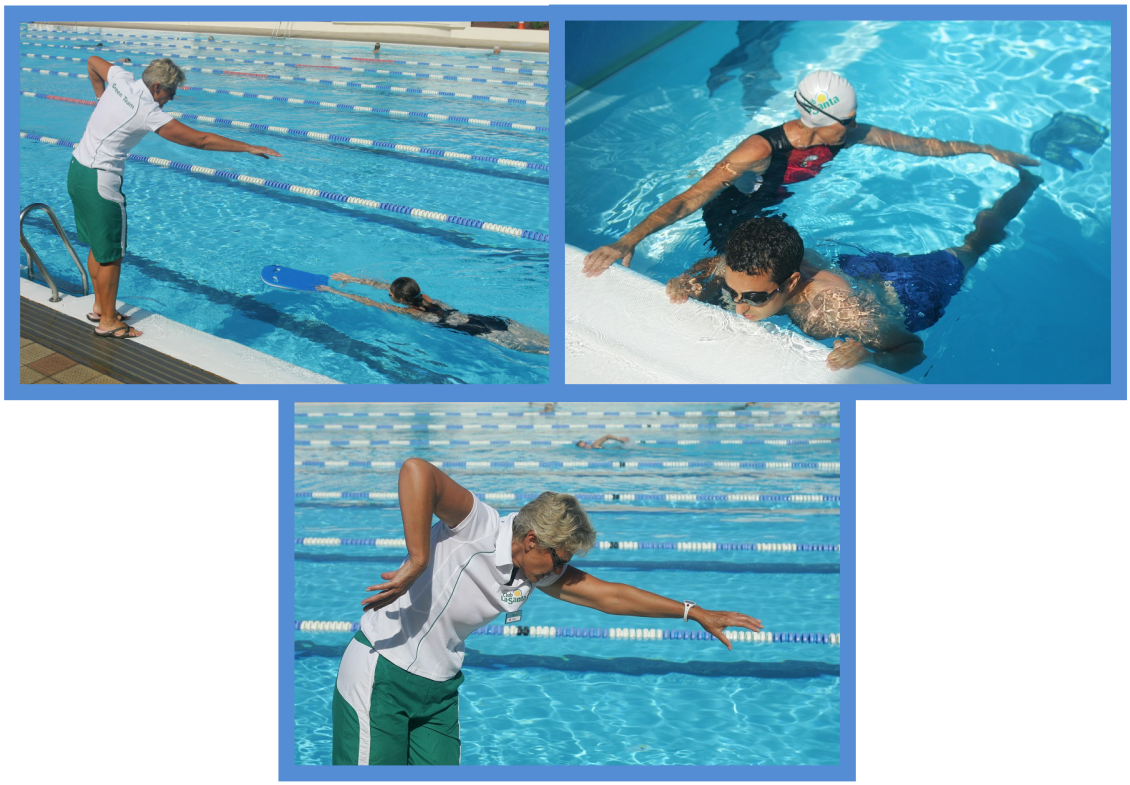
The 3 Golden Rules of Swimming

Technique! Technique and more Technique!



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Introduction

Correct technique is the most important part of swimming. As swimming is the first discipline in triathlon and is by far the most technical.

This is sometimes difficult for newcomers to the sport to understand. Runners and cyclists are used to making massive physical efforts to improve but in swimming this does not necessarily apply in the pool.

A good stroke is very important to a triathlete where the distance can be 1500m to 3800m. It is vital to work on technique and stroke drills, which are designed to ensure that your swimming is efficient over the endurance distances.

Poor technique can cause fatigue early in your race and this will have an effect on your overall race performance.

It is very important to your training that you include technique into your plan. Good swimmers allocate time within their training schedule to refine and redefine good technique.

If you swim with a stroke fault, swimming up and down a pool is just going to reinforce the fault, or worse still cause an injury. The most common being shoulder impingement. Over time this will feel correct as your brain is used to doing it this way; getting the stroke correct in the beginning of your triathlon journey is vital for future success.

Frontcrawl or better known as Freestyle!

<u>Definition:</u>

It is an alternating action performed on your front,with your face down in the water.

With this stroke, the force is directed backwards and there is continuous propulsion – This is the most efficient stroke particularly for long distance swimming.

