

Backstroke Technique

While backstroke maintains the body in a streamlined position, with the limbs able to apply constant propulsive forces due to the arms alternating action and the continuous flutter action of the legs, it is not as fast or efficient as freestyle. Backstroke is swum with arms out to the side of the body, meaning a swimmer cannot pull directly under their body, resulting in not reaching full potential power.

HEAD POSITION

The head position determines the body position in backstroke. The head rests in the water with waterline passing just under the ears, chin tucked in, eyes focused up and head completely still. This should be a fairly 'natural' position.

BODY POSITION

The body is in a near horizontal position with hips and legs within shoulder width.

BODY ROLL

Body roll should include both shoulders and hips. Backstroke swimmers spend a large majority of time on their side (35-45 degrees). There are two distinct advantages of increased body roll. Firstly, the body cuts through the water more smoothly and with less resistance when the body is rolled similar to the V-shape of the bottom of a boat. The large muscles of the trunk can also be involved in the pulling pattern to increase propulsion.

The first downsweep is a lot more effective with good body roll.

HAND ENTRY

In backstroke, the hand enters little finger first in line with shoulder point with the arm fully extended and palm facing out. The entry should be as clean and streamlined as possible.

Common errors on entry

1. Overreaching - increase drag force (frontal resistance) on body from lateral movement of hips
2. Entering too wide – a proportion of the propulsive phase
3. Entering with back of hand – usually results in smashing the back of the hand on the water, increasing drag and the swimmer is unable to catch water from entry

UNDERWATER ARM PULL

Once the hand has entered correctly, the hand sculls forward, downward and outward with the palm rotated to a downward pitch. The lift force exerted by your hand will cause the elbow to flex into the correct position. The hand continues to sweep down and out in a circular path with the shoulder and hips rotating toward the arm. The hand then sculls upward in a semi-circular pattern until flexed at 90 degrees opposite chest and shoulders. The hand **sculls** backward and downward until arm is extended. The same hip should rotate quickly upward during the second downward sweep. The pitch of the hand is always changing to get maximum feel of the water. Maximum hand velocity is found at the end of each underwater pull.

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Common errors in underwater pull

1. Dropping elbow at catch – hand must sweep down and out to reduce drag. Elbow drops if backward pull is made immediately.
2. Pushing backward against the water during downsweeps – propulsion becomes drag rather than lift dominated, resulting in a loss of forward velocity.
3. Losing the hold on the water during the sculling phase.

ARM RECOVERY

The shoulder rolls upwards as the hand exits the water (little finger or thumb first?)
The arm is straight on recovery with elbow locked, as hand travels parallel with midline. The arm and hand should be as relaxed as possible during recovery so that they get some rest between underwater armstrokes.

Common errors in arm recovery

1. Lifting the hand rather than the shoulder to initiate recovery – the shoulder is still underwater, creating more resistance
2. Low lateral recovery – will throw the body out of alignment.

ARM TIMING

As the stroking arm completes the second downward scull, the recovering arm shall enter the water

LEG ACTION

A six-beat flutter kick with legs not breaking the surface of the water is used in backstroke.
On the downbeat the legs should be kept straight and on the upbeat the legs should be slightly bent and applying more pressure.
Ankle flexibility is important to gain propulsion from the kick. Pointing the toes allows the feet to be a flat paddle with a larger surface area to push water back.

DOLPHIN KICK UNDERWATER

Most swimmers at the start of any backstroke lap use dolphin kick. The trick is to concentrate on streamlining the upper body as much as possible during the dolphin kicks. The thighs produce the strength for the dolphin upkick while the hamstrings work the downkick. The transition from dolphin kick to flutter kick should be as smooth as possible. The underwater pullout starts as soon as the flutter kick starts.

BREATHING

Good practice to inhale on the recovery of one arm and exhale on the recovery of the other

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BACKSTROKE DRILLS

All drills can be done in multiples of 25's, 50's or 100's

- Backstroke kick holding board on side
- Backstroke kick holding board on end
- Backstroke kick hands by side
- Backstroke kick hands overhead (streamlined)
- Backstroke kick hands at 45 degrees
- Backstroke kick one hand at 90 degrees, other overhead
- Backstroke kick hands at 90 degrees
- Single arm backstroke, roll opposite shoulder
- Backstroke 4 strokes left arm, 4 strokes right arm...
- Backstroke 3 strokes left arm, 3 strokes right arm...
- Backstroke 2 strokes left arm, 2 strokes right arm...
- 4L, 4R, 3L, 3R, 2L, 2R, then normal backstroke
- Double arm backstroke
- Backstroke single arm, pull on rope
- 10 kicks on side, one stroke backstroke, 10 kicks on other side...
- 10 kicks on side, three strokes backstroke, 10 kicks on other side...
- Backstroke – focus on hand entry – front view

BACKSTROKE TURN PROGRESSIONS

- Forward rolls on land
- Forward roll and stand up on land
- Somersaults in the water, standing up after each one.
- Three strokes freestyle then somersault
- Swim freestyle into wall, turn, stop
- Swim freestyle into wall, turn and push off on back
- Swim backstroke into wall, turn, stop
- Swim backstroke into wall, turn and push off on back
- Swim backstroke into wall, turn and push off on back with flutter kick
- Swim backstroke into wall, turn and push off on back with dolphin, then flutter kick
- Swim backstroke into wall, turn and push off on back with dolphin, then flutter kick, then backstroke

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