

INTRODUCTION TO OPEN WATER SWIMMING



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The following guide has been put together to try to give you a basic introduction to open water swimming. Whether you are a novice swimmer who would like the confidence to take a dip outdoors, or a competent pool swimmer preparing for your first open water swim, or even someone who has already experienced the thrill of open water and are keen to improve your skills and progress; hopefully there will be information here that you will find useful.

The aim has been to create a comprehensive, but not exhaustive resource. Whatever your starting ability, we hope you can use this guide to build the confidence and skills required to enjoy your Swimtrek trip, safely and effectively.

By definition, open water swimming, means swimming in any naturally occurring body of water – in lakes, rivers or the sea and more recently, that may also include many man-made lakes and waterways. It could include a social dip with friends, taking a Swimtrek holiday, entering your first open water triathlon event or even swimming the Channel.

With a range of abilities in mind, we have split this resource into 3 clear sections to cover the essential skills we think you should know about before taking to the open water.

Hopefully, these sections can act as a foundation on which you can build your swimming experiences. You can dip in and out of this resource to find information that fits your ability. Each section acts as a building block for the following sections. So, if you are a novice swimmer coming on your first Swimtrek trip, it will be valuable to start at the beginning and make sure you are happy with the basics. If you are confident in your ability you may wish to pick and choose relevant information.

For many people, their first open water swim is an anxious occasion, but it certainly doesn't have to be that way. With a bit of preparation, and armed with some basic skills, we are confident that you will enjoy your first, and subsequent, dips in the open water.

Most open water enthusiasts will attest to the thrill of swimming outdoors; there is no feeling like it!

The sense of exploration and challenge continue to attract people and the feelings of excitement and euphoria last long after you have left the water; whether you have just had a social dip down at your local lake or if you have completed your first Swimtrek trip.

So, take a dip inside....the water's lovely!

SWIMMING TECHNIQUE

Ability to swim...

Concentrating on Freestyle and Breaststroke, the most commonly used strokes in open water.

SWIMMING TRAINING

Ability to swim the distance...

Advice on how to structure your swimming to ensure improvements in fitness and speed

OPEN WATER SWIMMING

Ability to swim the distance in open water conditions...

Skills and advice on taking your swimming outdoors

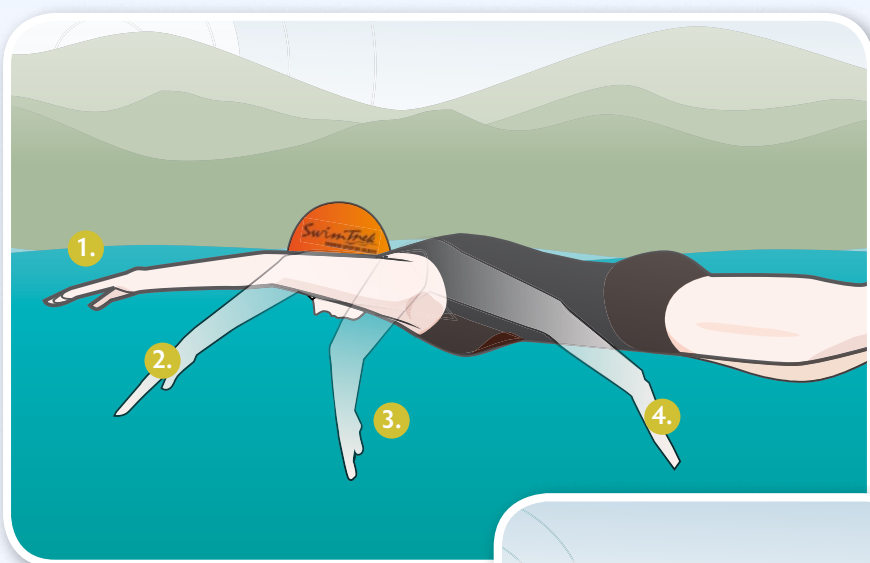


FREESTYLE TECHNIQUE – ARM ACTION

General Introduction

As you will no doubt see if you take a look at the swimmers in your local pool, or even most Olympic finals for that matter, there can be quite a range of interpretations as to what constitutes an effective arm action. These variations will come about because of individual differences in strength, flexibility and experience. However, the ultimate aim is the same and the effective principle is very simple and easy to understand.

Your arms will provide the vast majority of the propulsive force in freestyle. Be clear what you are trying to achieve. Ultimately, you are trying to use your hands and arms as levers to propel your body forward; rather than pushing water backwards.



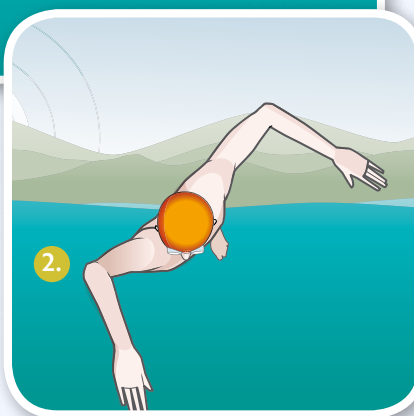
Specifics

1. At this furthest reach of your stroke your arm needs to be relaxed and weightless, so don't hold your arm on the surface of the water or press down. Keep fingers and hands light. This will help with the next phase where your hands should move down and out into the "catch" position

2. Your whole focus here shifts to feeling for a pressure against the water. It is important to keep the elbow high and wrist firm at this point to get the best hold on the water. You are now in a position to use your hands, forearm and even upper-arm to propel forwards. As you begin to accelerate forwards, aim to keep your hand stuck to the water and don't let your arms stretch too far away from your body

3. Keep the arms firm and utilize the stronger muscles around the torso to assist with the acceleration forward. Only press as hard and as fast as you can maintain that hold on the water. (This "feel" improves with practice and training.) As your body accelerates over the top of your arm, keep focused on holding the water until your hand has traveled beyond your waist and towards your thigh

4. Don't continue to accelerate the hand out of the water. Once your hand has reached this position you need to relax the arm and release the water, allowing the elbow to bend and begin the arms recovery over the water. This return to the start position needs to remain as controlled and relaxed as possible.



Focus Points

- The underwater (propulsive) part of the arm stroke accelerates from slow, at the front, to fast, at the back
- At the front of the stroke keep the arm relaxed and weightless
- Keep the elbow high as you feel for the catch
- Keep arms close to the body to lever body forward
- Maintain hold on the water
- Continue to push beyond the hips
- Relax arm as elbow exits water for recovery

Practices / drills

SINGLE-ARM SWIMS

These are very useful for highlighting weaknesses in the pull and focusing attention throughout the phases of the stroke.

