establish the best ways of motivating them, within safe and slowly progressive limits.

Some participants respond well to competition. Participants can be tested against others of similar ability to see who can swim the furthest or fastest under the water, although distances beyond 25m are not advised for competitive activity like this where participants may push themselves hard.

Others participants will prefer to monitor their own progression; perhaps compared with their own previous personal times or distances rather than compared with others. Again coaches can test participants to see how far they can swim under the water, or time how fast they can cover a set distance. This gives a benchmark to measure improvement against in the future.

Skill overview

Line throw

Option 1 Relays

If you have limited throw lines, a large group, or just want to add some variation to a session, try doing line throw relays. Split the group into teams. One person from each team starts in the water, holding the end of the line, like he would at the start of the line throw event. Other team members will line up behind the first rescuer, who will perform a line throw, from the start. Once his patient touches the wall he will dive in, holding the line and swim out until it is fully extended. The next person in the team will rescue him, and so on until the whole team has had a turn.

Option 2 Repetitions

In this Option the group will be split into pairs and will perform a number of line throws in quick succession. This does not give the rescuer much time to recover and is a good work out for them.

Another variation on this would be to call 'no' on the rescuers first few throws, whether he has reached the patient or not. This means he has to practice what he would do if he missed on the first throw in a race.

Tip

Underwater swimming can be fun and add much needed variety to a standard swim-training programme. However, while having fun its importance must not be overlooked and participants must keep up their underwater and lung-strengthening training to perform to a high standard.

Core Stability

When talking about the core, many people over emphasise the importance of the abdominal muscles, when in actual fact the core comprises all the muscles which keep the spine and pelvis stabilised. These muscles help with balance, weight distribution and movement in all directions. This does include the abdominal muscles, as well as the muscles in the back, the obliques, glutes, hip flexors and a wide range of other smaller muscles. To gain core stability there is no point in just doing sit ups and building a six pack, although it may look good. To build a strong core to support the participant during fin swimming and minimise the chance of injuries the whole core must be worked equally.

There is a wide range of equipment which can be used for core development, and many exercises which can easily be added into the start of a pool session, before swimmers enter the pool for the main swim set.

Option 1 Without aids

The plank

Begin lying face down on the floor, then raise the body up onto forearms and toes, with hands clasped together but with elbows apart. Keep the body rigid with no sagging bits, with the head relaxed and looking at the floor. Practise holding this for 10 seconds initially then increase the time as strength develops.

Variations on the plank

Once the participant can hold a straight plank for the set amount of time then can try lifting one leg off the floor and straightening that out behind them. Participants should alternate legs when doing this.

Side plank

This means only one side of one foot and one arm will be touching the floor when in the plank position. Beginners can rest on their whole lower arm and elbow, while stronger people will begin to straighten out their arm, until eventually only their hand will be on the floor.

figure 15.1

figure 15.2

figure 15.3

Core Stability *(continued)*

Further additions to the plank can be to add a leg raise, as shown in figure 15.4, generally a few inches above the other leg, and then hold it in place for a set amount of time. Another step can be to bend the leg and put the foot flat against the other leg, shown in figure 15.5.

figure 15.4

figure 15.5

The ultimate plank

For those participants who have achieved highly engaged core muscles. This involves raising one arm upright away from the body and then raising one leg up too.

Squats

A slow, controlled squat, keeping the back straight and upright will engage the core for balance and will build up the bum and leg muscles, used for fin swimming.

Another good exercise to try is lying on the back with the legs raised off the ground and to slowly simulate the freestyle leg kick. The slower the legs move, and the lower to the ground they are lifted, the more this will work the deep core muscles.
It is important not to use the hands or arms to support the body when doing this but to keep them by the side of the body, shown in figure 15.7.

figure 15.6

figure 15.7

Option 2 Swiss/stability balls

Stability balls are so versatile and can be used both with and without weights.

Stability call crunch

Sit on the ball with feet firmly planted on the floor and the ball resting under the lower back area. Cross the arms across the chest to the opposite shoulder and perform abdominal crunches. The core muscles will automatically engage to stabilise you.

Lower back extension – lie face down on the ball with knees and feet on the floor, with hands held up to the ears on either side. From here raise your back slowly and repeat.

