Freestyle

The freestyle stroke is the fastest, most efficient stroke, because it 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.

BODY POSITION

A streamlined body position is required with arms extended above the head. One hand is placed over the other and the arms cover the ears. The back and legs are kept straight, until a flutter kick is used.

HEAD POSITION

The head should be kept well down with the water line at the top of the head. This position will keep the body in a horizontal streamlined position and reduce frontal resistance. If the head is held too high, the torso and legs will drop, resulting in increased frontal resistance.

BODY ROLL

The body roll in freestyle is initiated by the arm action. The entire body turns on its long axis as the swimmer's hand enters the water in front. The rolling action of the body enables the swimmer to develop more power by bringing the large trunk muscles into play, particularly in the acceleration at the end of the underwater pull. Body roll will also assist the body to maintain a streamlined position by keeping the hips and shoulders in line. Freestyle swimmers will spend more time on their sides than they do on their fronts.

HAND ENTRY

The hand enters the water forward of the head, between the midline of the body and a parallel line from the shoulders. The fingertips enter the water first, with the elbow above the hand and the hand pitched at around 30 degrees. The arm should be approximately 2/3 extended when hand enters the water and then stretches forward. The front arm should be near complete extension as the other arm finishes the underwater pull.

Common errors on entry

1. Hand in a prone position on entry – increases resistance as the back of the hand pushes against the water.
2. Hand at 90 degrees on entry – increase the possibility of shoulder injury
3. Overreaching – increase drag force on body from lateral movement
4. Entering too early – increases drag, as your hand must travel a further distance under water against the body's momentum.

UNDERWATER ARM PULL

The catch is made with the front hand as the other hand releases the water. The wrist is flexed outward, downward and backward to expose the palm to the water. The elbow begins to flex, as the hand is swept downward and slightly outward.

It is important for swimmers to get a strong catch on the water and maintain a high elbow position as the hand moves under the head and shoulders.
The hand continues to sweep down and in toward the midline and then upward and in toward the lower chest. The hand will accelerate slightly throughout the underwater pull to gain maximum speed.
The final propulsive phase is made by sweeping the hand backward, upward and outward.

Freestyle

UNDERWATER ARM PULL (Continued)

Common errors in underwater pull

1. Turning palm inward at catch phase – Reduces forward velocity during the downsweep and leaves the hand in a poor position for the following insweep.
2. Pushing down on the water – the body moves in the direction of the back of your hand
3. Dropped elbow – reduces power on the water
4. Losing the hold on the water during the sculling phase.
5. Pushing water upward on exit – pushes body down
6. Exiting at full extension

ARM RECOVERY

Arm recovery is initiated by lifting the elbow upward and forward. A high elbow recovery is preferred by most because it reduces the effort required and maintains body alignment.
The hand and forearm are carried forward in a slight arc (boomerang) around the body with the back of hand pointing forward.

Common errors in arm recovery

1. Rushing the recovery – the arm should not start the catch phase until the other arm has finished the stroke. The underwater hand has less distance to travel than the hand recovering.
2. Low lateral recovery – will throw the body out of alignment.

ARM TIMING

Enter the water with the recovery hand anywhere between the beginning of the upsweep to the beginning of the push back. As one arm pushes back, the recovery arm will have entered and stretched forward in preparation for the catch (outsweep). The outsweep will occur simultaneously with the propelling arm's recovery.

LEG ACTION

The leg kick originates from the hip and the muscles in the upper leg. The legs move primarily in a vertical plane with the ankles flexed but relaxed so that the big toes turn toward each other. The key to easy and efficient kicking is to keep ankles and feet loose and flexible. Each kick has an upward and downward component called the upbeat and downbeat. There is also some lateral movement of the legs during the kicking action. This assists with stabilising and streamlining the body during the stroke.

A six-beat kick requires the swimmer to execute three downward beats during each armstroke.
A two-beat kick requires the swimmer to execute one downward beat during each armstroke.
Both have their advantages, with the speed provided by a six beat kick worthwhile, while the energy saved by doing a two-beat kick.

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BREATHING

Breathing should be incorporated into the body roll. The face should turn to breathe as the opposite hand L enters the water. Inhalation occurs as the hand R pushes back and the recovery takes place.
The face is turned back into the water as the recovery arm swings past the face.
Bi-lateral breathing important from an early age. Train swimmers to limit breathing in 25's and 50's from a young age.

Common errors in breathing.

1. Turning the head too early – not able to use natural body roll
2. Dropping the underwater arm through the pull while breathing – creates over roll of body
3. Turning the head out of alignment when breathing – creates too much lateral movement
4. Lifting the head when breathing – hips drop

FREESTYLE DRILLS

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

- Freestyle kick with board – chin on the surface
- Freestyle kick with board – head in water, breathe on side
- Freestyle kick with board – one arm on board, breathing on side
- Freestyle kick without board – one arm in front, breathe on side
- Single arm stroke with board, enter under the board, continuous kick
- Single arm freestyle
- Single arm freestyle, 4 strokes on each arm
- Single arm freestyle, 3 strokes on each arm
- Single arm freestyle, 2 strokes on each arm
- Catch up freestyle
- 4L, 4R, 3L, 3R, 2L, 2R, 1L, 1R…
- Single arm stroke, 10 kicks on side, one stroke, 10 kicks on side...
- Single arm stroke, 10 kicks on side, 3 strokes, 10 kicks on side...
- Unco drill, single arm freestyle, breathe on opposite side
- Hypoxic drills - F/s breathing every 2, 3, 4, 5 or 6 strokes
- Freestyle polo using kayaking principle
- Fast freestyle

Freestyle
FREESTYLE TURN PROGRESSIONS

- Forward rolls on land
- Forward roll and stand up on land
- Somersaults in the water, standing up after each one.
- Three strokes then somersault
- Swim freestyle into wall somersault, stop
- Swim freestyle into wall, turn and push off on back
- Swim freestyle into wall, turn and push off on front
- Swim freestyle into wall, turn and push off on front with flutter kick
- Swim freestyle into wall, turn and push off on front with dolphin, then flutter kick
- Swim freestyle into wall, turn and push off on front with dolphin, then flutter kick, then freestyle, no breathing on first stroke

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