1. Swim 25m using only one arm to pull (other arm stretched out in front) – count number of strokes. Maintain a strong leg kick.
2. Repeat on the other arm – compare (strokes should be equal)
3. Swim 25m full-stroke to contrast.
4. Repeat steps 1-3 a few times, aiming firstly to get single arm counts equal, then reducing stroke counts.
5. Then, try steps 1 & 2 with the non-stroking arm by your side.

MID-POINT SCULLING

This is a useful exercise for developing a feel for the water and maintaining a high elbow position

1. Lying in prone position let your arms hang beneath your shoulders. Use a pull-buoy or kick gently to maintain a horizontal position.
2. Lift your elbows up and out and lock them there, keep your forearms hanging down – imagine lying on top of a Swiss ball!
3. With elbows locked, sweep the hands and forearms out and then back in and repeat in a continuous motion. Don't let the hands move backwards or forwards.
4. As the hands sweep out the palms should be pitched outwards and as they move in the palms pitch inwards.
5. Aim to create a constant pressure on the hands and forearms and let the sculling (side to side) action of the forearms propel you forwards.

FREESTYLE TECHNIQUE – LEG ACTION



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General Introduction

Although they will provide relatively little in the way of forward propulsion, your legs will still play an important role in the balancing and timing of your stroke. In freestyle, the leg action is relatively simple compared to the arm movements. However, time spent making sure the legs are working as efficiently as possible will have a profound effect on the effectiveness of the whole stroke.

Specifics

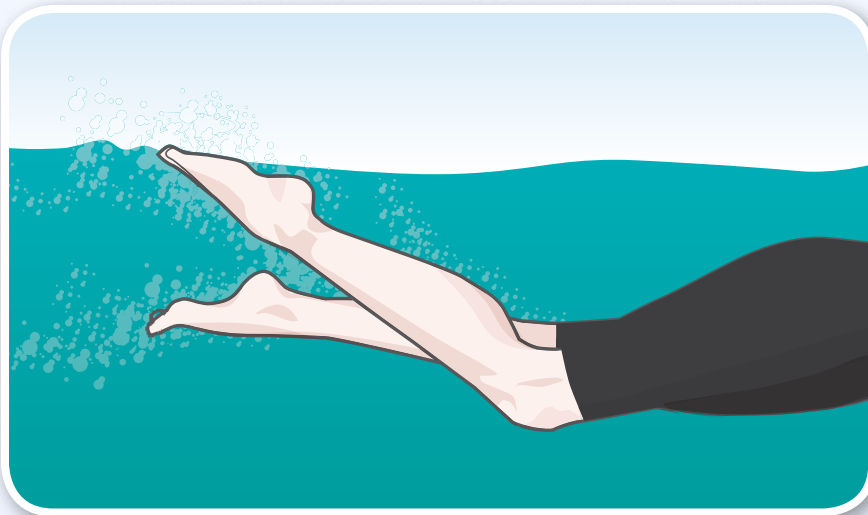
Different timings are often used for the leg action depending on how fast/far the swimmer is going.

- Short distance/ sprinting often employs six kicks per arm-cycle.
- Middle distance/ pace often employs four kicks per arm-cycle.
- Long distance/ slower pace often employs two kicks per arm-cycle.

Simply put: faster or shorter swims, you can kick faster. Longer or slower swims you should kick easier.

Note that these numbers increase in multiples of 2, so naturally fit into the rhythm of a full arm-cycle (2 strokes). Whatever tempo of kicking you employ, it is important that it comfortably slots into the rhythm of your arms and follows a few simple fundamentals.

The larger leg muscles will use up a disproportionate amount of energy unless you employ them appropriately and economically.



For them to work effectively it is important that the legs are relaxed enough to allow flexion in the knees and, especially, the ankles. The aim is to alternately kick the legs in an up/down motion whilst keeping them within the streamline of the body. So the feet should not leave the water, nor kick too deep.

If you maintain this relaxed shallow kick, your legs can operate effectively in tandem rather than ineffectively, in isolation.

The legs should be long and straight, but avoid deliberately pointing the toes as the relaxation in your legs is all important to allow the flex of the ankles, and also for that all important “feel” of the water.

Practices / drills

SIDE KICKING (WITH/WITHOUT FINS)

1. Lay on your side with lower arm extended, upper arm at your side resting on your thigh. Face can be turned up so you can breathe at will.
2. Kick 25m smoothly on one side then switch, and kick 25m on the other side.
3. As you get more comfortable kicking on your side, switch from one side to the other after a designated number of kicks (eg. 6 kicks left / 6 kicks right).

VERTICAL KICKING (WITH/WITHOUT FINS)

1. Float upright in the water, legs hanging below, arms can be by side or across chest.
2. Kick with a narrow, compact flutter kick
3. Kick 10 sec bursts hard aiming to get higher out of the water.

Focus Points

- Legs need to remain relaxed with kick initiated from the hips
- The kick operates just below the surface
- Keep ankles flexible – don't point your toes!
- Aim to keep the kick within the streamline of the body
- Kick at an appropriate intensity to your intended distance

FREESTYLE TECHNIQUE – BODY POSITION

General Introduction

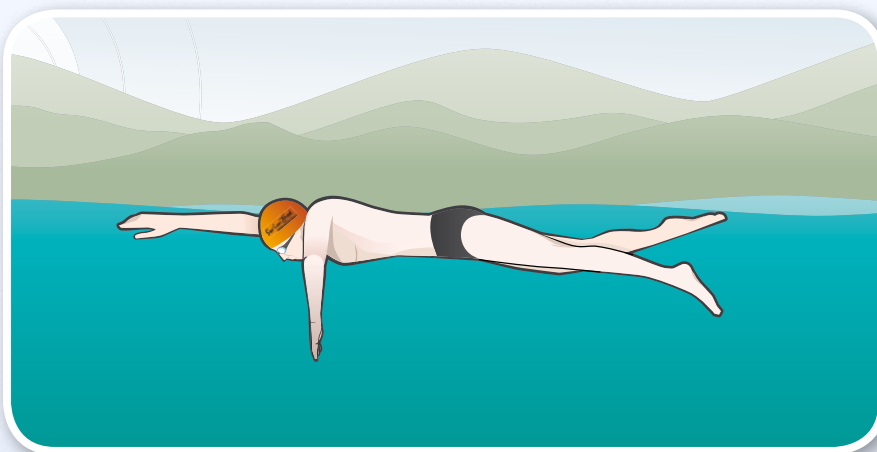
When swimming, because you are moving through a medium roughly 1000x denser than air, it is imperative that you adopt the most streamlined position possible. Have you ever tried to run across the shallow end of a swimming pool? Never has the maxim, "learn to crawl before you can walk" been more appropriate!

To move efficiently through the water you are looking to minimize resistance along the length of your body, trying to achieve a near horizontal, streamlined position. Although it can sometimes be tempting, you are not going to try to swim over the top of the water; more precisely, you are going to cut through it. The advantage you have when working in the water, is that achieving this near horizontal position is really a case of relaxing and allowing the water to support your bodies' weight. Maintaining a long, relaxed and streamlined body position throughout your stroke is the key to effective swimming.

