

Masters Swimming NSW Workshop

Freestyle

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Coach the swimmer not the stroke.

- There are many variations in the freestyle stroke and as coaches, we are trying to make the stroke the most efficient for each individual.
- Basic principles of efficient swimming are followed, with variations for body types and the pool or open water swimming.
- Drills are used as a progression to be incorporated into full stroke.
- Swimming is a interconnected whole-body experience. Changing an upper body fault may also fix a fault elsewhere.
- Changes in stroke takes time, particularly with older swimmers, as many of the faults could have been there for a very long period.

What are the fundamentals of a good freestyle stroke?

Freestyle Stroke Triage - What do you fix first?

Body Position and Core

The factor that makes the biggest impact on a swimmers' style and performance is their body position and core. Incorrect or poor body position is the biggest contributor to drag, it also adversely impacts other swimming fundamentals. A strong core is needed to join the top half of body to the bottom half thus swimming with whole body. Core is also important in other factors such as body roll.

Goals

- Obtain the correct posture and its feel
- Obtaining the correct body position, body alignment and its feel
- Achieve and maintain an engaged core
- Bring in the kick

Cues

- Posture: stand proud, core on, butt on
- The 3 H's, Head, Hips and Heels
- Flat back
- Straight body and leaning forward
- No up-down or left right movements
- Pointed toes

Breathing

Breathing technique also impacts body position, and poor breathing technique is the main factor that causes a swimmer to be worn out after only swimming a short distance.

Goals

- Continuous and full exhalation
- Low head position on breathing
- Breathing pattern to suit purpose, stroke and distance - training vs racing

Cues

- Look underwater with one eye
- Head rotation – think chin, don't lift the head
- Maintaining body position
- Face back in the water before recovery hand reaches shoulder

Kicking

Goals

- Kick from the hips
- Small amplitude
- Kick timing (2,4,6) – often depends on distance being swum
- Kicking in both directions

Cues

- Kick from the hips
- Kick within the of your body profile
- Kick in both directions
- Floppy feet/ Pigeon toed

Entry, Catch, Pull, Exit and Recovery

To move forward you need to catch water and move it backwards (or put another way, move your body over the water that you are holding). The more water you can catch and the more quickly you can move it backwards, the faster you will propel yourself forward.

Goals

- Reduce drag
- Bubbleless entry
- Early Vertical Forearm
- Achieve power diamond and maximum stroke power
- Avoid injuries
- Efficiency
- Relaxation
- Develop muscle memory for the stroke

Cues

- Enter the water in front of your shoulder
- Spear middle finger into water, reach forward then “over the barrel”
- Early Vertical Forearm (EVF): Elbows slightly higher than wrist, wrist slightly higher than fingers.
- Power Diamond position. @ 110-120 degree angle at the elbow

- Accelerate through stroke, following line of your body.
- Clean and flowing arm pull movement through to an almost straight arm exit
- Relaxed recovery- elbow leads recovery.

Rotation

Body rotation is needed in freestyle (and backstroke) to reduce frontal drag, to increase extension in the water and to engage the right muscles to increase stroke power.

Goals

- Reduce frontal drag
- Increase extension
- Engage the right muscles to increase stroke power
- Increase propulsion
- Rotate shoulders and hips to 35-45 degrees

Cues

- Show your arm pit to pool side
- Rock both your shoulders and your hips
- Rock your body to around 30 to 45 degrees on each side

Timing

Good timing, with the above stroke fundamentals can make that extra positive difference to a swimmer's stroke. Working on front quadrant swimming can assist in fixing other stroke faults such as stroke crossover, high head position and a wide kick.