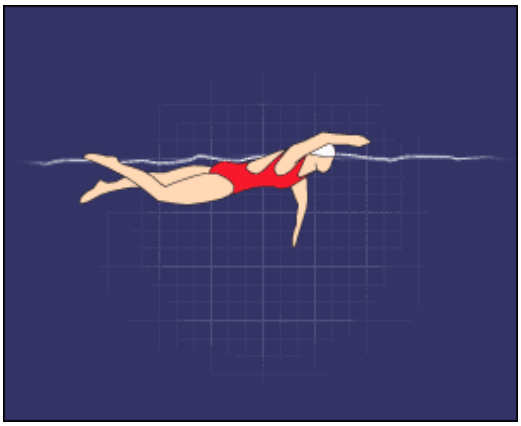
Frontcrawl:

The stroke is broken down into parts and each part plays an intricate role within the stroke:

- Body Position [Balance/Body Roll/Relaxing]
- Legs
- Arms
- Breathing
- Timing

Body Position:

Ideal body position for swimming is a high, flat horizontal position. Think long, stretched and straight [or level], just below the surface of the water. It is important that the height, width and depth of the body is as streamlined as possible.



Think about the aerodynamics of a Formula 1 Car, you should try and create a similar effect during your swimming. Any unnecessary movement of the body will cause resistance and, drag, which will lead to early fatigue as your swimming intensifies.

This is number one priority maintaining a level body position combined with body rotation. The head is neither raised, or lowered but in-line with the body, with the eyes looking down and slightly forward. The water surface will be somewhere between the eyebrows and the hairline.

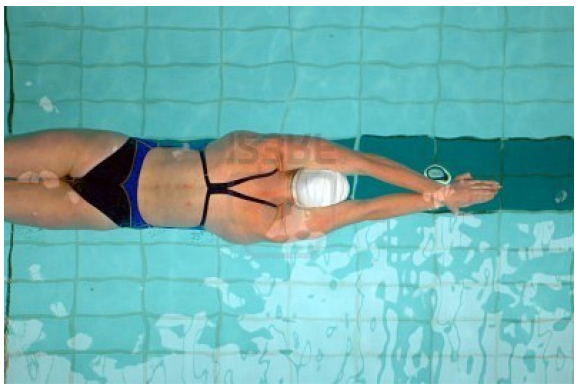
Relaxing

Confidence is the key, knowing that you will and can float helps to let tension ease out of your stroke. Try a simple exercise called a mushroom float. Take a big breath and wrap your arms around your knees whilst sticking your chin on your chest (tucked position) hold your breath to the count of 15 or 20 and let, yourself relax whilst maintaining the position. You will find that you will bob up to the surface and feel supported securely by the water.

Push and Glide

Practice standing with feet together in the pool, arms extended above your head [squeeze ears with upper arms] hands overlapped and with face in the water.

Push off the wall of the pool. Every time you push off the wall, you have the opportunity to improve your streamlined position. Practice blowing/ exhaling down while your face is in the water next time you push off the wall.



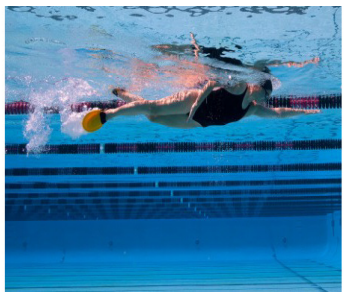
Balance and Body Roll

In the front crawl stroke the body rotates through the longitudinal axis (head to toe). It is important to keep the body alignment whilst rotating the hips to 45°. The most effective way to practice this essential body rotation and hip and shoulder alignment is body roll, with fins on whilst keeping your arms by your side.

After every 6 or so kicks roll onto your side remembering to keep the hips and shoulder in line, take a breath to the right ensuring that the head is turned to a minimum. Repeat with the same number of kicks and repeat this drill on the left side.

Tips

- Practice with fins
- Relax and let the water do the work of supporting your body.
- Don't kick too fast or rush this drill- it needs to be done perfect balance.
- Use fins at first and when you get enough confidence try without
- Remember that the kick needs to be continuous and effective.



Common mistakes

- Turning too quickly to breath- this is a slow drill and everything is performed in slow motion.
- Turning the head too far to breath- simply turn so that only 1 lens of your goggles are showing.
- Avoid kicking too deep as you will be unable to perform a good balance or body rotation.

Leg Action

The Legs help towards achieving a good body position and balance for the arm action it also assists in propulsion. Poor leg kick can cause drag – if the legs are lower than the body this acts as a braking system!

It is vital to develop an efficient leg kick from the start. Neglecting the leg kick will lead to decreased efficiency, there could be occasions when swimming open water events that the wetsuit due to high water temperatures are not allowed.

The leg kick [flutter kick] moves close together in an alternating vertical movement. The whole leg is used while keeping the legs long and from the hips. The feet are relaxed with toes pointed [plantar flexed] to the back wall. The strong muscles of the quads, and the front part of the foot are used in the downbeat action. The whipping action of the foot on the upbeat, fires up the hamstrings and gluteal muscles causing a slight bend in the knee [flexion]. The ankles need to be loose and flexible throughout.