With its relatively heavy weight and leading role at the front of the swimmer, your head and where you position it will have a great influence on your balance and position in the water, and ultimately, your efficiency as a swimmer. Self-taught swimmers, or years of lane swimming in crowded pools often leads to adopting a "default" head position which may not be the most efficient. It is important that you become aware of your own head position and adapt it if necessary.

Specifics

Ultimately, you are looking for a neutral head position, which maintains the relaxation down your neck and along the length of your body. To do this, your head should be in line with your spine and supported by the water. As a rough guide you should be looking down; eyes slightly forward. The aim is to keep your head still and allow your body and limbs to move around this fixed point.



*Note: A few factors may have an effect on your head/body position relative to the water.

- Swimming in fresh/salt water
- Swimming in calm/choppy water
- Wearing (or not) a wetsuit
- Sprinting/swimming longer distance

These variable conditions may mean that you need to make slight adjustments to your overall body or head position. The important thing is that you are aware of it and can adapt accordingly – the fundamentals remain the same!

Practices / drills

TORPEDO:

1. Lying face down in the water, hands by your side
2. Gently kick legs and maintain long horizontal position
3. Rotate body (but not head) slightly to one side
4. Then roll back via centre to same position on opposite side
5. Continue, varying degree of rotation and maintaining smooth rhythm

GLIDING:

1. Push off the poolside, hands by your side, head in line with spine – glide (note how far you traveled)
2. Try again; this time lift your head up, looking forward – contrast with before (What happened to your legs?)
3. Again; this time push head down, looking underneath you – (How did it affect your balance and streamline?)
4. Return to a neutral position and note the most comfortable and effective head position

Focus Points

- Don't be afraid to evaluate or adapt body/head position
- Relax and be supported by the water
- Aim for a long and streamlined body
- Head in line with spine and neck relaxed
- Look down and slightly forwards
- Head remains still-body rolls around this axis
- Water-level between crown and forehead

FREESTYLE TECHNIQUE – BREATHING



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General Introduction

Once you have a grasp of the mechanics of the stroke it will be breathing (or lack of it!) that will be the next limiting factor. As with the arm and leg actions, it is important to fit the breathing naturally into the rhythm of your whole stroke.

Most people breathe every second, third or fourth arm-stroke. Adopt a breathing pattern that suits your circumstances (distance/speed/conditions etc.). You may need to be able to breathe either side, in case choppy/rough conditions make breathing to one side difficult.

Whichever pattern you choose will be a matter of preference, but you should always aim to be comfortable with any combination of breathing patterns should circumstances require it.

Specifics

Whenever you decide to breathe, you should look to the side and slightly backwards to take the breath. Turn the head towards the side of the recovering arm as it begins its recovery. Turning the head early allows you to complete the breath before the recovering arm returns to the water.

Your head should not need to lift or move from your central axis, so use your bodies natural rotation to time the breath. Make sure you return your head to the centre-line after each breath.

As your face will only be clear of the water for a limited time during the stroke cycle, it is important to make best use of this time. By exhaling whilst the face is in the water you will allow more time to inhale whilst the face is clear. This also has the added benefit of aiding relaxation, so make sure you exhale long and controlled; avoid snatching the breath.



*Note: as with body position previously, you may have to adapt your breathing to suit specific open water conditions. If it is choppy, for example, you may need to roll and turn your head further to make sure that it is clear of the water, to enable you to comfortably take a breath.

Practices / drills

BREATH-COUNTING

1. Swim 50m freestyle – breathe every second arm stroke (25m to left then 25m to right)
2. Repeat – this time breathe every third stroke
3. Repeat – this time breathe every fourth stroke (again 25m to left then 25m to right)
4. You can now repeat the series 1-3 or continue increasing number of strokes per breath to 5,6 and even 7. This changing rhythm will improve your ability to vary your breathing and give you the options that you may need in open water conditions. It can also act as a useful aerobic workout.

Focus Points

- Fit breathing pattern to stroke rhythm
- Choose appropriate frequency (2,3,4 strokes) – but be comfortable with all
- Look to side and slightly backwards. Try and keep one goggle in the water when breathing
- Use body roll to assist timing of breath
- Return head to centre line after breath
- Exhale fully underwater
- Breathe deeply and controlled

FREESTYLE TECHNIQUE – TIMING/ROTATION

General Introduction

If you have the basics in place then your next step for improvement is in the timing of the stroke. You should not need to add much more detail; instead, you should aim to fit what you already have into a complete and effective package. A technically correct movement can easily be rendered ineffective by incorrect timing.

Look at the leaders in many fields of activity, and they usually have the appearance of making it look very easy and swimming is no exception. Timing is the key.

Time spent working on the overall co-ordination of your stroke will have as much of a positive impact on your swimming as any individual area you care to work on. Get the timing right and the ease with which you can move through the water can be a revelation.

Specifics

The aim is to utilize the natural rotation of the body caused by the alternating arm action, to create a constantly streamlined and stable body position.

As your hand enters the water at the front of your stroke, take the time to reach forward and roll out onto your side. This position needs to feel stable and relaxed. As your arms alternate roles, your whole body should switch from one side to the other. By relaxing and keeping the head still you should be able to roll smoothly from one side to the other around your bodies' central axis. Use the core muscles of your body to stabilize and control your hips as they roll.

By using this rolling motion effectively, you can;

- Use the larger back and core muscles to generate propulsion
- Achieve a more efficient and streamlined position in the water
- Make it easier to breathe above chop/waves

All movements should be smooth and controlled, so be patient with your stroke, as rushing at any point will have a knock-on effect.

- Focus on feeling your way through the water rather than forcing it. The water is probably the best coach you'll ever have!
- As all great swimmers know, you will benefit from working with the water rather than against it.

So, if we can be allowed to paraphrase Captain Matthew Webb's famous saying, just to make our point;

**“Nothing great is easy”...
except great freestyle!**

Practices / drills

¾ CATCH-UP

1. Begin by swimming normal freestyle.
2. Now start to delay your pull until the recovering arm begins to enter the water.
3. Make sure the hand enters in line with the shoulder and extends at shoulder width (not across the centre-line)
4. The fingers, wrist and forearm should enter through the same hole.
5. As the fingers begin to enter the leading arm should catch hold of the water and anchor the swimmer.
6. Finally, drive the hips to rotate around onto your other side as the entering arm continues its' extension. This should give you a feeling of connecting the timing of the propulsive movements to the strong drive of the hips.

LAY-OUT

1. Start by kicking on your side with the lower arm extended.
2. Kick for specified number of leg kicks (eg 6)
3. Place face in water and take 3 strokes without breathing. Aim to extend and roll fully on each stroke. Time each pull to connect with the roll of the hips.
4. After the 3rd stroke immediately lay out into position 1 (but now on the other side).
5. Continue through stages 2-4.

