

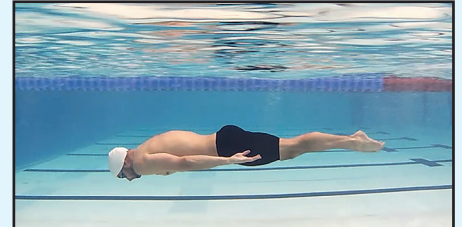
THROUGH THE SURFACE & OFF THE WALL

Once the swimmer dives through the surface or pushes from the wall the tight, squeeze streamline must be held through the arms shoulders and torso. A 'weak' position which allows independent movement of the arms, head, torso or legs will create drag and slow the swimmer down.

THROUGH THE SURFACE (1):

STARTS

A good dive entry will mean the swimmer is travelling diagonally down towards the pool floor. Swimmers who have good 'underwaters' should dive deeper than those with weak skills. This trajectory can be controlled by the angle of entry and the direction of the underwater pull.



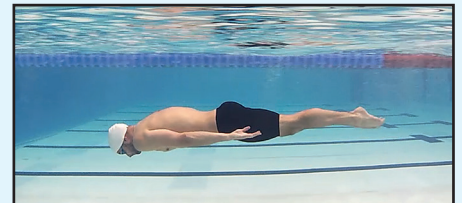
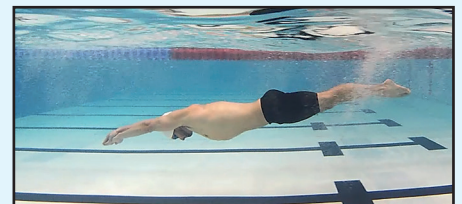
OFF THE WALL: THE TURNS

The breaststroke push should be slightly in a downward direction - don't let the swimmers push 'upwards' towards the surface. If they push straight out from the wall they will rise to the surface anyway because of the air in their lungs and the general buoyancy of the body but if they push slightly downwards they set themselves up for better underwater pull and kick phases.



PULL, KICK & DOLPHIN KICK

- One underwater pull and kick are permitted on breaststroke and **they need to be different to the pull and kick used during 'surface' swimming.**
- The underwater pull is wider and 'flatter' than the surface stroke, there is no head, shoulder or torso lift during the insweep and the hands complete what is basically a butterfly pull all the way back to the thighs where they are pressed tightly in a streamline position. During this whole movement the body must maintain a 'strong', tightly flexed streamline shape with the spine rigid and the buttocks tightly clenched.
- At the end of the underwater pull-through the body should be travelling fast and it is important to maximize the advantage of that. The position of a soldier at attention should be held for maybe 1 second (varying by individual) and then the hands brought forward, fingers pointing forwards, with the palms close to and facing the torso. As the hands pass in front of the swimmer's face the feet are smoothly brought up into a 'catch' position with the knees widely separated. The legs first bend at the knees to bring the feet high with the lower leg vertical. The hips then flex.
- As the hands shoot forward into streamline, the powerful, backward, propulsive movement of the kick is made. **There is no head movement during any of these phases.**
- **If the feet are brought up too fast (faster than the hips are moving forwards in their own right) the transfer of energy will slow the swimmer down by dragging the hips backwards. The feet should be brought up at a speed which is almost the same as the independent hip speed.**
- **One dolphin kick is allowed during the underwater phase** and it must occur **before** the legs start their first kick. Swimmers should learn to do the dolphin kick action a) before the outswEEP, b) during the outswEEP, and c) during the backswEEP so that the best result for each swimmer is realised.



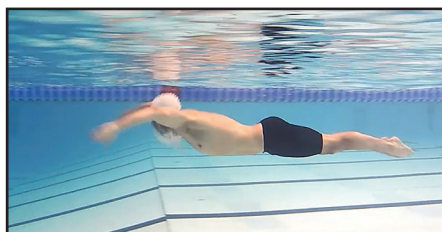
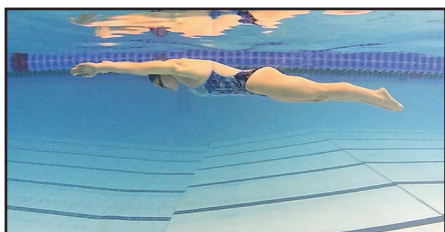
PALM ORIENTATION

- Pressure is applied to the water by pressing with the hands and forearms. The direction which the palms face is
- critical to obtaining maximum propulsion and, again, **it is different to the surface arm stroke.**
- After the initial streamline position the hands are turned outwards so that the palms face **directly** to the sides of the pool. They are then swept directly outwards, with the arms held straight, into a 'Y' shape. The hands are then turned so that the fingers point downwards and the palms face backwards and slightly inwards. This is the catch position and, if done correctly (with no shoulder drop), the elbows will naturally move into a 'high elbow' position.
- The hands and forearm are then brought inwards and backwards along the 'arms' of the "Y" until they almost touch underneath the belly button. During this movement **equal pressure** should be applied by the hands and the forearms.
- As the "Y" is closed the hands change so that the palms face directly backwards, fingers still pointing downwards, and the elbows then extend with the hands pressing water back towards the feet. **Both hands maintain their fingers down, palm back position throughout this backward movement** until they are close to the thighs with the elbows are at full extension. The hands are then flipped into a streamline position, pressing tightly on the thighs with the fingers pointing backwards.