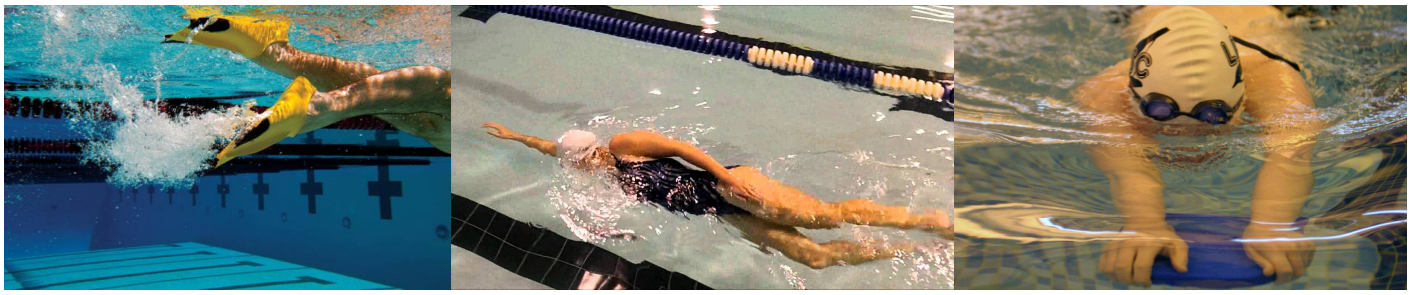
Boil the water – an efficient leg kick is about 30-45cms (12-18in) deep. Too deep and this will cause resistance, it needs to be deep enough to be functional, and maintained within the body depth.

Common fault in the leg kick is too much bend in the knee – this causes a build up of water behind the knee – you may feel you are going backwards! Or not moving at all!!

Runners are notorious for kicking with toes pointed to the pool floor- this causes drag and fatigue and more than anything athletes get frustrated.

- Using a float/kick board- hold front outstretched in front of you with face in the water, push off the wall and practice the leg kick.
- Kicking on your side [side kick], one arm extended in front think of this as your leading arm.

  With the leading arm extended at 12 o'clock, and your other arm placed on your thigh kick the legs in a small scissor action. Alternate to the opposite side by taking a stroke with the arm at your side, roll and rotate onto the opposite side.
- Side kick 6/3/6 – kicking on your side for six leg beats, three strokes, breathe rotate to opposite side six leg beats – repeat over the pool length.
- Vertical leg kick: In deep water with toes pointed to the bottom of the pool, hands relaxed and using a sculling action with your hands for balance. Kick you legs as you kick your legs you should feel your body raise slightly higher in the water. Try this with your hands raised in the air!!!
- Kick with fins
- Silent kicking – no splashing – no sounds
- Arms at side, with your face in the water. Rotate to breathe take 3/4/6/ beats and alternate sides.



Arm Action:

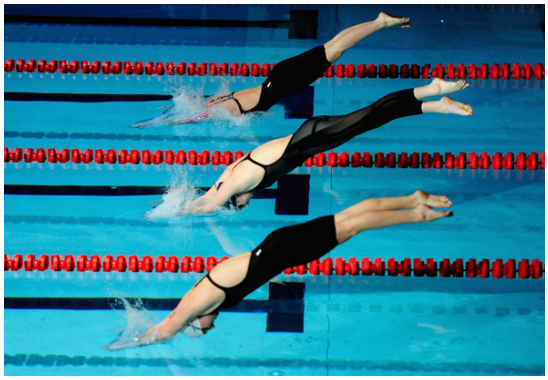
The main propulsive force is the arms and the action is an alternating one with continuous movement.

The arm action is broken down into five phases

- Entry
- Catch
- Pull
- Release
- Recovery

Entry:

Enter the water with your middle finger in advance of the head, between the shoulder and mid-line. Your goal is to do this as smoothly as possible. The hand should enter approximately 10-20cms or 6- 8 inches, in front of the shoulder 'slicing' into the water. The hand goes down into the entry point quickly followed by the forearm. The arm extends forward from the action of the other arm [working arm].
At full extension the palm of the hand is facing the bottom of the pool or sea.



: -Care should be taken to prevent the elbow from dropping at this point – the elbow is higher than the wrist and hand. A dropped elbow is one of the main reasons for an inefficient stroke.

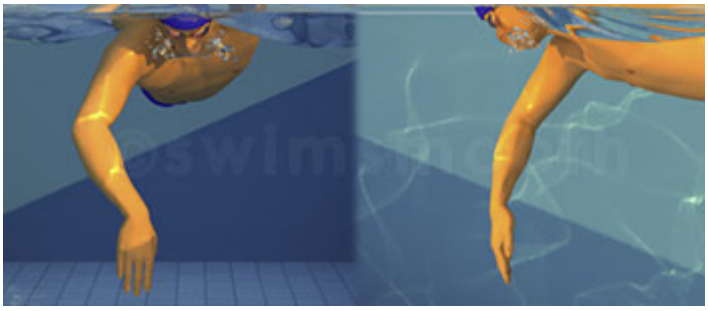
Catch:

This phase is where the purchase or gripping the water takes place, power phase: The hand has extended forward in a straight line at this point, think about starting to rotate the upper arm to achieve a high elbow position. This action is a vital leverage factor and increases power. Engage the chest [pectorals] and shoulder muscles [latissimus dorsi] as much as possible.