Focus Points

- Roll your body in time with your arms' alternating action. As one arm enters the water the other arm should be beginning its push phase
- The roll of your hips should connect with the powerful push at the end of the arm stroke
- Keep movements smooth and controlled
- Allow the whole body to rotate from the neck down
- Stabilize the hips with your core muscles

BREASTSTROKE TECHNIQUE



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General Introduction

Breaststroke may be chosen in preference to freestyle for a number of reasons:

- Difficulty mastering the alternating nature of freestyle
- Inability to maintain freestyle for duration of swim
- Easier to navigate in open-water
- More sociable option / enjoy surroundings

Essentially, a well-executed breaststroke can be more efficient and enjoyable than a poorly executed freestyle and therefore, may be the preferred option for a number of swimmers. As with other strokes however, many of the principles remain the same and observing a few basic rules can make your breaststroke an effective alternative to freestyle.

Arm-action

The arm movements can be broken down into 4 distinct phases:

1. Out-sweep – from full extension the arms pull wide and straight
2. Catch – as the arms travel wide of the shoulders the elbows begin to bend and press down on the water
3. In-sweep – the arms continue to accelerate in a semi-circular movement to bring the hands underneath the body
4. Recovery – as the hands release the water they continue up, in and forward until they reach the surface and extend again to the start position

Note: the four stages should combine to produce a continuous action and there should be a smooth acceleration of hand speed from the beginning of Phase (1) to the end of Phase (4).

Leg Action

The leg kick is important in breaststroke because it generates a much larger proportion of the propulsive force than it does in the other strokes.

Again, the kick can be broken down into 4 phases:

1. Recovery – from an extended position, the heels are drawn up towards the buttocks. Keep the feet extended and the knees close (inside line of shoulders).
2. Catch – as the heels approach the buttocks the feet should be rotated out and dorsi-flexed (turned up).
3. Out-sweep – the hip and knee joints extend to drive the legs backward and outward.
4. In-sweep – the legs continue to accelerate, now sweeping back together and finishing completely extended.

Note: as with the arm action the stages should combine to produce a continuous movement, though there should be a notable acceleration through stages 3-4

Body position

Breaststroke, because of the movements involved, tends to create more resistance, and so, tends to be the slowest of the strokes.

However, just like freestyle, the aim in breaststroke is to maintain as streamlined a body position as possible. It helps if you can put your face in the water at the front of the stroke. This will help to keep the body streamlined and the hips up near the surface..

Treading Water

Another valuable skill to master is the ability to tread water. This skill can be utilized and adapted for a wide range of circumstances in the open water. You may use it to:

- Rest
- Re-orientate yourself
- Take on board food or drink
- Fix leaking goggles
- Attract attention or call for help
- Waiting for the start of a swim race
- Talk to fellow swimmers
- Enjoy the view

This fundamental, but versatile skill will make you much more comfortable and safer in the water.

HOW TO:

- Sit up straight in the water
- Bend knees in front of you and kick a slow breaststroke or egg-beater (alternating breaststroke) kick
- Maintain a constant downward pressure with a sculling action of the hands
- Breathe normally; don't hold your breath
- Movements should be smooth and steady
- Lay more onto your back to get your face clear of the water, if you want to adjust goggles or take a drink etc.
- If you are in salt water and/or wearing a wetsuit you will already be buoyant and so will have to put very little effort into treading water

BREASTSTROKE TECHNIQUE



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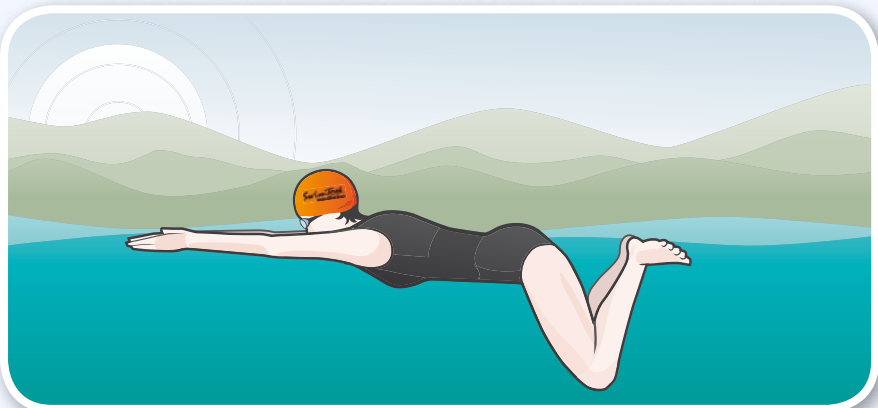
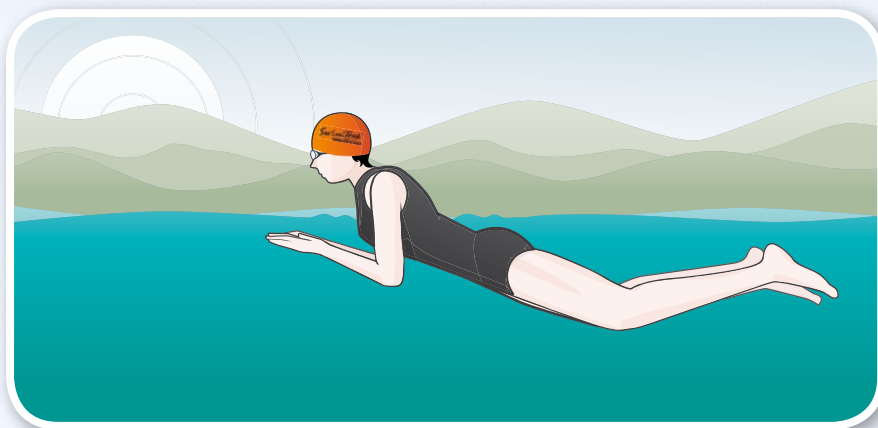
Breathing

Breaststroke swimmers should breathe once every stroke cycle. This should not be a problem as it more likely helps propulsion rather than hindering it.

You should inhale as the arms finish their in-sweep and the face is clear of the water.

There should be no need to lift the head up too far, as the action of the hands should raise the head and shoulders sufficiently to breathe.

As the arms extend forward through the recovery the face should drop back into the water and as with freestyle, you should exhale strongly and smoothly whilst your face is in the water, prior to the next stroke cycle.



Timing

As with all other swimming strokes, the aim of the timing in breaststroke is to maximize forward propulsion whilst minimizing drag resistance. To achieve this try to complete the propulsive phases of the arms (Stages 1-3) before starting with the propulsive phases of the legs (Stages 2-4).

