

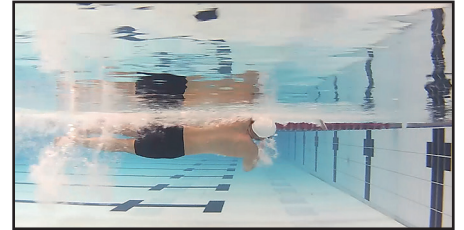
APPROACH

PREPARATION

- The swimmer must prepare for the turn when they see themselves passing under the flags.
- The arm strokes should be adjusted so that the roll-over can be a smooth and coordinated action.

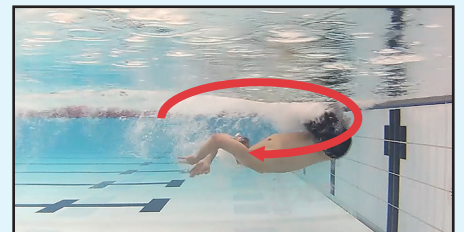
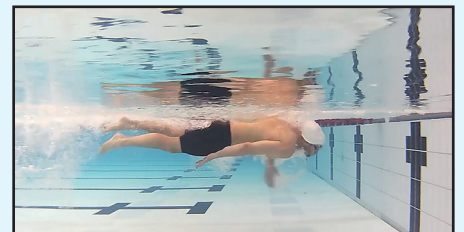
ROLL-OVER

- The roll-over to the breast should be made with a powerful rotation of the shoulders as well as a 'kayaking' style of stroke with the recovering arm. This stroke should produce an **increase** of swim speed.
- The roll-over should position the swimmer to **immediately** begin the rotation once they are on their breast.



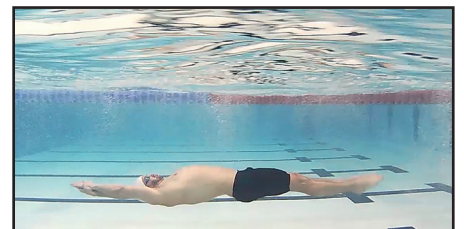
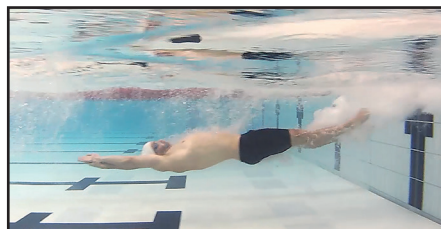
ROTATE & TOUCH

- The forward rotation should start by pulling with either one or both hands combined with a single, strong dolphin kick.
- The head should be facing **down** with eyes looking at the pool floor.
- The head should be tucked in, chin on chest and the back rounded as the hips are brought **towards** the wall. Blow out during the rotation.
- The hips should continue towards the wall throughout the rotation following a partial ellipse shape.
- The hand(s) pull-through means the arms are **already** pointing towards the new swim direction - no readjustment should be necessary.
- The feet should touch the wall simultaneously after a straight forward summersault, with the knees pointing up and the feet planting in line with the head.



PUSH

- The head must be at the same depth as the feet when the feet are placed on the wall. Approximately 70cm deep is recommended - that's the height of the starting block from the water surface or the length of most stopwatch lanyards.
- The arms (already in place) and the head (arrives in place at the end of the rotation and 'hides' between the arms) should be 'streamlined'.
- The legs start to extend just before the feet hit the wall. The push against the wall starts at the hips and progresses through the knees and then the ankles.
- The duration of the push should be short which indicates maximum power. The spine should be fixed and rigid during the push phase. The push should be horizontal and take the swimmer under the following wave.
- The arms, head, shoulders, torso, hips, legs and feet should be in a tight streamline position.



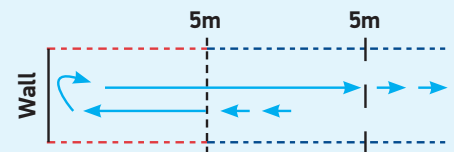
PHYSICAL REQUIREMENTS

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

TESTING & MONITORING

- **Speed of rotation:** Time the rotation from the entry of the last hand to the feet touching the wall. It should be the same time as **half** the stroke cycle time when approaching the wall. I.e. if a full stroke cycle, say right-hand entry to right-hand entry, takes 1.8 seconds then the rotation from last hand entry to feet touching, should take 0.9 seconds ($1.8/2$).
- **Approach, turn and push:** 5m in + 10m out (timed head to head).

