

Freestyle: Making your stroke efficient

It is important to set yourself up, right from the start with good body position.

- Shoulders back, strong core – pull belly button to spine, lengthen out, long and strong, head low – 1 goggle in, 1 goggle out.
- Breathing is continuous while face is in water. Good to do some bilateral to balance stroke.
- Body in straight line; head, shoulders, hips and toes touching surface.
- Your stroke – Reach “over the barrel” on entry and spear middle finger into water. Elbows slightly higher than wrist, wrist slightly higher than fingers. 120-degree angle in catch and pull phase. High elbow underwater, accelerate through stroke, following line of your body. Relaxed recovery- elbow leads recovery.
- Your kick – legs narrow straight behind, from hips, turn big toe in.
- Timing – hold your catch - when your opposite hand passes your ear, commence your pull phase.
Stroking in the front quadrant - there must always be 1 hand in front of your head

Freestyle Drills

Fins and snorkel recommended

Drill	Why?	How
Jelly Fish Float	Body position -To find centre of balance -ideal streamlined position	Swimmers float with arms and legs hanging down. Gradually raise arms and legs until body feels to be in optimal streamlined position, (exhaling air to reduce buoyancy) start to kick and then introduce stroke keeping body in same position.
Sink Downs *	Practise exhaling	Exhale through mouth/nose, relax and let your body sink to pool bottom.
Kick On Side	Catch/body position	1 arm extended in front slightly under water, other by side, take breath, then head in water, kick. *Maintain good posture and hand position in water to set up for catch.
6 Kick	Kick, lengthen stroke	6 kicks to every arm stroke – quick little kick, long slow arms.
Diagonal Drill	Develop 2 beat kick Develop core awareness	Place paddle on 1 hand, fin on opposite leg. Swim and as hand enters, kick with fin foot – develops awareness of kick – what beat. Will also feel connection across core.
Core Drills	To develop core awareness	Float, kick then swim focus on core – pulling belly button to spine Place pull buoy between ankles and swim
Sculling Long Log Paddle	Improve catch/feel for water	Pull buoy – small movements with hands. Scull in front- think fingers pointing down. Long dog paddle-underwater recovery - focus on getting into high elbow catch position. https://www.youtube.com/watch?v=CO90gg3iEoA
Closed Fist	Find catch	Swim closed fist, rub hands on rough end of pool, swim back normal.
6-1-6 6-3-6	Catch Maintaining high elbow underwater	As with kicking on side, kick for 6, stroke, change sides. As above but with 3 strokes, change sides. https://www.youtube.com/watch?v=ShRT_dQxgEs

Javelin Drill *	Catch and Pull	Kick on side with paddle on extended arm. Focus on pulling shoulders back, fingers lower than wrist, lower than elbow. Transition to full stroke breathing away from paddle. https://www.youtube.com/watch?v=6sjc3mX-sYs&t=240s
Finger- tip drag	Relaxed recovery	High elbows, drag fingers on water, imagine elbow is being pulled forward on a string.
Almost Catch Up	Setting up pull Rhythm Timing Assists in preventing crossover Leads into front quadrant stroking	Swim bringing hands over to almost touch at front - Almost catch up – hold catch then accelerate your stroke though 2 nd ½ of underwater pull phase. Front Quadrant Stroking: there must always be 1 hand in front of your head . https://www.youtube.com/watch?v=rFKLvk2ET20&t=441s
Triceps Extension	Practise hand exit	Keeping arms tucked by side, alternate arms practising end part of pull phase with hand near hip, underwater return.
Half Diamond #	High elbow position in pull phase	Your arm will make a half diamond shape if viewed front-on. One arm held in half diamond position about 100-120 degrees – fingers pointing down. If viewed side on, fingers, elbow and shoulder are all in 1 line. Kick, feel the resistance and practise the high elbow catch position. https://www.youtube.com/watch?v=jpko4K1EIBk&t=154s
Unco *	Body rotation, timing	1 arm stroking, 1 arm by side, breathing to non-stroking side. Roll shoulder out and in as you breathe – then dip and stroke. Swim 25 1 side, 25 normal. Swap sides https://www.youtube.com/watch?v=b00E4REZvBO
Broken Arrow *	To relax back and shoulders	Kick on side, raise arm vertically, pause, bend arm, spear into the water and rotate and repeat other side https://www.youtube.com/watch?v=a7L-GKLJ0Jw
YMCA #	To practise high elbow position through all stages of catch and pull	Hold 4 key positions: Y = starting catch arm extended out in front, fingers lower than wrist, wrist lower than elbow, elbow lower than shoulder. M =hold in high elbow catch position, fingers pointing down to bottom of pool C = Power Diamond position. Both arms held in diamond position @ 100-120 degrees, if viewed side on, fingers, elbow and shoulder are all in 1 line A = Exit -palm of hand facing mostly behind next to hip, elbow slightly bent Recover underwater and repeat https://www.youtube.com/watch?v=Q5thjxmqLnY&t=7s Extension 1: YMC Accelerate (1 arm) and then continue through to full stroke Extension 2: YMC Accelerate + 1 Stroke (1 arm) and continue to full stroke and then add 1 stroke. Repeat using other arm.
Show your armpit	rotation	As you are swimming , rotate to show your armpit to side of pool!
Drills from *Swim Smooth # Effortless Swimming		

Stroke Rate

Average Stroke Rate is around 60-65.

Swimmers set tempo trainer on **Mode 3** and experiment with different stroke rates:

48 – Should be way too slow for all

63 - about average

76 – Ian Thorpe

96 – Brownlee brothers (British Triathletes)

110 – Janet Evans

- Experimenting with own stroke rate:
Swimmers set tempo trainer a few beeps above or below stroke rate- what feels good?
All about finding the sweet spot – swimming fast and efficiently
- Coaches can find stroke rate using stopwatch.
Stroke rate Mode '00'– observe swimmer – press start as hand enters the water count 1, on 4th stroke count 4 and press stop. The number is the stroke rate.
- Ramp test: Used to find optimal stroke rate.
Swim a set of 50s increasing stroke rate each 50, starting at a rate below usual rate.
What is the point where fastest speed is achieved without comprising stroke? This is optimal stroke rate.