It may help to visualize this if you think:

- As the arms propel and lift, the legs will be extended.
- As the legs flex and begin to drive, the arms should be extended

And remember each whole stroke cycle begins and ends in a streamlined position.

Focus Points

- Start and finish each stroke in an extended, streamlined position
- Inhale during the powerful in-sweep of the arms as the head reaches its maximum height
- Drive out and back with the legs as the arms reach for full extension
- Hand speed continues to accelerate through all phases of the arm stroke
- As the feet come together at the end of the kick the next arm stroke begins

Practices / drills

2 KICKS / 1 PULL DRILL

Swim breaststroke but complete 2 full kick cycles with the arms extended, before taking one pull and a breath. Aim for maximum distance with each kick and ensure a fast hand movement on the pull. This encourages a strong kick and fast hands.

PULL WITH DOLPHIN LEG KICK

Use a dolphin or butterfly leg kick whilst pulling using breaststroke arms. Use one kick per arm pull and you should kick as the arms sweep out. This helps to encourage the driving of the hips and create an undulating body motion.

SWIMMING TRAINING



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General Introduction

As every great swimmer knows, getting fit is what happens when you are working on your technique!

Likewise, every great open water swimmer knows that their ability to cope with the vast array of conditions is dependent on a solid base of physical conditioning.

Obviously the ideal place to train for open water swimming would be the open water, but we realize that this may not always be possible, or realistic. So, we will assume that most of the training is likely to be done in a swimming pool.

Training zones / Energy systems

There is a wealth of literature available on the bodies' energy systems and specific training zones. What is important is that you understand the principles enough to train appropriately at level suitable for you. If you are just swimming for pleasure then a very basic understanding of these subjects is all you would need, but if you intend to compete and improvements are what you are after, then a more thorough understanding would be helpful, and you may want to research the subject more.

Put simply, the body produces energy in 2 ways:

- Anaerobic system (without oxygen)
- Aerobic system (with oxygen)

As a general rule the shorter and more intense the activity, the greater the percentage of energy comes from the anaerobic system. As the duration of the exercise increases and the intensity drops, then proportionally more energy comes from the aerobic system.

So, a 5 second burst of activity will likely be fuelled 100% anaerobically. Whereas, a steady sustained hour long swim will be close to 100% aerobic. This has implications for how you may want to train for your swimming.

With this information we can split training up into any number of categories. If you want to keep it simple just divide your training into 2 categories (aerobic and anaerobic).

However, here as an example, we have used 4 categories.

1. **Aerobic base training** – this is low intensity training 60-75% (longer sets, short rests)
2. **Aerobic endurance training** – this is higher intensity 75-85% (long sets, short rest)
3. **Anaerobic training** – higher intensity again 85-95% (short sets, longer rest)
4. **Sprint training** – maximum effort 100% (very short sets, rest to full recovery)

Using these categories you can vary and target your training, making it more effective and enjoyable.

Planning your Training

When most lap swimmers head down to the pool they generally just do one long swim at a moderate pace, with little or no technical emphasis. This is guaranteed to make you better conditioned to swim slowly with the same stroke weaknesses as before. And it's not very interesting at that!

Take the time to plan what you are going to do. Making it part of a progression towards a goal will ensure that you continue to improve. By planning your training you can add variety and focus to your workouts, which will keep it interesting and help with motivation.

It is important to remember before deciding how to train, exactly what you are training for. Reflect in your training what you are trying to achieve.

If you are planning a 750m swim as part of a triathlon, your training should reflect this in its distance and intensity. Likewise, if you are training for an attempt at the English Channel, then the make-up and duration of your training should be specific to the nature of the challenge.

SWIMMING TRAINING



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Training Category	% Effort	Training effect		Work/ Rest Ratio
Aerobic base (1)	60-75%	Improves aerobic capacity	20-30%	~ 5:1
Aerobic endurance (2)	75-85%	Improves endurance	60-70%	~ 4:1
Anaerobic (3)	85-95%	Improves anaerobic capacity	10-15%	~ 1:1
Sprint (4)	100%	Improves swim speed	5%	~ 1:2+

As you can see from the table above, this gives you a template upon which to structure your weekly swimming. You can adapt it to suit your own goals.

Training for a longer swim e.g. 10k would require that the vast majority of training would be in categories 1 & 2.

If, however, you were training for a 750m race then you would need to increase the percentage of training in categories 3 & 4.

All open water swimming relies primarily on aerobic capacity and endurance, so these areas should be emphasized in training, but there may always be occasions where intense bursts of work or speed may be required. So, training on all the energy systems to some degree is advisable.

Long swims

Another aspect of training to consider is one-off long swims. This essentially involves swimming a set distance in one go, without a rest. These prepare the mind and body for swimming long duration continuously. They can be built up from an initial base and ideally they should mimic as closely as possible the length and anticipated conditions of your target swim.

For example, if you were planning a swim of 5k, you may start with a one-off swim of 2.5k, maybe 6 months before. Then each month you may add ½k to your one-off swim, culminating in 5k practice swim the month before your planned swim.

Ideally these swims would be in open water acclimatizing to the conditions of your target swim. However, that may not be possible and in such cases swimming the right distance in a pool would be the most important thing.

Mental Training

The mental aspect of training is often neglected for the physical. But it should not be overlooked. Due to the incredible adaptability of the human body and the time that people invest in physical training, it is the mental aspect that will often be the limiting factor.

Aspects of mental training to consider include;

- Setting yourself goals – realistic and progressive; short- and long-term
- Challenging yourself – know you can always improve
- Positive attitude – look at every challenge as an opportunity
- Focus – think about what you are doing when you are doing it, don't be distracted or worried by external matters

Motivation for training will come and go. This is normal for everybody, even the greatest athletes. You should accept this as part of the challenge of training. (Open water) swimmers know that the hardest part of training is getting out of bed or into the water. If you learn how to motivate yourself then you have probably mastered the most important ingredient to your success in open water swimming.

