

Winter Session, 2021-2022

The rationale behind the changes for the coming season:

Every season I tweak the Base Sets for each of the strokes. Sometimes I bring back something that has worked some years in the past to address a deficiency I saw in the majority of my swimmers at that time. Once the deficiency was fixed, I replaced that element in the base set with something else. As time passes a new generation of swimmers comes along and that old deficiency reappears.

Sometimes I just come up with a better way of teaching and drilling a specific stroke concept.

Monday: Primary Emphasis – Free and Back, PoPO's, StartPo's Secondary Emphasis – Core(Dolphins), Kicking, Strength, Breathing

6:15 – 6:30	(15) Stretching	
6:30 – 6:40 (4 Lanes)	(10) Warm-up	(400)
6:40 – 6:55 (4 Lanes)	(15) Dolphin Core + Breathing Drill	(700/1,100)
6:55 – 7:20 (4 Lanes)	(25) Free Base Sets	(1,500/2,600)
7:20 – 7:45 (4 Lanes)	(25) Back Base Sets	(1,400/4,000)
7:45 – 8:05 (Whole Pool)	(20) PoPo sets	(600/4,600)
8:05 – 8:15 (4 Lanes)	(15) Free or Back Goal Drills	(500/5,100)
8:15 – 8:30 (4 Lanes)	(15) Free Middle Distance Set	(1,000/6,100)
8:30 – 8:45 (6 Lanes)	(15) Breast Middle Distance Set	(800/6,900)
8:45 – 9:00 (6 Lanes)	(15) Strength Drill or IM Set	(700/7,600)

Wednesday: Primary Emphasis – Breast and Fly, PoPO's, StartPo's Secondary Emphasis – Core (Dolphins), Kicking, IM's, Breathing

6:15 – 6:30	(15) Stretching	
6:30 – 6:40 (4 Lanes)	(10) Warm-up	(400)
6:40 – 6:55 (4 Lanes)	(15) Dolphin Core + Breathing Drill	(700/1,100)
6:55 – 7:20 (4 Lanes)	(25) Fly Base Sets	(1,550/2,650)
7:20 – 7:45 (4 Lanes)	(25) Breast Base Sets	(1,200/3,850)
7:45 – 8:05 (Whole Pool)	(20) PoPo sets	(600/4,450)
8:05 – 8:15 (4 Lanes)	(15) Breast or Fly Goal Drills	(500/4,950)
8:15 – 8:30 (4 Lanes)	(15) Free Middle Distance Set	(1,000/5,950)
8:30 – 8:45 (6 Lanes)	(15) Breast Middle Distance Set	(800/6,750)
8:45 – 9:00 (6 Lanes)	(15) IM or Back Mid. Dist. Set	(700/7,350)

Warm-up (1,000 yards, 10 minutes)

4 x 100 on 2:00 done in the following order: Free, IM Kick, IM Swim, Free acceleration)

Dolphin Core set (600 yards, 15 minutes) (Fins and boards)

This set can be done using any combination of 25's, 50's and 100's per the schedules listed below. Swimmers can do either Back or Fly, but each 4-lap segment must be done using the same stroke and. Regardless of the way the set is broken up, the swimmer alternates between dolphins on top of the water and dolphins under the water every 4 lap segment. 30 Seconds rest is taken between each 4 lap segment. Flip turns are recommended for Backstroke when 50's or 100's are used. For Backstroke, at the end of each lap the swimmer should use a strong and properly executed pull out and either a strong lunge stroke with a properly executed lunge or a strong cross-over pull followed by a strong and complete pull into a turn. For Butterfly underwater laps, the swimmer should use a strong pull-out stroke and lunge to the wall.

