Freestyle

Freestyle is a long axis stroke. We want to swim with our head in a neutral position, eyes looking down and slightly forward.
Imagine a metal rod going from the top of the head, down the spine and out the tail bone. We want to rotate the body on that rod/axis.
Today we are going to work on:

- The timing of the breath in relation to the arm cycle phase.
- The arm position to support the breath
- Maximizing the propulsive force of the arms and legs
- Shaping your vessel to resemble a speed boat, reduce drag and resistance and improve stroke efficiency.

Divide up equally among the lanes and have your gear ready at the end of the lane. We'll start the 5-minute warm-up on my go. Remember, enter feet first and circle swim counter-clockwise.

Freestyle Drills

1. One Goggle In, One Goggle Out

- **Focus:** Good body position and breathing properly.
- **Instruction:** Push off the wall face down, with one arm reaching forward and one arm down at your side. While kicking with fins, breathe toward the downside arm while keeping one goggle in the water. Don't move your arms and keep your torso rotation to a minimum. Practice this drill on one side at a time. If you breathe bilaterally, do the first 25 on one side and the next 25 on the opposite side. If you don't breathe bilaterally or find one side more difficult than the other, use this drill to practice breathing on both sides.
- **Key point:** Keep your eyes open! Ask the swimmers, "When was the last time you learned anything with your eyes closed?" Make sure the swimmers keep their eyes open and watching that one goggle stays below the surface of the water. There should be constant air exchange and no breath-holding.
- **Key point:** Don't over-rotate! Keeping one goggle in the water decreases the chance that swimmers will over-rotate to breathe.

2. Freestyle Rhythm Drill

- **Focus:** This drill helps swimmers with proper breath timing during the stroke cycle.
- **Instruction:** Start by swimming freestyle using only one arm. Keep the non-stroking arm by your side. Only breathe towards the opposite side of the arm that is moving. Your head should rotate enough so one of your eyes is above the water and the other is underwater. The cycle of the rotation of the head to breathe should be finished with the eyes looking at the bottom of the pool before the stroking arm begins the catch phase. Inhale and exhale in an even rhythm; don't hold your breath.
- **Key point:** Stay neutral! Keeping your head in a neutral position with your eyes looking directly down at the bottom of the pool, not forward or up, helps keep your body in an alignment that reduces drag during the propulsive phase of the arm stroke. This body alignment clears the path for maximum hip drive.

3. Freestyle Top Hat Drill

- **Focus:** This drill helps correct improper head and spine alignment and reinforces proper head and neck motion to breathe.
- **Instruction:** Place a hand paddle on the crown of your head, following the coach's instructions. Push off the wall and begin to kick with one hand holding the paddle on the

head. Once water pressure has been applied to the paddle, let go of the paddle. Begin to swim while balancing the paddle on your head. Once you've established a proper balance point with the paddle and your head, add breathing. After two successful lengths of the pool practicing this drill, eliminate the paddle and swim a length of the pool focusing on the feel of the identical pressure point of the water on the head.

- **Key point:** Align your head with the waterline. Proper head and body alignment reduces drag and resistance while swimming. Many adults were taught to swim with the water line at the brow or top of the goggles. But, science has shown that maintaining a neutral head and neck position in alignment with the spine is more efficient.

4. Freestyle Catch-Up Drill

- **Focus:** The catch-up drill focuses on body alignment, breath timing, and learning how to delay the start of the pulling motion until the body is in a proper position. It also helps swimmers feel like they are swimming downhill by having more weight—head, arms, and shoulders—in front of their center of buoyancy. This is also known as front quadrant swimming.
- **Instruction:** Push off the wall in streamline. Swim one natural freestyle arm cycle while the non-propulsive arm is extended forward. Once that cycle has been completed, the stationary arm then becomes the propulsive arm and performs the natural freestyle stroke while the other arm maintains an extended forward position. The arm out front does not begin the catch phase until the moving arm reaches its final forward position.
- **Key point:** Stay long. Only one arm should be moving at a time in this drill. Maintain a steady and smooth kick with the head in alignment with the spine and eyes looking towards the bottom of the pool. Maintain a long posture position. Your hands should enter the water in line with the shoulder—they shouldn't touch each other.

5. Freestyle Paddle or Fist Drill

- **Focus:** This drill focuses on an early positioning the hand, forearm and upper arm in the catch phase of the stroke to create early vertical forearm (EVF) and a high elbow pull. This drill will help swimmers create the most effective "paddle" to create propulsion with the proper alignment of the hand, forearm, and upper arm.
- **Instruction:** Demonstrate the proper grip of the hand paddles as you have seen in this drill's video.
    - **Phase 1:** Begin swimming freestyle while concentrating on presenting the surface area of the paddle as early as possible in the catch phase of the stroke. When performed correctly, with a steady kick to keep the hips stable, this drill will develop a correct forearm pitch through catch position of the pull and create maximum propulsion as you pull and push the water backwards over an anchor point.
    - **Phase 2:** After swimming with hand paddles, next swim with tight fists while concentrating on the same forearm pitch and early catch of the water.
    - **Phase 3:** Next, begin a length of the pool with four strokes of the fist drill and then open the hands to swim normally for the remainder of the pool length.
- Ask the swimmers, "How did your hands feel when you opened them up. Did they feel like garbage can lids?"
- **Key point:** Keep a high elbow during the pull phase. This drill helps reduce or eliminate the dropped elbow in the pull phase of the stroke. Studies have shown that arm propulsion is greatest when swimmers maintain as much force as possible on the water for as long as possible while pulling or pushing the water in the direction opposite to where they want to travel. The S-shaped pull is not as effective as pulling with the arms and hands moving straight backward.