SWIMMING TRAINING - SAMPLE SESSIONS



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Aerobic Base Workouts

	Shorter workouts	Mid-length workouts	Longer workouts
Warm-up	300m Freestyle (F/S) 200m Pull (buoy) 100m Kick	400m F/S 3 x 100m Pull (buoy) 2 x 100m (50 Kick-50 Drill) 1 x 100 (Breathe 2,3,4,5)	300m (75 F/S-25 BK) 300m (75 F/S-25 BS) 300m (75 F/S-25 Drill) 300m (Breathe 3,5,7)
Minor Set	4 x 75m (Middle 25m Drill)	5 x 100m (#1,3,5 F/S) (#2,4 Medley) @ 20 secs rest	3 x 200m (#1 Pull (buoy)) (#2 Kick) (#3 Pull (buoy))
Main Set (60-75%) Aerobic Base	1 x 25m, 1 x 50m, 1 x 75m, 1 x 100m, 1 x 150m, 1 x 150m, 1 x 100m, 1 x 75m, 1 x 50m, 1 x 25m All (F/S) @ 5 secs rest per 25m	1 x 400m, 1 x 200m, 1 x 300m, 1 x 150m, 1 x 200m, 1 x 100m, 1 x 100m, 1 x 50m ALL (F/S) @ 10 secs rest per 100m	1 x 400m 2 x 300m 3 x 200m 4 x 100m ALL (F/S) @ 10 secs rest per 100m
Swim-down	2 x 50m (25 Drill-25 F/S) (Total 1800m)	200m Backstroke (BK) 200m F/S (Total 3400m)	6 x 50m (25 Choice-25 F/S) 300 F/S (Total 4400m)

Aerobic Endurance Workouts

	Shorter workouts	Mid-length workouts	Longer workouts
Warm-up	200m F/S 4 x 25m Kick 100m F/S (Breathe 2,3,4) 4 x 25m Pull (buoy)	200m F/S 200m Kick 200m Ind. Medley 200m Pull (buoy) 200m F/S	400m F/S 300m (75 F/S-25BK) 200m (50 F/S-50BS) 100m Ind. Medley
Minor Set	2 x 25m 2 x 50m (#1 F/S, #2 Choice) 2 x 75m 2 x 100m	10 x 50m Alternate 50's Catch-up @ 15 secs rest	10 x 75m (25 Kick-25 Drill-25 F/S) @ 15 secs rest
Main Set (75-85%) Aerobic Endurance	6 x 100m F/S @ 30 secs rest Aim to keep constant pace	5 x 300m F/S @ 30 secs rest Aim to get faster #1-3, 4-5 10 x 50m @ 10 secs rest	1 x 500m 2 x 250m 5 x 100m 10 x 50m 20 x 25m All F/S @ 10 secs rest
Swim-down	100m (every 2nd 25m Choice) (Total 1700m)	150m BS 4 x 50m F/S 150m BK (Total 3500m)	250m Choice 250m F/S Drill 250m Choice (Total 5000m)

SWIMMING TRAINING - SAMPLE SESSIONS



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Anaerobic workouts

	Shorter workouts	Mid-length workouts	Longer workouts
Warm-up	100m F/S Breathe 2,3 2 x 50m Choice 100m F/S Breathe 3,4 2 x 50m Drill 100m F/S Breathe 4,5	500m F/S 3 x 100m Ind. Medley 6 x 50m Pull (buoy) 12 x 25m Kick	800m F/S (every 4th 25 Drill) 4 x 200m (#1 Kick, #2 Pull, #3 Drill, #4 F/S)
Minor Set	400m Pull (buoy)	750m F/S Breathe 3,4,5	6 x 150m (50 BK-50 BS-50 F/S) @ 15secs rest
Main Set (85-95%) Anaerobic	2 x (75m F/S @ 2 mins) (50m F/S @ 1:30) (100m Easy @ 3 mins)	6 x (100m F/S @ 2:30) (50m F/S @ 1:15)	2x (10 x 50m F/S @ 1:15) (200m Easy @ 5 mins)
Swim-down	200m Easy Choice (Total 1650m)	600m Easy Choice (Total 3650m)	750m Easy Choice (Total 4650m)

Sprint Training

You can also add short sprint training sets into your training sessions. Use them frequently, but sparingly as they only need to make up a small percentage of your total training.

The aim of sprint training is to achieve and develop your maximum speed, so you shouldn't be swimming to fatigue. Very short, fast repeats with full rest.

Example Sprint Sets:

3 sets of (2 x 25m @ 60 secs then 2 x 12.5m @ 60 secs)

or

8 x 25m (1st 15m Fast then 10m Easy @ 60 secs)



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SWIMMING TRAINING

Distances to achieve prior
to SwimTrek trips

Average Daily Distances (KM)		2-3	4	5	6	7	8
Months Prior to Swim	Week						
3	1	1	1.5	1.5	1.5	1.5	1.5
	2	1.5	1.5	2.5	2.5	2.5	2.5
	3	1.5	2	2.5	2.5	3	3.5
	4	1.5	2	3	2.5	3	4.5
2	1	2	2	3.5	3	3	4.5
	2	2	2.5	3.5	3	4.5	5.5
	3	2.5	2.5	4	4	4.5	6.5
	4	2	3	4.5	4.5	5.5	6.5
1	1	3	3.5	5	5.5	6.5	7.5
	2	3	3.5	5	5.5	6.5	8
	3	2.5	4	5	6	7.5	8
	4	2.5	3.5	4.5	5.5	6.5	7.5

The distances given above indicate the one-off weekly distance to achieve in the period leading up to your trip. We obviously recommend swimming more than once a week but this is the minimum required.

SWIMMING TRAINING



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Cross training / Variety

You may consider adding supplemental activities to your training. These could include;

- Weight training
- Circuit training
- Flexibility training / Yoga
- Other aerobic activities (e.g. cycling / running)

These would all be valuable additions to your training program and can help overall conditioning. The important thing to be aware of is that adaptations will only occur in the muscles and organs stressed in the training process. So, make your training as specific to your goals as you can. Water-based work is the most specific training for swimming, so dry land activities should supplement water training, but not substitute it.

There are also many other ways to add variety to your swimming workouts:

- Vary the times of day that you swim
- Change the location of where you swim (not always same pool, same lane!)
- Swim with others / swim alone (at the pool)
- Mix indoor and outdoor swimming
- Use a variety of strokes and drills

Rest and Play

Finally, if you are going to increase your training and challenge yourself, then it is equally important to make sure that you are resting properly and recovering from previous efforts. Fitting your training into a longer-term plan helps to make sure that you don't over-train.

Alternating hard and easy sessions can help to make sure that you are recovering from the previous workout.

Also, don't assume that everything needs to be training orientated. Ask yourself why children learn skills so quickly. Give yourself time to play and enjoy the water. Regular time spent playing and just enjoying the sensation of being in water will always have a positive effect; both on your ability in the water and on your frame of mind.

Enjoy being in the water and you can't help but improve!

Focus Points

- Plan your training – better improvements and easier to fit around other commitments
- Make your training specific to what you want to achieve
- A solid aerobic base is the platform on which to build, so plenty of long steady swimming
- Make one-off long swims a part of your program
- Don't neglect the mental aspect of training
- Add variety and complementary activities to your routine
- Rest and play are integral to your development – improvements will be slow without them



OPEN WATER SWIMMING



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General Introduction

As can be seen from the successful transition of many pool-based swimmers into successful open water athletes, a solid base of pool swimming is a very good platform from which to learn the necessary skills to become a safe and confident open water swimmer.

Taking your swimming out into the open water does not require wholesale changes, but there are a few important differences that you should be aware of. With some knowledge of these variables and a bit of forward planning you will be well equipped to swim safely and enjoyably in many conditions.