- 25's on :25 keeping the times under :15,
- 50's on :45 keeping the times for the above water 50's under :35 and the underwater 50's under :30
- 100's on 1:30 keeping the times for the above water 100's under 1:10 and the underwater 100's under 1:00

* These intervals are based on 12 swimmers and :05 sendoffs between swimmers. The Olympians and High School A circles can be reduced to :45 by shortening the sendoff interval to :03

Objectives and points of emphasis:

- Strengthen the dolphin muscles (abs and upper legs)
- Improve the body line during the dolphins
- Learn to use dolphins in an all-out, full sprint manner
- With the fins providing race-time speed
 - Practice race-simulated pull-outs, cross-over pulls, pulls into turns, and finishes (lunges for backstroke)
 - Practice aggressively attacking turns and finishes
 - For Backstroke, practice using the flags as gauges for approaching the wall for either a finish or a turn.

Breathing Drills (100 yards, 4 minutes) :

1. 8 bobs using regular, relaxed breathing
2. 1 x 100 continuing the same breathing pattern used with the bobs in the previous step
3. 8 bobs using regular, relaxed breathing

The objectives for the set: Reinforce the need to have a full exchange of air on every breath, even when speed is an issue.

IM Sets (700 yards, 15 minutes)

1. **Broken 100 IM set:** 7 x (4 x 25 w :05 in 100-IM order) on 2:00 – subtract :15 from elapsed time to get the 100 IM time
2. **Broken 200 IM set:** 4 x (4 x 50 w :10 in 200-IM order) on 4:00 – subtract :30 from elapsed time to get the 200 IM time
3. **Breast Emphasis 150 IM set:** 5 (3 x 50 in IM order on :35 (1:15 rest), :40 (1:00 rest), or :50 (:45 rest)
 - Fly and Back: 6 dolphins
 - Breast: 30' underwater pulls and kicks

The objectives for these sets:

- Instill the concept of breaking the IM down into 4 separate components, performing each component at a high level unto itself with no carry over from the previous components and no thought of future components. Full transitions in the IIM are essential
- Build the mental toughness and self confidence in the ability to perform each leg of the IM properly (PoPo's TOR, SC – Distance Per stroke), regardless of the level of fatigue – one leg and one lap at a time

Strength Drills (700 yards, 15 minutes)

1. **Muscle Swims:** 6 x 75 – Lap 1 Fly, Lap 2 Head up Free (finish with a flip turn, Lap 3 Free breathing every 6 strokes – set up 6 lanes based on the fastest schedule and going up :05 as you go across each lane – goal is to get at least one swimmer at :50 by the end of the season
2. **Fly Strength Drill:** 25's using a push off, 1 dolphin and 8 fly strokes at a TOR of 1.5 or faster. The TOR is important. This set is not for critiquing strokes – it is an in-water strength building exercise. After the 8 strokes are done, if the swimmer is not at the wall, they can finish doing free. All 25's are done on a 20 second schedule. Break the lanes into four levels of challenge:
 - a. 14 sets of (2 x 25) with :20 rest between sets
 - b. 7 sets of (4 x 25) with :40 rest between sets
 - c. 5 sets of (6 x 25) with 1:00 rest between sets
 - d. 2 sets of (12 x 25) with 2:00 rest between sets

POPO and StartPo Widths

Method 1 (Distance Focus) (400 yards, 20 Minutes)

Move the 2 end lane ropes (the ones between lanes 1-2 and 5-6 to the lane ropes between lanes 2-3 and 4-5.