PHASE	PALMS	FINGERS
STREAMLINE (1)	DOWN	FORWARD
OUTSWEEP TO 'Y'	OUT	FORWARD
INSWEEP	IN & BACK	DOWN
BACKSWEEP	BACK	DOWN
STREAMLINE (2)	IN	BACK

PULL OUT/TRANSITION

- The head should break the surface at the widest part of the second arm pull. Once at the surface the body position must be high throughout the whole of the second cycle.



PHYSICAL REQUIREMENTS

- Upper body strength.
- Strong gluteus max (butt) muscles.

TESTING & MONITORING

- Dive start/push start to 10/15m. Timing is done from feet leaving to head passing distance mark.
- 25m underwater breaststroke pull & kick. Add together stroke count and time. Progression is (1) hold time and reduce stroke count, then (2) hold stroke count and reduce time.

THE RULES

- **SW 7.1** After the start and after each turn, the swimmer may take one arm stroke completely back to the legs during which the swimmer may be submerged. At any time prior to the first Breaststroke kick after the start and after each turn a single butterfly kick is permitted.
- **SW 7.2** From the beginning of the first arm stroke after the start and after each turn, the body shall be on the breast. It is not permitted to roll onto the back at any time except at the turn after the touch of the wall where it is permissible to turn in any manner as long as the body is on the breast when leaving the wall. From the start and throughout the race the stroke cycle must be one arm stroke and one leg kick in that order. All movements of the arms shall be simultaneous and on the same horizontal plane without alternating movement.
- **SW 7.4** During each complete cycle, some part of the swimmer's head must break the surface of the water. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke. All movements of the legs shall be simultaneous and on the same horizontal plane without alternating movement.

COACHING PROCESS & CONTROL

- The focus for the entry and initial glide phase is to **maintain** the entry speed.
- The focus for the first arm pull is to **increase** the speed.
- The focus for the second glide phase (arms by side) is to **avoid** loss of speed.
- The focus of the arm and leg recovery phase is to **reduce** the unavoidable loss of speed.
- The focus of the kick and pull-out phase is to **increase** the speed again.
- The underwater leg recovery into the catch position differs from surface kicking because the swimmer does not have to worry about the feet breaking the surface and the body is horizontal rather than angled. The angle at the hips, therefore, can be much more oblique than surface kicking which reduces the drag on the front of the thighs.
- There is a natural undulation of the body during the outswEEP and insweep of the arms and another during the backswEEP towards the 'soldier' position. Allowing this natural undulation to be expanded into a strong dolphin movement is a technique used by many successful swimmers and produces a powerful kick, but the kick can also be made before the hands start their outswEEP movement.

LAND EXERCISES

- Planking

SKILLS DEVELOPMENT

- Vertical breaststroke kick +/- weights attached to the waist and/or +/- weight held overhead (water bottles can be delightfully heavy).
- Underwater kick in streamline position on front or on back.
- Underwater pull and kick on front or on back.
- Underwater pull or pull+kick with negative bungy.
- Underwater pull +kick stroke count (target 25m = 3 strokes).

INTERPRETING THE RULES

- The rules for breaststroke have changed more and more often than any other technical aspect of the sport. It is highly likely that they will continue to be modified and changed at frequent intervals. **Stay vigilant.**
- Breaststroke rules are also “blessed” with vague and ambiguous wording, e.g. “*At any time prior to the first Breaststroke kick after the start and after each turn a single butterfly kick is permitted.*” Just what is meant by “*prior to the first breaststroke kick*”; does it mean before the start of the foot recovery in preparation for the kick or does it mean the start of the actual propulsive movement, i.e. ‘the’ kick. Coaches must stray into the mindsets of Technical Officials (TOs) and stay on the right side of disqualification while extracting maximum advantage from the permitted limb movement combinations.
- The swimmer has to be ‘on the breast’ when they leave the wall at the turns, but at the start the ‘breast’ ruling starts when the first arm stroke starts; in other words after the swimmer has entered the water and has maybe travelled a reasonable distance. There seems little advantage to push this anomaly but swimmers with a weak side may tilt somewhat during a dive and end up towards one side during the initial underwater ‘glide’ phase. Be aware of the detail wording of the rule in case your swimmer is DQ’d for something which is not actually proscribed.
- “*The head must break the surface of the water before the hands turn inward at the widest part of the second stroke.*” The rule is interpreted by TOs to mean the ‘second stroke’ **on each lap** but, unlike being on the breast, that is not what it says. Best to teach your swimmers to be up and swimming before that point on **every** lap.
- If the permitted ‘butterfly’ kick is placed **before** the hands start their outswEEP movement, the two natural undulations can also be used to add momentum to the pull and kick phases. Of course, they must not be emphasized to the extent that they are, in fact, additional dolphin kicks because only one is permitted, but emphasizing the natural body movement as opposed to actively kicking the legs is a technique that uses nature to advantage.

COMMON FAULTS & FIXES

- Unstable body/arm/head/leg position. Uncontrolled movement in any of these body parts will create drag.
- Weak hand and arm movements – swimmers simply going through the motions rather than applying powerful pressure to the water.
- Uncoordinated arm and leg movements – the foot recovery and the propulsive leg drive must be perfectly coordinated with the appropriate hand and arm movements. Failure to do so will result in forces being applied **against** each other and that is not a good idea.
- ‘Swimming through the surface’ too early or too late. The breakout of the head must be timed to coincide exactly with the press at the start of the insweep (which causes the head and shoulders to rise so best to go with the natural order of things).

DESCRIPTIVE WORDS & IMAGERY

Dolphin/mermaid/spear/torpedo/missile/whipcrack/whiplash