The way to approach open water swimming is to control what is controllable; and adapt to what is not.

The previous sections on technique and training are areas that you can control, as are some of the techniques in this section. However, as you are swimming in a relatively uncontrolled environment, you should expect that the circumstances may change and be prepared to react.

There is no better preparation for open water swimming than actually getting out there and doing it. Even if you have diligently worked on your technique and training in the pool, nothing will properly prepare you for the euphoria, elation, anxiety and nerves that may well make up your first open water swim.

The aim of this section is to give you the knowledge and skills to safely take your swimming out of the strict confines of the pool and into the more varied, and less predictable realm of the outdoors.

Key differences between pool swimming and open water include:

- **Temperature**
- **Visibility / navigation**
- **Weather conditions**
- **Support / safety**

We can go through each of these factors and look at how we can adapt to them.



OPEN WATER SWIMMING - TEMPERATURE



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General Introduction

Deciding to swim in open water means you could quite realistically be swimming in waters between 10 and 25 °C (50 – 77 °F). So, probably substantially colder than the average swimming pool.

The body loses heat more quickly in water than in air, and more quickly in cold water than warm water. How well your body copes and how you experience this, will depend on your body composition and your previous exposure to cooler temperatures.

Acclimatization

The key is to acclimatize the body to the colder water and this should be done over an extended period of time. Try to get into colder water regularly and try to build up the time spent in the water.

Start with 5-10 minutes and add a few more minutes each time you go. If you can't access open water, reduce the temperature of baths or showers and stay in for longer.

Your body will improve its ability to cope with colder temperatures, if you give it the time and opportunity to do so. It will become effective at moving the blood away from the extremities (skin and limbs) and keeping it where it is most needed (central organs and brain).

In fact, experiencing mild hypothermia (body temp. 95-98 ° F, shivering and goose bumps) can help you to subsequently cope with the colder temperatures and comfortably remain in the water for longer periods.

Getting In

Each time you enter the water, take your time and try to warm up gradually. Your body will adapt to the change of conditions, but needs time to do so. A large temperature difference between the air and water can cause you to gasp for air. Allow your breathing to normalize before exerting yourself physically.

Wetting your hands and face prior to getting in will prime your body and help the adaptation.

Try to swim easy and relaxed for the first few minutes, until you feel comfortable with the temperature. Avoid trying too hard straight away, as this can cause breathing problems and potentially lead to injury. If you are racing, try to allot time prior to the swim, to warm up.

Swimming Caps

As most people are aware, and all open water swimmers know from experience, a high proportion of your bodies heat is lost through your head.

One of the simplest, and most effective ways to tackle the cold is to wear a good quality swim cap made of either silicone or neoprene. This should be brightly coloured so that it is easier to see in open water conditions.

Focus Points

- Acclimatize over a period of time - try to get in regularly and often
- Build up cold water exposure gradually – temperature and duration
- Enter the water slowly - give your body time to adapt
- Wet hands and face before getting in
- Give yourself time to warm up – take it easy at the start of a swim
- Wear a good quality swim cap – silicone or neoprene
- Make sure you are well fuelled and hydrated
- If you wear a wetsuit, make sure it is appropriate and fits well
- Warm up immediately upon exiting the water

OPEN WATER SWIMMING - TEMPERATURE



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Wetsuits

For personal swims, it is obviously your choice whether to wear a wetsuit or not. For organized races it may be a requirement one way or the other depending on the organizers and the water temperature.

There are now many swimming specific wetsuits on the market and their performance has improved markedly over recent years. These are made of specially designed neoprene, which is flexible enough to allow you to swim normally without too much compromise.

If you are using a wetsuit the most important factor is that it fits well, as its aim is to maintain a thin layer of water around your body. This layer of water, in addition to the neoprene of the wetsuit, insulates your body against the colder outer water.

*One added benefit of wearing a wetsuit for weaker swimmers is that it provides extra buoyancy. So resting is easier and many find they can swim faster wearing a wetsuit.

Getting out

Whatever the length of swim it is important to be prepared to warm up immediately upon exiting the water.

When you leave the water there is often a secondary cooling effect as warmer blood from the bodies' core is allowed back to the colder limbs and skin.

Get dry immediately and remove wet costumes. Get clothes on quickly and again, a warm hat will be very effective. If you don't have one, leave your swimming cap on.

Shivering is your bodies' way of warming up the muscles and as long as it doesn't continue indefinitely, is absolutely normal.

Try to take on warm fluids as soon as possible. Beware very hot drinks, as it can be difficult to sense extremes of heat when initially exiting the water.



OPEN WATER SWIMMING - VISIBILITY / NAVIGATION



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General Introduction

The first thing that you will probably notice once you have adjusted to the colder water is the relatively poor visibility in the water. Even if the water is clear there will be no lane ropes running in nice straight lines down the pool.

Although you may not have paid a great deal of attention to them before, you may be quite surprised how reliant you are on them for swimming in a straight line.

Next time you are in an empty lane try swimming a length of the pool (slowly!) with your eyes closed. See how far you go before you hit the lane rope and how confident you were in your sense of direction.

So, how will you know where you are going without these visual aids in the open water?

Sighting

This is an important skill to develop for open water swimming. As the visibility may not be good and there will be no lane lines, you will need to lift your head regularly to see where you are going.

For breaststroke swimmers this is not much of a problem, as you will be looking forward every time you lift your head to breathe. For freestyle swimmers it will take a slight adaptation of your stroke to lift your head clear of the water.

As you should be aware from the technique section, lifting your head too much will cause problems for your body position, so you need to be able to do it as effectively as possible. The key is to fit each lift of the head into the natural rhythm of your stroke and only lift as much as necessary.

There are 2 subtly different ways of doing this and it is worth experimenting with both.

Sighting Method 1

1. As one arm extends and enters the water at the front of the stroke, begin to lift your head.
2. Press down with the leading hand to bring your face clear of the water.
3. You can take a breath at this point and orientate yourself at the same time.
4. Drop the head back into the water as the other arm recovers over the water.

* This method has the advantage of enabling you to lift your head higher out of the water, but can have problems in choppy water where breathing to the front can be difficult.

Sighting Method 2

1. As your arm begins its' recovery, take your breath at the normal time.
2. Start to lift your head as the arm begins to enter the water.
3. Lift your head sufficiently to orientate, raising your eyes above the surface as the hand starts to press down.
4. Drop the head back into the water and continue with stroke cycle.

* By taking the breath before sighting, it can make the action feel less rushed and also reduces the risk of getting a mouthful of water. However this option doesn't allow you to gain the height of the first method.



OPEN WATER SWIMMING - VISIBILITY / NAVIGATION



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How often should you be sighting to orientate yourself?