The ball can be held between the feet, with the person lying on their backs on the floor, legs in the air. The person then moves the ball from side to side, really using the core muscles to lock in the body and move the ball slowly in a controlled manner, shown in figures 15.10 and 15.11.

figure 15.8

figure 15.9

figure 15.10

figure 15.11

Kneeling/standing on the ball

These are highly developed core exercises, not something to begin attempting without coaching. Kneeling on a swiss ball engages the core muscles to stop the person rolling off and takes a lot of practise to perfect. Once the participant can competently perform kneeling on a swiss ball they can attempt standing on the ball, although again they should have someone with them. This will strengthen not only the core but the leg muscles too.

These activities are highly skilled and can be dangerous so they should not be attempted without appropriate coaching and supervision.

figure 15.12

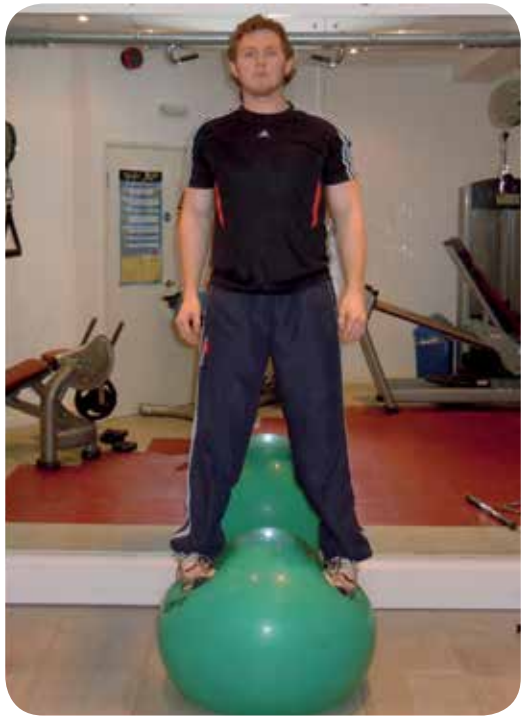


figure 15.13

Activities for Younger Participants

The number of children participating in surf life saving sport is growing each year, with the nipper age group (up to 12 years old) by far the largest in SLSGB. Making sport accessible and fun for nippers is important for the continued growth of life saving and can be very rewarding for the coach delivering the training. Many nippers will prefer the swimming pool environment to that of the sea. The pool is so much more controlled and warm. This creates a safe and secure environment in which they can learn and have fun.

Children and manikins

Children should not carry full weight manikins until they are juniors (age 13) or final-year nippers. Up until that point they carry empty or half-filled manikins.

Children should be taught to carry the manikin in the double-handed carry when they are young and first learning.
As they grow stronger they can move on to developing other carrying techniques.

figure 16.1

figure 16.2

Drills

figure 16.3

Option 1 The brick

Young children can get a feel of what it will be like to carry a manikin by 'rescuing' a rubber brick. They should dive down to the bottom of the pool to retrieve the brick and bring it to the surface where they then have to carry it a certain distance.

Older nippers can progress to using a bottle filled with water, increasing in size and weight, in preparation for carrying a manikin.

figure 16.4

figure 16.5

Option 2 Swim relays

Children often prefer a competitive environment where they are part of a team rather than an individual. The spotlight is not solely on them and they can have fun with their friends. Splitting a training squad into teams and running some fun relay races can really help them bond and practise the skills they have learnt.

figure 16.6

Option 3 Opposite relays

For this activity split the squad not into two teams, one team at each end of the pool. Number one swimmer at each end sets off at the same time and aims to get to the other end before the opposition. Number two swimmer sets off when number one touches the wall and so on. This way the participants never actually see who wins the 'race' so it is a friendlier environment for them to race in. The cycle can keep going as long as the coach wants and will also work with odd numbers of participants.

Option 4 Trains

In this relay have half the team at one end and half the team at the other end. The first person will swim a normal freestyle length but when they turn at the other end the second swimmer will take hold of their ankles and kick with the first swimmer. The same will happen at each end, with another person adding on to the end of the train until all the team are together. Each person can use one arm to swim and one to hold on.