1. **Free PoPO's:**
 - a. Using the lines on the bottom of the pool, push off the wall to reach the second line, dolphin to the third line, flutter to the fourth line and pull out so as to clear the lane ropes - 29 and ½ feet from the wall (blue cones are 30 feet).
 - b. Finish the full width by adding either an additional pull with a breadth (no recovery) into a turn or a pull and lunge stroke into the wall.
 - c. Do 3 widths.
2. **Back PoPO's:**
 - a. Using the lane ropes, push off the wall and dolphin to the first lane rope, flutter to the second lane rope and pull out so as to clear the third lane rope - 29 and ½ feet from the wall (blue cones are 30 feet).
 - b. Finish the full width by doing either a cross-over pull and a pull into a flip turn on the wall or a pull and lunge stroke into the wall.
 - c. Do 3 widths.
3. **Fly PoPO's**
 - a. Using the lines on the bottom of the pool, push off the wall and dolphin to the fourth line and pull out so as to clear the lane ropes - 29 and ½ feet from the wall (blue cones are 30 feet). The butterfly pull-out should be exactly like the pull used in the breaststroke underwater pull and kick. Focus must be on the pull-out, not the subsequent recovery of the arms. The recovery can be coordinated after the proper pull-out is learned.
 - b. Establish the full width by adding a recovery and lunge into the wall.
 - c. Alternatively the swimmer may dolphin the entire width.
 - d. Do 3 widths.
4. **Breast PoPO's**
 - a. Using the lines on the bottom of the pool, push off the wall and complete the underwater pull and kick so as to clear the lane ropes - 29 and ½ feet from the wall (blue cones are 30 feet). A good baseline technique is to push off and dolphin to the third line, pull on the third line and kick on the fourth line, reaching the fifth line.
 - b. Establish the full width by adding one pull and kick and a lunge into the wall.
 - c. Do 3 widths.
5. **Free StartPo's:** 3 widths from dives using the same techniques used during the Free PoPo's.
6. **Back StartPo's:** 3 widths from back starts using the same techniques used during the Back PoPo's.
7. **Breast StartPO's:** 3 widths from dives using the same techniques used during the Breast POPo's.
8. **Fly StartPo's:** 3 widths from dives using the same techniques use during the Fly PoPo's.

The objective for these sets is to pull together on a consistent basis the points of emphasis listed below – to build the muscle memory of finely executed starts, push-offs, and pull-outs so they are there automatically without thinking at race time.

- For Free and Back PoPo's
 - During all pull-outs, the swimmer must keep the non-pulling arm straight and keep the head down in the streamline position with the ear squeezed against the shoulder of the non-pulling arm until the second pull is begun. There is never a breadth on the first pull.
 - If dolphins are used, the swimmer should not jerk the upper body (head and arms) either up or down in preparation of the first dolphin – this increases drag at a critical moment of great speed under the water. It is also important that the swimmer does not bend the knee too much in executing the dolphin(s) – use a full body whip with only slight knee bend similar to the technique used when wearing large flippers. The amplitude of the knee-to-foot motion does not need to exceed 12 to 18 inches in order to be effective.
 - The head and body should break the surface of the water at the same time.
- For Back PoPo's

- During all pull-outs, the swimmer must keep the non-pulling arm straight, keep the pull below the horizontal level of the body, keep the head back in a position that allows the swimmer to see the extended non-pulling arm until the second pull is begun
- Dolphin kicks should be done between the horizontal plane of the body and below the horizontal plane of the body. If the upper thrusts of the kicks go above the horizontal plane of the body, the swimmer will be thrusting his\her hips down and out of the streamline (wheel barrow effect) instead of thrusting the body forward.
- Use the tilting of the hands to avoid being too deep at the end of the dolphins.
- The head and body should break the surface of the water at the same time.
- For Breast PoPo's
 - Do not rush the dolphin – make it effective before moving on to the pull.
 - Minimize the drag created during the arm recovery – keep the elbows in tight to the body, cross the hands underneath and as close to the body as possible, and keep the palms facing the body before rotating the thumbs down after the hands pass the face.
 - Return to the streamline after the kick before starting the first stroke.
 - A slight body roll can be used to lead into the first stroke, but care should be taken not to create any downward pressure with the feet.
 - Care should be taken not to drop the head out of the streamline during the underwater pull.
 - The head should be down during the entire underwater pull and kick.
 - The legs must be brought together, and the toes pointed at the end of the underwater kick.
 - The underwater pull and kick should not be deep – the body needs to be at the surface of the water as the first pull is done.

Method 2 (Speed Focus) (500 yards, 20 Minutes)

Move the all lane ropes to the middle.

