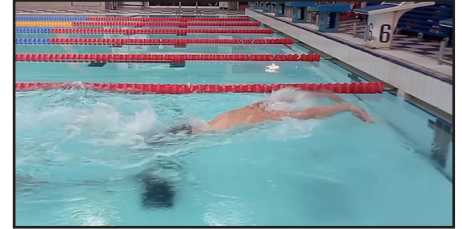


## BUTTERFLY TO BACKSTROKE

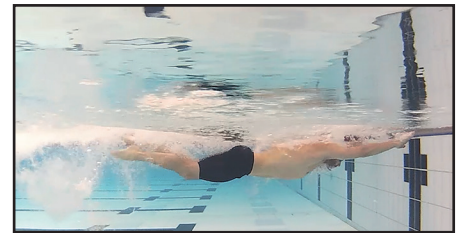
### APPROACH

- The butterfly approach starts quite a distance before the end of each lap. The technique and effort over the 5, 10 or even 15m of swimming ("the approach") can make a significant difference to the ease of the turn and to its speed. A well judged approach can make **at least 0.3 – 0.5 seconds** difference to a race time. Depending on the pool length and race distance there may be as many as 15 turns, so the effects add up.
- The swimmer must 'spot' the wall from **at least** 5 meters before the finish so that the touch is made with perfect stroke timing with the final stroke taking the hands purposefully onto the wall at almost full extension and with no time-wasting and speed-sapping glide.



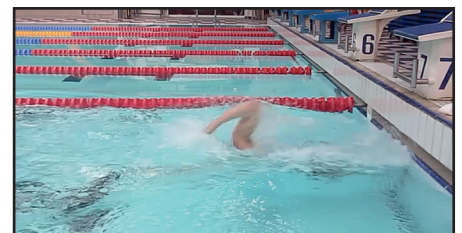
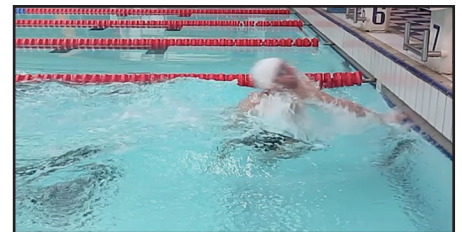
### TOUCH

- The two handed touch should coordinate with the end of the arm recovery (touch the wall instead of entering the water) and be accompanied by a leg kick to ensure maximum speed 'going into' the wall.
- Both hands should hit the wall simultaneously. They must be separated, i.e. they cannot overlap with one hand on top of the other (otherwise only one hand has 'touched') but they do not need to be at the same height as each other; one could be above the waterline and the other below the waterline. Swimmers 'ready' themselves for the change of direction so the hands are often at different heights as well as the shoulders being slightly turned at the last moment before the touch.



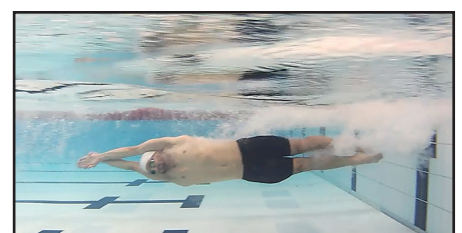
### ROTATE & TOUCH AGAIN

- As the hands touch the wall the hips should continue forwards towards the wall as one hand is quickly released (No 'sticking' to the wall, NO resting). The swimmer will rotate backwards with a slight turn **towards** the hand which is released first.
- The elbow of the released side drives backwards and the shoulders continue backwards as the hips continue towards the wall. The swimmer should continue looking forwards towards the wall and upwards; they should not turn their head sideways or look back at this point.
- An in-breathe should be taken at this point.
- The second hand releases as the knees are bent and brought up to the chest with the feet close together or slightly overlapping. As the feet are brought towards the wall the arms, head and shoulders of the swimmer are ready to submerge in preparation for the foot plant and push.
- The feet should touch at the same time as the 'top' arm enters the water. Both feet should hit the wall at the same time with the toes pointing upwards or diagonally upwards with the body on the back.



### PUSH

- As the feet touch the wall the swimmer's upper body should be streamlined with head hidden between stretched out arms. An effective push cannot start until the head and feet are level with each other (at the same depth).
- The push should be of short duration which indicates increased force.
- The back should be straight and firm throughout the whole of the push phase.
- The push should be horizontal (neither upwards nor downwards) and should take the swimmer underneath the wave which follows them into the wall.



