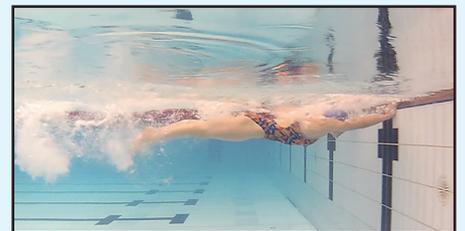
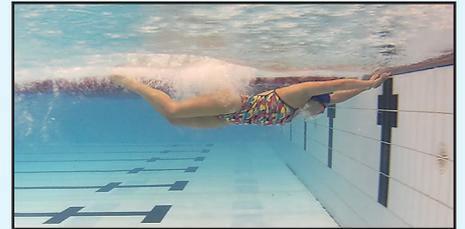


APPROACH

- Turns for butterfly start 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 seven 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. The final stroke takes the hands purposefully onto the wall at almost full extension and with no time-wasting or speed-sapping glide.

TOUCH

- The hand touch should coordinate with the end of 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.



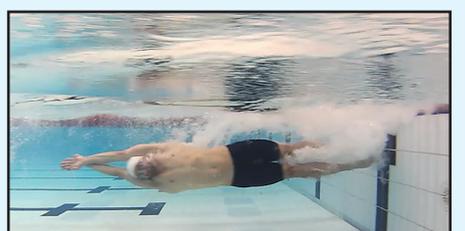
ROTATE & TOUCH AGAIN

- 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 and NO resting). The swimmer will turn **towards** the hand which is released first.
- The elbow of the released side drives backwards and the shoulders reverse direction and turn as the hips continue towards the wall. The swimmer should continue looking forwards towards the wall and take an in-breathe. The head should not be turned sideways or be looking back 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 sideways and the body facing sideways.



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 duration should be as short as possible for maximum force.
- The push should rotate the whole body onto the breast **with no twisting at the hips.**
- 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.



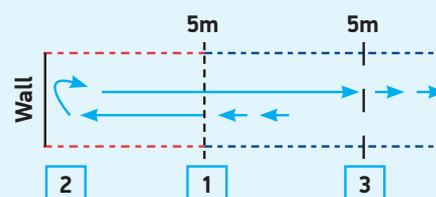
PHYSICAL REQUIREMENTS

- Spatial awareness & coordination
- Core strength
- Agility
- Lower limb power (butt, thighs, calves)
- Shoulder flexibility

TESTING & MONITORING

- **Total turn (approach, rotation and push):** Time the swimmer from the head passing the flags at 5m (1) all the way into the wall (2) and back out until the head passes the 10m mark (3). Do not time the hands passing the 5m or 10m mark because they may be in a different stroke phase from test to test and the results will be misleading. The head is a constant.
- **Speed of rotation:** Young swimmers tend to lose time during the rotation so it is a good idea to isolate this aspect - time from the hands touching to the feet leaving the wall. A good swimmer will be close to 1.0 seconds for this phase.
- **Turn Segments:** Each of the three segments – the approach, the rotation, and the push can be timed separately. Comparing one swimmer with another will highlight each swimmer's strengths and weaknesses.
- Alternatively the three segments can be timed during a "total turn" test – simply 1) start the watch when the head passes the flags at 5m, 2) split the watch when the hands touch the wall, 3) split again when the feet leave the wall, 4) split again when the head passes 10m.

BUTTERFLY FLAGS



BUTTERFLY		
LEVEL	MALE	FEMALE
1	07.2	08.1
2	07.6	08.4
3	08.0	08.7
4	08.4	08.9
5	08.8	09.2
6	09.2	09.5
7	09.6	09.7
8	10.0	10.0

**TOTAL TURN STANDARDS
(5M IN + 10M OUT)**

THE RULES

BUTTERFLY

- **SW 8.1** From the beginning of the first arm stroke after the start and each turn, the body shall be kept on the breast. Under water kicking on the side is allowed. 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.
- **SW 8.4** At each turn and at the finish of the race, the touch shall be made with both hands separated and simultaneously, at, above or below the water surface.

COACHING PROCESS & CONTROL

- Turns demand three over-riding concerns depending on the phase: how to **increase** speed, how to **maintain** speed already gained, and how to **minimise** loss of speed when that is **inevitable**. The only times the last one should occur during a turn is during the underwater arm and leg recovery on breaststroke; apart from that situation speed should never decrease during a turn. All other phases involve increasing or maintaining speed.
- Insist on 2-handed touches **every** time in training.
- When 'circle swimming' the swimmer must cross over the black line before the turn not during or after the turn. This way they learn to push off in a straight line.

LAND EXERCISES

- Gymnastics
- Double leg and single leg squats
- Explosive squats in streamline position
- Various versions of sit-ups
- Stretching and flexibility

SKILLS DEVELOPMENT

- Mid-pool turns: swim then turn at the flags rather than the wall. The turn should be executed **exactly** as though the wall was being used.
- Double-turn 25s and triple turn 50s: start the swim at the flags and swim into the wall, turn, swim 25m, turn and swim back past the flags. This adds additional turns to every exercise.

COMMON FAULTS & FIXES

- Gliding into the wall (last stroke too far out) - loss of speed and momentum.
- Last stroke too short at the touch – hands flat, elbows excessively bent – prevents momentum being carried into the rotation.
- Two ‘stand-alone’ arm strokes into the wall due to swimmer panic. **DQ.**
- One handed or non-simultaneous touches (lack of concentration). **DQ.**
- Hands ‘stick’ to wall and/or are used to lever the swimmer up and around – adds a time delay.
- Swimmer lifts themselves up before rotating – adds a time delay and produces a loss of momentum.
- Knees not brought far enough up to chest – creates resistance during rotation – slows the swimmer down.
- Knees brought up to chest too slowly – adds a time delay.
- Rotation in the horizontal plane (circling around towards the side) rather than vertically, straight in and out, almost like the start of a reverse somersault – creates resistance during rotation – slows the swimmer down.
- Turning the head to look back down the pool length during the rotation – decreases the speed of rotation and produces additional rotation in the wrong plane (adds a time delay).
- Push on back with rotation to the breast after leaving the wall. **DQ.**
- Feet and head at different levels when push is made. The swimmer has either to wait until they level up (adds time), or has to push with a flexed spine producing a banana-shaped push (greater resistance and increased drag) - slows the swimmer down.
- Push made with flexed or relaxed spine – increases drag - slows the swimmer down.

DESCRIPTIVE WORDS & IMAGERY

Stretch, arrow, spin, “elbow someone in the ribs”,

SEE ALSO

- British Swimming: britishswimming.org
- ASA: swimming.org
- SASA: scottishswimming.com
- WASA: swimwales.org
- BSCA: gbswimcoaches.co.uk