BACKSTROKE TURNS



THE RULES

- **SW 6.5 (BACKSTROKE)** When executing the turn there must be a touch of the wall with some part of the swimmer's body in his/her respective lane. During the turn the shoulders may be turned over the vertical to the breast after which an immediate continuous single arm pull or immediate continuous simultaneous double arm pull may be used to initiate the turn. The swimmer must have returned to the position on the back upon leaving the wall.

COACHING PROCESS & CONTROL

- **Insist** on legal and technically proficient turns on **every** lap of **every** repetition of **every** set **every** day.
- Training turns should be done by crossing the lane and then turning, not by turning and then pushing diagonally. It's safer this way and teaches straight push-offs.

LAND EXERCISES

- Sit ups, crunches.
- Vertical squat jumps with streamline arms.
- Single leg squats. Double leg squats.

SKILLS DEVELOPMENT

- **Standing jump somersaults** in the shallow end of the pool. Try to complete the rotation before hitting the water.
- **Mid-pool somersaults** from a 'layout' position and return to layout (the number of consecutive somersaults is coach's choice). Modify this by swimming then somersaulting (full 360°) then swimming then somersaulting. Modify again by rotating 180°, instead of 360°, with a half twist to return to the front, then swimming in the opposite direction, then rotating.
- **Backstroke:** Swimmers kick in from before the flags with one arm extended until they touch the wall. Repeat but include a single arm stroke when passing under the flags then continue kicking with one arm extended. Repeat, this time with two consecutive arm strokes. Repeat, adding one arm stroke each time until the wall 'arrives' on a 'hand entry' movement. Each swimmer's stroke count before the turn roll-over is one stroke less than their count on this exercise.
- Training sets of 50m as 25 freestyle + 25 backstroke.
- **Corkscrew swimming:** teach the swimmers the roll-over by swimming corkscrew. Start on the back and as the right hand recovers over the water rotate towards the left so that the right hand then enters as in freestyle. As the right hand then pulls through with the swimmer on their front continue the rotation so that when it exits the swimmer is on their back again. Continuous swimming like this resembles a corkscrew action. Make sure the swimmers learn to corkscrew in both clockwise and anti-clockwise directions so that they can turn to either the right or the left during races.

INTERPRETING THE RULES

The **backstroke** rule specifies three important points, one of which confuses and trips up many swimmers:

- The swimmer can touch with any part of their body but touching with the feet only is the fastest.
- The backstroke turn **may** be initiated by a single or simultaneous double arm pull which is "immediate [and] continuous" following the roll-over. This implies that the swimmer can choose to use other combinations of timing and continuity but beware, that is not the case in practice. Swimmers will be disqualified if they delay the arm pull (kicking or gliding in), if they pull and then delay while kicking in, or if they use discontinuous arm movements (starting to pull, stopping, then restarting). They can turn without using any arm pulls but that's not recommended.
- Swimmers must have "returned to the position on the back **upon leaving** the wall." Upon leaving means the swimmer can start the push on their side (or even their front but that's not recommended) but they **must** be on their back when their feet lose contact with the wall.

The mention of "in his/her respective lane" for backstroke is superfluous as it applies to all stroke (SW 10.3).

COMMON FAULTS & FIXES

- Gliding into the wall (last stroke or next to last stroke too far out) - loss of speed and momentum. **DQ**.
- Last stroke too close to the wall – this makes the knees too tightly bent when trying to push.
- Lifting the head to look at the wall.
- Rolling over past the breast on backstroke.
- Over-rotation of the head and shoulders bringing them too near the surface before the push.
- Unnecessary movements of the arms during the rotation – usually balancing with the hands due to a lack of core strength.
- Hips and/or legs brought **over** the water rather than through the surface towards the wall.
- Feet and head at different levels when push is made. The swimmer has either to wait (adds time) until they level up, or has to push with a flexed spine which produces 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