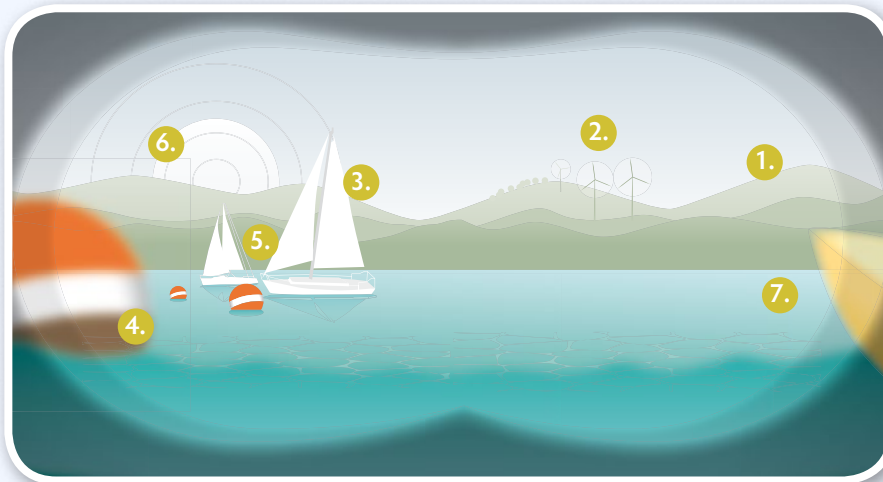
This can depend on several factors, but basically you need to be sighting often enough to be confident that you are swimming in the right direction, but not so often as to tire yourself out.

Factors that may affect how often you sight include:

- How difficult your target is to see
- How confident you are that you swim straight
- The difficulty of the conditions (sun, waves, cloud etc)
- Whether you are swimming in a group or with support
- How accurate you need to be for your target
- Whether you are swimming along a shoreline or into open water

So, if conditions are difficult or you are not confident you may need to sight every 3 or 4 breaths, to be certain that you are on course. However, if conditions are better or you can use others to help guide you, that number may increase upwards to 10 or even 20 breaths.

But however confident you are it is prudent to get into the habit of checking your direction regularly.



What do you need too look for when you are sighting?

1. Use obvious and visible points of relief in the landscape
2. Choose highly visible permanent structures e.g. wind-turbines, pylons, buildings
3. Avoid basing you direction on objects that could move e.g. cars, moored boats
4. Objects low in the water may become obscured by waves or swell
5. Beware; distances can be very difficult to judge
6. If the sun is in your eyes it can make sighting difficult, so you may have to take visual cues from either side
7. Use any boat support and other swimmers to help you maintain your course

Pre-Swim Check

Whether you are taking part in an organized swim or are just swimming for pleasure, it is advantageous and safer to check out the location before you swim. Things to check for include;

- How will weather affect the location?
- Where are appropriate get in/out points?
- Is there a tide/current?
- Will there be other users in/on the water?
- Are there submerged rocks/ropes?
- Where is nearest support/assistance?
- Look at a map of the area to get a good overall view in your mind
- Look at the site from a variety of viewpoints, especially if the swim involves changes of direction

Goggles

The prevailing weather conditions and the position of the sun can combine to cause a wide range of light conditions at the water surface. This can compromise visibility if you don't have appropriate eyewear.

It is worth investing in 2 pairs of goggles;

- 1 tinted pair – for bright or high glare conditions (morning/evening)
- 1 clear pair – for low light or overcast conditions

OPEN WATER SWIMMING- WEATHER CONDITIONS



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The prevailing weather conditions will have a massive effect on how you experience an open water swim. Unlike in a swimming pool where two similar length swims will be subject to roughly similar and constant conditions; two similar open water swims may be rendered unrecognizable by differences in the weather.

Not only may conditions vary from swim to swim, it is not uncommon for conditions to change during an individual swim.

All weather conditions can cause hazards or difficulty, so, be aware of them and take them into account:

- Sunny – may affect visibility and increase risk of sunburn/sunstroke
- Fog – reduced visibility and muffling of sound
- Wind – can cause choppy conditions and waves. Also possibility of blowing you away from your course.
- Rain – may cause increased water flow and flooding
- Thunder/Lightning – obvious danger to anybody out in the open

Be aware of changing or deteriorating conditions, keeping one eye on the weather at all times. Make sure you have a plan for what to do if conditions worsen and that you can get out at short notice.

Part of the attraction of open water swimming is experiencing and taking on these varying conditions. Only swim in weather that you are comfortable with and feel adequately prepared and supported to cope with. If in doubt: stay out!

Focus Points

- Get an accurate weather forecast
- Know how long you intend to be in the water
- Don't swim in conditions you are uncertain about or are beyond your ability
- Swim with adequate support for the conditions
- Keep a constant eye on the weather



OPEN WATER SWIMMING - SUPPORT / SAFETY



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Probably the most important rule of open water swimming is; never swim alone.

There should always be someone at hand should you need their assistance.

Open water is a challenging environment, so difficulties such as cramp, hypothermia, anxiety, tiredness etc. can often require assistance to ensure they don't escalate into a more serious situation.

If you are swimming with a support boat or kayak, as well as providing safety cover it can also be useful in helping you navigate. A person on a boat will have a better viewpoint than you, down at water level.

Position yourself (or the boat) where you can see it easily when you breathe. If you are breathing to the right, get the pilot to position to the right and slightly in front. That way they can share some of the responsibility for navigating and you may not have to sight so often to follow a straight course.

A boat can also be positioned to shield the swimmer from the worst of conditions such as waves, sun and spray.

Swimming in groups is an enjoyable and safe way to enjoy what is often seen as an individual sport. Less confident individuals will usually feel less anxious in a group and the social aspect can be a break from the routine for more seasoned swimmers.

Finally

We hope that this guide has provided you with some useful information.

Whatever the ultimate goals are for your open water swimming; competitive or social, challenging or relaxing, most of the information here can be applied at any level.

The vast majority of skills needed for open water, can be practiced in any swimming pool or incorporated into most workouts. Use your time in the pool productively.

However, there is no replacement for the real thing and we hope that this guide will also act as motivation and inspiration to take your swimming outdoors and enjoy what is truly one of the most accessible and enjoyable activities available.

Written by Neil Bowers..

www.mvSPORT.co.uk
neil@mvSPORT.co.uk

Support

Regardless of how good a swimmer you are or how confident you feel you should always have company or support. This could include any of the following:

- Capable swimming friends
- A coach
- Safety boat or kayak
- Training companions
- Lifeguards

Focus Points

- Swim with other people.
- Have boat support if possible.
- Stay close to the shore.
- Seek local advice
- Check for currents / rips etc.. before getting in.
- Keep an eye out for boats.
- Don't swim in reservoirs.
- Wear a bright swim hat. Good for keeping warm and for being easily spotted.