# BACKSTROKE TO BREASTSTROKE

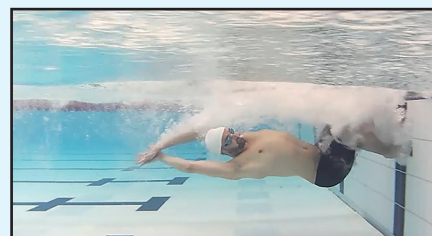
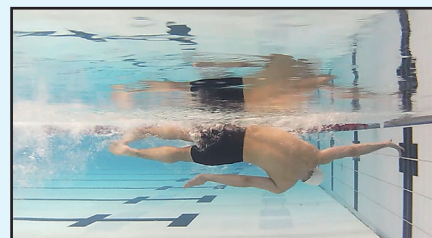
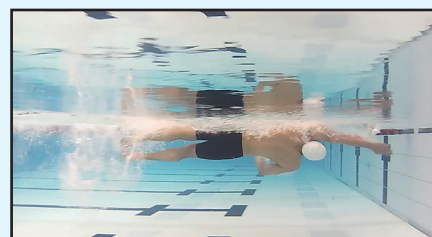
## APPROACH

- The technique and effort over the 5, 10 or even 15m of swimming ("the approach") can make a significant difference to the ease of the turn and to its speed. A well-judged approach can make at least 0.3 – 0.5 seconds difference to a race time. Depending on the pool length and race distance there may be as many as 15 turns, so the effects add up.
- The swimmer should count their strokes from passing under the flags (5m) into the wall so that they know exactly when they will arrive at the wall. This can be a scary skill to learn for young swimmers, but once learned it can give them a big advantage in their next race.



## TOUCH

- On the final stroke the swimmer should rotate slightly towards the touching hand (to allow further extension of the shoulder joint) and change the normal backstroke entry (down) to a lunge at the wall (forwards) above, at, or below the surface. A strong, single dolphin kick should accompany the arm lunge. This may cause arching of the back but it should be kept to a minimum. Extreme arching of the back shortens the horizontal length of the body/arm and forces the center of gravity to travel further towards the finish; it may look spectacular but it may lose the race.
- Some part of the swimmer's body must break the surface when the touch is made. This can be the hand, arm, shoulder, head or a single foot, but some part must be above water (SW 6.4).



## BREASTSTROKE TO FREESTYLE

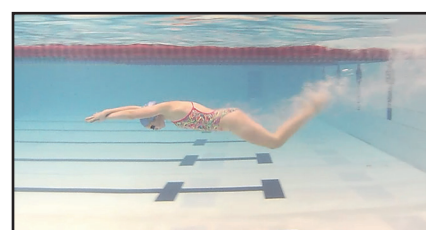
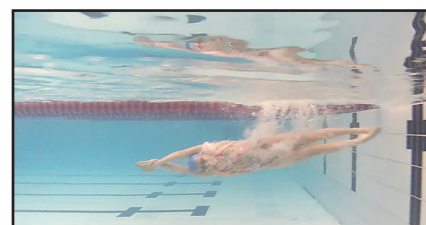
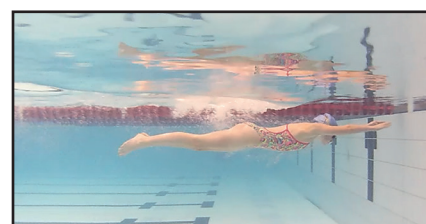
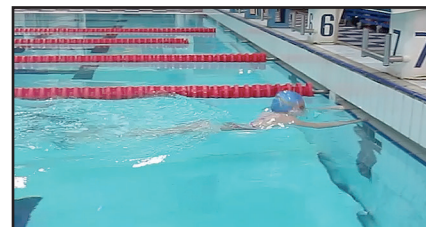
### APPROACH

The technique and effort over the 5, 10 or even 15m of swimming ("the approach") can make a significant difference to the ease of the turn and to its speed. A well-judged approach can make at least 0.3 – 0.5 seconds difference to a race time. Depending on the pool length and race distance there may be as many as 15 turns, so the effects add up.

The breaststroke to freestyle turn is **exactly the same** as the butterfly to backstroke turn except that the push **cannot** be performed on the back. The single difference, therefore, occurs during the Rotate and Touch phase:

### ROTATE & TOUCH AGAIN

- The feet should touch at the same time as the 'top' arm enters the water. Both feet should hit the wall at the same time with the toes pointing **sideways** or diagonally upwards with the body on the **side**.
- The Push phase should then be executed in **exactly the same manner as the butterfly to backstroke push** but with the swimmer on the side or front.



### PHYSICAL REQUIREMENTS

- Agility
- Strong quadriceps and gluteus maximus.
- Shoulder flexibility.

## TESTING & MONITORING

- In addition to the testing and monitoring detailed on the individual stroke factsheets the IM stroke switch techniques can be monitored as follows:
- 5m in – 10-15m out.**
- Hand touch to feet leave. (All stroke-switch turns are touch and rotate).
- Competent coaches can time all three of these parameters with one test – 15m in - hand touch to feet leave - 10m out.
- 1) Ask the swimmer to start swimming at least 10m from the wall; this ensures they can pass the 5m mark at full race pace. 2) Start the watch when the swimmer's **head** passes the backstroke flags at 5m. 3) 'Split' the time when the swimmer's hand(s) touches the wall. 4) 'Split' the time when the swimmer's feet leave the wall. 5) '**Split**' the time (don't 'stop' the watch) when the swimmer's head passes the 10m mark.