6. Freestyle Head Tap Drill

- **Focus:** This drill gives swimmers kinesthetic feedback on proper breath and stroke timing.
- **Instruction:** While swimming freestyle, touch the crown or side of your head with the hand during the mid-recovery phase of each arm cycle and then slip your hand into the water in front of the shoulder while reaching forward. Briefly make contact on every cycle so a slow and methodical stroke results. The hand touch to the head must not take place while the swimmer has his or head in the rotated position to take a breath.
- **Key point:** Time the touch. If the touch to the head occurs while the head is rotated to inhale, the swimmer is either breathing too late or too long.

7. Vertical Kicking Drill

- **Focus:** The vertical kicking drill helps develop a proper kick containing an up-beat, down-beat, and hip-driven propulsive force.
- **Instruction:** Tread water with arms stretched across the surface of the water toward the sides of the pool. Begin flutter kicking while maintaining that vertical orientation. Your kick amplitude should be no greater than if you were kicking with your feet and legs inside a bucket. While kicking, keep your ankles floppy as if you were kicking off loose shoes. Your shoulders and hips should move as one unit as the hips shimmy to provide hip drive. Using core strength will help maintain the relationship of the shoulders and hips.
- **Key point:** While vertical kicking, kicking the legs and feet with the same force in both directions produces enough propulsion to stay at or near the surface of the water.

8. Streamline

- **Focus:** Swimming efficiency includes trying to cover the most distance in the shortest period of time from the dive and push off the wall by eliminating excess drag and resistance. Staying tightly streamlined improves efficiency and extends acceleration off the blocks and walls.
- **Instruction:** Swimmers should exit the pool and demonstrate their best streamline: Extend your arms above your head, place one hand over the other, and squeeze your ears with your inner arms. Align your head and spine. Squeeze your thighs, knees, calves, and ankles together tightly. A good streamline will eliminate as much surface area of the body as possible. Next, reach up and lengthen yourself by two more inches. (Try tightening your butt.) Now, get back in the water and hold onto the wall with one hand. Place your feet on the wall target, not higher or lower than your back end, with knees and toes pointing to the side of the pool or slightly toward the ceiling. Sink down below the surface of the water and release the hand from the wall. Dive the hand in close to the head as you get into the streamline position before pushing completely off the wall.
- **Key point:** Tighten up quickly. Get the upper body into a streamline position before the legs push off the wall. This creates a more efficient streamline resulting in better acceleration off the wall.

9. Underwater Kicking

- **Focus:** Kicking underwater allows swimmers to feel the propulsive force of the down-beat and up-beat mechanics of the flutter kick.
- **Instruction:** This drill is like the streamline drill we just completed. Push off the wall about 1 to 2 feet underwater and begin a very small but quick kick as learned in the vertical kicking drill. You should feel the propulsive force of both the down-beat and up-beat of the flutter kick. Use hip drive by keeping the torso—from shoulders to hips—all moving as one unit.

- **Key point:** Focus on tight streamline. Streamlining underwater reduces drag, and by adding a quick kick with proper technique, swimmers can extend their acceleration off the push.

10. Stroke Count Challenge

- **Focus:** The stroke count challenge drill is a combination of streamlining, underwater kicking, and swimming freestyle. This drill reinforces the application of mechanics and techniques learned from the progression of the freestyle drills.
- **Instruction:** First, have the swimmer swim one length of the pool and count their strokes. Ask each for their stroke count. Next, challenge the swimmers to cut two strokes off their original count on the next one length swim. Again, ask each swimmer to give you their stroke count. Give high fives or praise to those that reduce the count. Again, challenge the swimmers to reduce the stroke count by one more stroke over the next one length swim. You may hear a few moans and groans. Tell the swimmers that if they concentrate, use their brain, and pick something they learned from one drill and applied it to this next length of the pool, they will make the desired count. At the end of that length, ask the group "Who made it?" And finally, ask the swimmers to reduce the stroke count one more stroke. Remind them that if they have learned the importance of streamlining, proper kicking under water, and an efficient stroke, they can meet this challenge successfully.
- **Key points:** Reduce strokes, but don't decelerate. Swimming fewer strokes over any distance beyond an all-out sprint is a good thing, but don't lose momentum for the sake of reducing stroke count. This drill takes practice, but helps swimmers improve efficiency and energy conservation.

This concludes the freestyle portion of the clinic. Take a short break.

Backstroke

Begin the backstroke progression by having the swimmers stand on deck facing you.

- Like freestyle, backstroke is a long axis stroke. Swimming efficiently requires a neutral head position aligned with the spine. If the head bobs or sways, the body will follow, creating inefficiencies and increasing drag and resistance.
- The proper catch position of the arm is similar to the high elbow catch in freestyle. Demonstrate this relationship by showing the freestyle arm catch position leaning forward, and keep the same arm position as you move and lean backwards.
- Demonstrate the maximum bend of the elbow during the pull phase. Maintain straight lines from the shoulder, through both collarbones, through the other shoulder, and down to the elbow of the arm that is in the propulsive phase of the stroke.
- Coaches used to teach bigger body rotation than they currently do. During the underwater portion of the stroke, swimmers should keep their fingers pointing toward the side of the pool 6 to 7 inches below the water line. Finish the stroke at or near the hip, not below.
- No camel hump action is necessary to help create body rotation.
- Concentrate on an early catch and create a paddle with the hand and arms forcing water behind you, not towards the sides or bottom of the pool.
- Proper rotation is initiated with a shoulder driven straight arm recovery. Shoulders to hips stay as one unit maintained by core strength.

Have the swimmers enter the water and put on their fins. You're now ready to introduce the first backstroke drill.