Goals

- Front quadrant swimming
- Holding the catch
- Engaging your whole body

Cues

- Breathing commences as recover hand exit
- Anchor your catch until your recovery arm passes your ear then commence the pull
- Head returns to neutral position as pull commences
- Roll your hip as you pull

Stroke Rate brief snapshot

- Stroke Rate is individual for each swimmer and varies according to distance swum
- Stroke Rate can be too slow. Increasing the stroke rate may improve rhythm and timing and can also remove dead spots in the stroke
- Tempo Trainers are an excellent tool. (found on online swim sites)

Freestyle Drills

Fundamental	Drills and notes
Breathing	<ol style="list-style-type: none"> 1. For demonstration purposes only breathe incorrectly: Swim holding your breath as much as possible for 25 m, alternatively only breath out just before you are about to breath in, rest 30 secs then 2. Swim breathing out (fully) whilst face is in the water for 25 m 3. Swim focus on “Think one goggle in 1 goggle out for 25 m 4. Experimenting with breathing patterns (including bilateral) <p>Sink-downs</p> <ul style="list-style-type: none"> • Description: This drill demonstrates that most swimmers do not breathe out fully thus limiting the amount of fresh air they can inhale. Some swimmers only breathe with a small exchange of air. In the deep end of the pool take a breath, then breathe out UNTIL you can sit on the bottom of the pool.
Body Position And Core	<ol style="list-style-type: none"> 1. Jelly fish float/Position 11 drill <ul style="list-style-type: none"> • Equipment: Snorkel optional • Description: (This drill can be started from the hanging in the water position, or) whilst floating in position 11, try to achieve a high body position, with head, hips and ankle at the surface, once you can achieve this position, commence to swim and whilst swimming, maintain this high body position 2. Head Position Drill <ul style="list-style-type: none"> • Equipment: Snorkel • Description: Float in position 11 / superman position. Experiment with head position from looking straight down to looking as forward as practicable – where do you achieve high hips 3. Core drill <ul style="list-style-type: none"> • Equipment: Pull buoy • Description Swim with pull buoy between ankles, focus on keeping hips high. You will need to have your core on to achieve this. When your core is on and your hips are high, remember how this feels and this should be how it feels all the time whilst swimming. 4. Balance Drill https://www.youtube.com/watch?v=vezm223Z7h8

Fundamental	Drills and notes
Kicking	<ol style="list-style-type: none"> 1. Torpedo kick and swim <ul style="list-style-type: none"> • Equipment: Fins optional • Description: Practice can improve streamlining thus lowering drag. Emphasise pigeon toed kick, lifting hips and strong core 2. Vertical Kicking 3. Kicking on side 4. Swim and vary kick patterns according to purpose -e.g. sprint, distance 5. Diagonal Drill – to develop beat awareness https://www.youtube.com/watch?v=M25pCBfpB18 <ul style="list-style-type: none"> • Equipment – fins and paddles • 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.

Fundamental	Drills and notes
Catch	<ol style="list-style-type: none"> 1. EVF – dryland exercise <ul style="list-style-type: none"> • Equipment: A light band for pulling practice (light is often red or green in colour) • Description: Attached band at waist height, bend over and grab the band (on end of the band in each hand if possible. Simulate the EVF catch followed by the pull phase (recover as if recovering under water). Feel the muscles of the back connect in the pull 2. Entry Drills: <ul style="list-style-type: none"> • Single arm FR with board, hand entry dipping under board • Put the brakes on – wrist drop while kicking to feel negative effect • Catch -Kick: equipment: snorkel. Hold 1 hand in entry position and kick 3. Sculling (sculling teaches feel for the water and hand / arm position) <ul style="list-style-type: none"> https://www.youtube.com/watch?v=NE_vO6xIBvY • Equipment: Pull Buoy • Description: This drill is often practiced in a forward (catch) position, then in a mid-position and in a hands under the shoulder position. Finger tips down. When sculling your elbows do not move, only the hands and the forearm move. 4. Long dog paddle https://www.youtube.com/watch?v=CO90gg3iEoA <ul style="list-style-type: none"> • Equipment: Fins optional, snorkel optional • swim dog paddle and focus on a very good catch and partial pull, recover under the water 5. Single arm Equipment : fins optional Stroke with single arm, other arm remains in front, swap after 25m 6. Water polo Swim with head up focusing on catch entry 7. Closed fist Swim 25 with closed fists – thus encouraging an EVF, swim 25 m normal and repeat (feel the difference). If you swim with closed fists for longer distances say 400 + meters, you will improve your EVF, and also be able to swim this drill quite quickly