Once they have all the team at one end they then have to swim the race in reverse, dropping each person back off where they started until eventually the first person is left swimming on their own again. This relay can be very funny as the children try to hold on to each other.

Option 5 Woggle races

Whether you call them woggles, worms or noodles these swimming aids are very good for children to play with. Children can use them in relays, either laying on them or with them between their legs, semi sat on them.

figure 16.7

Option 6 Diving for coins/toys

Diving for coins is a fun game to help children feel comfortable underwater, without them even realising it. The coach will have a selection of sinkable objects, such as coins or rings (available in swimming pools or sports shops). They will scatter the objects across a designated area and then the children try to collect as many as they can. This not only helps children feel comfortable underwater, but also prepares them for underwater swimming and manikin pickups as they get older.

Diving for a sinkable rubber brick is another variation of this game. In this case the brick is heavier than the other objects so it is not necessarily a simple case of picking a toy up. The participant will need to put more effort in to bring it to the surface. This reflects the effort needed for the manikin pick-up.

figure 16.8

Option 7 The 'obstacle' event

Children can be taught the method of negotiating obstacles when they are very young by using a shallow barrier. A coach can use a rod, pole or even a float laying flat on the surface as something the participants need to go under. To do this they will not need to dive deep down or swim very far, so it is not as daunting for them as the obstacles themselves, but will improve their confidence.

Games such as diving for coins and the brick are also a way of simulating the obstacle race. Developing on from this the weighted sinkable hoops can be used for children to dive down and swim through, mimicking the obstacle event.

figure 16.9

Option 8 Nipper board races

Nippers still race in the pool on the nipper boards so it is worth including this in training sessions. Children will also love getting to paddle the boards in the pool. Coaches can use the nipper boards in relays, as they take up most of a lane. They can also be used to practise board rescues. It is best to use them towards the end of a session because children tend to get excited when the boards are brought out and may not be in the mood for learning afterwards.

Figure 16.10

Figure 16.11

Figure 16.12

Option 9 Fins

As previously mentioned, swimming with small rubber fins is advisable for younger participants, in preference to the fibreglass racing fins older participants use. Again, children will enjoy wearing fins and feeling how fast they can swim in them. As with most activities, anything which breaks the normal routine will keep them keen and interested.

Option 10 Manikin relays

Children can perform the same manikin-carrying relays as older participants although using empty manikins which float.

Option 11 Tube rescue relays

The same can be done for tube rescue relays, participants take it in turns to rescue and tow each other back down the pool.

Figure 16.13

Figure 16.14

Figure 16.15

Figure 16.16

Option 12 Diving through hoops from the side

The coach can hold a light hoop out from the side of the pool for children to aim to dive through when practising dive starts. This will give them a target to aim for so they are less likely to belly flop.

Games

There are many games which can be played during pool sessions which will keep the nippers interested and progress their skills while having fun. This is also a nice way to mix up the group.

Nipper board games

At the end of the session take out all the lane ropes and split the participants into 6 teams. Have a team in each corner of the pool and also in the middle of the two widest walls. Each team has a nipper board. On the starting command a participant from each team will begin paddling around the perimeter of the pool, chasing the other teams. They must go all the way around and back to where they started before they then tag the next paddler. One member of each team can be in the water as a marker to make sure other teams don't cut corners. The other teammates can sit on the side of the pool and splash the opposition.

Stuck in the mud

The playground game of Stuck in the Mud can be played in the pool. A few people are chosen to be 'it' and everyone else has to avoid being tagged. When a person is tagged another team mate has to swim through their legs to free them. It may be best to play this game in the shallow end as many nippers will not be able to stand in the deep part of the pool.

Water polo

Nippers can be taught to play water polo using a lightweight soft ball. A large mat can be positioned at either end of the pool to act as a goal and the participants divided into two teams. They then see who can score the most goals, either by swimming with the ball or throwing it to each other. They can also use the ball to swim water-polo-style relay races.

Whirlpool

Depending on pool depth this may work best in the baby pool as the children need to be able to 'run' in the water. Have all the children in a circle and get them to run around the pool in that circle shape as fast as they can. As they move the water will create a whirlpool around them until eventually they will fall over and float around in a circle in the water.

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