	1	2	3	4	5
ACTION					
SWIMMER	Start swimming from 10m	Head Passes 5m	Hand(s) touch wall	Feet leave wall	Head passes 10m
COACH	Prepare	Start watch	Split watch	Split watch	Split watch
WATCH					
RUNNING TIME	0:00.00	0:00.00	0:04.24	0:05.93	0:13.27
SPLIT	0:00.00	0:00.00	0:04.24	0:01.69	0:07.34



The **total** time is obviously the race-significant data but **each** separate component (**shown in red**) can be improved. Comparing the segments of one swimmer to another will show where the most attention needs to be paid.

## THE RULES

- SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, **except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.**
- SW 9.3 Each section must be **finished** in accordance with the rule which applies to the stroke concerned.
- Within each stroke the turns must conform to the rules governing the stroke-specific races.

## COACHING PROCESS & CONTROL

- IM training is a valuable developmental strategy for all young swimmers. It teaches them to utilize varied movement skills and enhances both spatial awareness and body awareness.
- Additionally swimmers acquire stroke-specific proficiency at different times during their development, e.g. a young swimmer who appears to be a backstroke swimmer may turn out to be more suited to butterfly. IM training allows the qualities required for each stroke to appear in a systematic and monitored manner and also allow a tremendous amount of variety to be included in the programme.

## LAND EXERCISES

- See stroke specific factsheets for land exercises suitable for IM skill development



## SKILLS DEVELOPMENT

- Progressive IMs: 4 x 125m with rest between 125s as:  
 25 Fly, 25 Bk, 25 Br, 50 Fr.      25 Fly, 25 Bk, 50 Br, 25 Fr.  
 25 Fly, 50 Bk, 25 Br, 25 Fr.      50 Fly, 25 Bk, 25 Br, 25 Fr.
- This set demands in-stroke turns and stroke switch turns but keeps the repetition distance short.
- Randomedleys: random order IMs:** Write the names of each stroke on a separate piece of paper and have the swimmers 'pull them out of a hat'. The order they remove the strokes is the order they swim the IMs. This demands an **understanding** of the stroke rules (not simply rote memory) as well as creativity in choosing solutions for non-standard stroke switches (e.g. freestyle to breaststroke).

## INTERPRETING THE RULES

- Each stroke must finish in accordance with the finishing rules for that particular stroke, e.g. at the end of the butterfly leg the touch must be made as if the swimmer was finishing a butterfly race. (See stroke specific factsheets for the rules that apply for each stroke).
- This is particularly important during the backstroke to breaststroke turn – the swimmer is **not** allowed to roll over and perform a forward somersault in preparation for the breaststroke push. They must finish the backstroke leg on the back and then turn ready for breaststroke.
- After the touch is made the swimmer can change direction in any way they choose until they are ready to push. The push, however, must be made in accordance with the turn rules specific to that new stroke, e.g. the backstroke push must be made on the back.
- There has been a recent interpretation of the IM turn rule for freestyle: Rule SW 5.1 specifies freestyle during individual medleys as "any style other than backstroke, breaststroke or butterfly." In 'regular' freestyle races 'anything goes' but during individual medley races the freestyle leg must be 'not backstroke'. Pushing on the back is judged as backstroke so it is not allowed. **Freestyle pushes during individual medley races must be on the side or on the front.**
- Mid-sector turns (e.g. a backstroke turn at the 75m mark of a short course 200m I.M.) must be performed in accordance with the stroke specific turn rules.

## COMMON FAULTS & FIXES

- See the stroke specific turn factsheets for faults common to those strokes
- Swimmer rolls onto the front at the end of the backstroke leg. **DQ.**
- One handed touch on either butterfly or breaststroke. **DQ.**
- Pushing on the front at the start of the backstroke leg. **DQ.**
- Pushing on the back at the start of the breaststroke leg. **DQ.**
- Pushing on the back at the start of the freestyle leg. **DQ.**

## SEE ALSO

- |                   |  |       |  |
|-------------------|--|-------|--|
| British Swimming: | <a href="http://britishswimming.org">britishswimming.org</a>   | WASA: | <a href="http://swimwales.org">swimwales.org</a>             |
| ASA:              | <a href="http://swimming.org">swimming.org</a>                 | BSCA: | <a href="http://gbswimcoaches.co.uk">gbswimcoaches.co.uk</a> |
| SASA:             | <a href="http://scottishswimming.com">scottishswimming.com</a> |       |  |