Pull Phase

1. Single arm

Equipment: Fins optional

2. 6-1-6 drill (alternative 6-3-6 drill)

https://www.youtube.com/watch?v=ShRT_dQxgEs

- Equipment: Fins optional
- Description: six kicks on the side, stroke and change sides

3. Javelin Drill <https://www.youtube.com/watch?v=6sjc3mX-sYs&t=240s>

- Equipment: Fins and one pointy paddle
- Description: start kicking on side with one pointy paddle extended forward , Kick on side until ½ way then swim, get onto catch /spear into water and breathe away from paddle

4. Half Diamond Drill: <https://www.youtube.com/watch?v=jpko4K1EIBk&t=154s>

Equipment	Fins and snorkel
Description	With one arm by your side, the other arm is held stationary at the shoulder position (which is part of the way through the pull), holding your elbow at approx. 120 degrees and your hand under your shoulder, your shoulder, elbow and hand should be in a straight line – should look like a half diamond shape.
Purpose	Stroking though this position engages a larger group of muscles including your lats
Activity	Kick up the pool for 25 m holding one arm in the above position then swim normal for 25 m. Ensure that during the swim you achieve the half diamond position Swap arms and repeat
Focus	Whilst performing the drill, look at your arm in the half diamond position and learn that you should achieve this position during each and every arm stroke
Related Drills	YMCA drill for whole catch and pull phase

5. YMCA Drill

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>

6. Progression: YMC + 1 stroke

Fundamental	Drills and notes
	<ul style="list-style-type: none"> • Leave 1 arm in front, with other arm follow Y M C as above, continuing through to full stroke. Then swap arms.
Timing Rotation	<ol style="list-style-type: none"> 1. Almost catch up <ul style="list-style-type: none"> • Leads into Front Quadrant swimming • Equipment: fins option • Description: When swimming FR, commence your pull as your recovery arm is about to enter the water 2. Front Quadrant Swimming https://www.youtube.com/watch?v=rFKLvk2ET20&t=441s <ul style="list-style-type: none"> • Equipment: fins option • Description: Whilst swimming FR, focus on keeping one arm in front of your head at all times 3. Rotation: <ul style="list-style-type: none"> • Equipment: Nil • Description: Whilst swimming FR, think- lift hips as hand exits water and show your arm pit to pool side 4. Unco: https://www.youtube.com/watch?v=b00E4REZvB0 <ul style="list-style-type: none"> • Equipment: fins • 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
Exit and Recovery	<ol style="list-style-type: none"> 1. Tricep Extension Hands by side, practise end of stroke alternating extension of each arm-palm of hand facing mostly behind next to hip, elbow slightly bent 2. Finger tip Drag <ul style="list-style-type: none"> • This drill encourages relaxed recovery • High elbows, drag fingers on water, imagine elbow is being pulled forward on a string 3. Broken arrow https://www.youtube.com/watch?v=a7L-GKLJ0Jw Equipment : fins <ul style="list-style-type: none"> • This drill opens up shoulders and encourages relaxed recovery • Kick on side, raise arm vertically, pause, bend arm, spear into the water and rotate and repeat other side

Fundamental	Drills and notes
	<p>Stroke Rate</p> <ul style="list-style-type: none">• Average Masters Freestyle Stroke Rate is around 63. A very low stroke rate is 40 and a high one is up to 90 or even higher. The stroke rate that is best for a swimmer is dependent on physical characteristics like height and arm length etc. If a stroke rate was for example 65 and someone else's was 68; that does not mean that they're a better swimmer– it just means that the swimmer has a higher stroke rate. Generally tall people swim with lower stroke rates than shorter people• Swimmers set tempo trainer on Mode 3 (stroke rate mode) and experiment with different stroke rates, try:<ul style="list-style-type: none">48 – This should feel way too slow63 - about average80 – some swimmers will find this easy, others near impossible• Some stopwatches (e.g. Finis) have a mode to measure stroke rate• Ramp test: Swimmers 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.

Resources:

Effortless Swimming: <https://effortlessswimming.com/#>

Swim Smooth: <https://www.swimsmooth.com/welcome>