1. **Free PoPO's (set the beepers to .6):**
 - a. Push off the wall on a beep, use 4 beeps (2.4 seconds) for the push off and as many dolphins or flutter kicks desired, then use 2 beeps to do the pull out so as to clear the lane ropes positioned in the middle of the width.
 - b. Establish the full width by adding as many additional strokes as required to reach the wall with a lunge.
 - c. Do 4 widths using either open or flip turns
2. **Back PoPO's (set the beepers to .7):**
 - a. Push off the wall on a beep, use 3 beeps (2.1 seconds) for the push off and as many dolphins or flutter kicks desired, then use 2 beeps to do the pull out so as to clear the lane ropes positioned in the middle of the width.
 - b. Establish the full width by adding as many additional strokes as required to reach the wall with a lunge.
 - c. Do 4 widths using either open or flip turns
3. **Fly PoPO's (set the beepers to 1.5):**
 - a. Push off the wall on a beep, use 2 beeps (3.0 seconds) for the push off and as many dolphins desired, then use 2 beeps to do the pull out so as to clear the lane ropes positioned in the middle of the width.
 - b. Establish the full width by adding as many additional strokes as required to reach the wall with a lunge.
 - c. Do 4 widths using open turns
4. **Breast PoPO's (set beepers to 1.5)**
 - a. Push off the wall and complete the underwater pull and kick so as to clear the lane ropes positioned in the middle of the width.
 - b. Establish the full width by adding as many additional strokes as required to reach the wall with a lunge.
 - c. Do 4 widths using open turns
5. **Free StartPo's:** 4 widths from dives using the same techniques used during the Free PoPo's.
6. **Back StartPo's:** 4 widths from back starts using the same techniques used during the Back PoPo's.
7. **Breast StartPO's:** 4 widths from dives using the same techniques used during the Breast POPO's.
8. **Fly StartPo's:** 4 widths from dives using the same techniques use during the Fly PoPo's.

Method 3 (Training Focus) (Deep end - 600 yards, 20 Minutes)

- **Move the all lane ropes to the middle.**
 - **Everyone must have a working beeper.**
 - **Set the Beeper to 3.0 unless the swimmer has been able to cover the width in 6 seconds in which case, reduce the interval accordingly (e.g., 2.75 for 5.5 seconds)**
 - **On each repeat, the swimmer sprints so as to achieve the greatest distance possible in 6 seconds with the goal being the entire width (45 feet). After stopping to check his\her distance, the swimmer moves to the far wall, waits for the waves to finish and leaves again on the appropriate interval.**
 - **Break the pool down into three sections:**
 - **Deep end (to red cone): Lanes 5 and 6**
 - **Middle (between red cones): Lanes 3 and 4**
 - **Shallow end (to red cone): Lanes 1 and 2**
 - **Try and limit the waves to two except possibly in the shallow end**
1. Four sets of widths Deep end and Middle: 10 on :20 with :40 rest between (4:00)
 2. :05 interval between waves.
 3. Execution rules for each stroke:
 - a. Fly - at least 2 dolphins
 - b. Back – at least 1 dolphin and 4 flutter kicks
 - c. Breast – just the underwaters
 - d. Free – at least 1 dolphin and 4 flutter kicks
 4. The overall distance of the four sets combined is approximately 600 yards which, if done without rest breaks, is the equivalent of 6 x 100 all out sprint on 2:00.
 5. The lines on the bottom of the pool can be used by both swimmers and coaches as distance-reached gauge points just like they are used in the other two PoPo methods,

FLEXIBILITY

6. Rest breaks between sets are up to the coaches of each section based on the proficiency level and training needs of the swimmers.
7. The coaches of each section can choose the stroke content for the sets . Some examples are:
 - a. Each Set is a different stroke: Free, Back, Breast, Fly
 - b. All sets are the same stroke
 - c. IM: rotate through the strokes in IM order for each repeat.
 - d. Etc.
8. The coaches of each section can choose the content of each set for each swimmer individually; e.g., each swimmer does Prime 1 for all four sets or Prime 1 for 2 sets and Prime 2 for 2 sets
9. The coaches of each section are free to work with any swimmer during the course of the training session to achieve the optimal mix of dolphins, flutters, and strokes as well as critiquing the different components of a swimmer's PoPo. The coach can also customize the sets to match the experience level of the swimmers; i.e., the JO's can be more instructional while the deep end swimmers can be pushed hard. In this way, all the swimmers get the most out of the PoPo session.