Think that you are reaching over a barrel. The elbow bend enables you to use the powerful muscles of the back to provide more power to the pull phase.
Tip: - without a good and early elbow the pull will be less than optimal.

Pull:

This is the power phase. The pull is the actual movement that propels you forward. As you arm passes the shoulder, you start to straighten the elbow and use your triceps to finish the pull.



During the start of the underwater stroke the arm rotator muscles are used with the arm to achieve the high elbow, which is essential if the stroke is to be efficient. The wrist must be held firm and flexed throughout. The pattern of the stroke is much like a shallow slither.

Release and Recovery:

The hand nears completion the palm is changed to backwards and outwards and upwards towards the thigh. Ensuring the palm is kept flat with fingertips pointing at the bottom until the hand reaches the front of the thigh. The length of this phase for triathletes is slightly longer, but care should be taken not to pause at this point.

On recovery, the elbow should remain flexed slightly as arm cycle is near completion and then should lead the hand out of the water to start the arm cycle again.

The muscles used are the deltoids, supa-spinatus and trapezius, while the chest adductors relax during the recovery phase.

One feature of good frontcrawl is a high elbow position, which encourages good balance and good rotation which all aid to good streamlining.

Tip: Tightness of the shoulders will affect the stroke – always think of relaxed smooth shoulders.

Breathing:

Breathing in swimming has to be taught. The only time the stroke of Frontcrawl is altered is during the breathing phase. It does not contribute anything towards propulsion but we wouldn't go very far without breathing!

The face and entire body, including the shoulders and the hips should roll towards the breathing side withou t moving the head away from mid-line.

The roll is no more than 45° on the breathing side and only slightly on the other. The head begins to turn for a breath when the hand of the opposite side starts to enter the water. This is the natural place to breathe in the stroke cycle, since the roll of the body allows the face to be exposed to the air with the least amount of head movement.

The head should be turned through the body roll not lifted at the front.
Different breathing types:

Explosive breathing: used by sprinters – the air is expelled quickly and a quick inhalation is taken when the head is turned into the 'trough' which is created by the bow wave from the crown of the head.

Trickle breathing: is more rhythmical and is the breathing pattern used by long distances swimmers and Triathletes. Breath is exhaled through the nose and mouth while the face is submerged this breath taken often sounds like a gasping actions as the mouth clears the water. Some athletes use count 1,2,3 breath – finding the correct breathing pattern is unique to the individual.

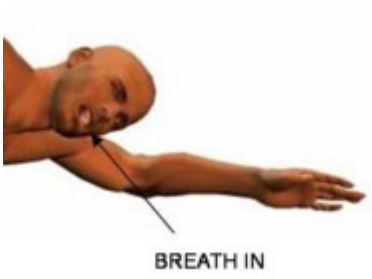
Bilateral Breathing:
Means the athletes uses both sides, usually alternatively every third arm pull. This causes minimum interference with the stroke and also is useful for correct faults. Example: A swimmer who pulls harder one side than the other, or has a week leg kick, or if they have difficulty balancing the stroke.

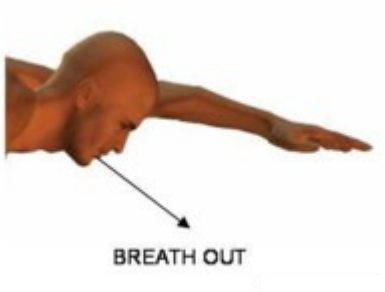
Alternate breathing:
Involves breathing every stroke cycle – this breathing pattern is good to use for specific technique sets within your swim training plan

Most triathlon however would breath every arm cycle as this is the first of the three disciplines and the emphasis would be on conserving and economy of energy at this stage.

Breathing Drills:

- Breathing to the left side
- Breathing to the right side
- Breath-holding or hypoxic breathing [2/4/6/8 or 3/5/7/9 per arm cycles]





Timing

Timing and co-ordination in Frontcrawl will be developed from practice and following swim drills to perfect and improve the legs-arms breathing timing.

Break down the stroke and work – whole-part-whole sets – isolate each area and focus on that part.

Train smart

Rosemarie Jones

RTJ Sports

For training plans or more information about triathlon training visit:
www.rtjsports.com/coaching/trainingplans