

# List of Swimmers Drills

## Freestyle Drills-

1. **Spear Kick**-Streamline kicking with the head just at the surface of the water. This is done to promote a proper body position and to keep pressure on the feet. The head is to remain straight and still, with the face looking towards the bottom of the pool in the most streamline position.  
**Do not move the head.** When the swimmer needs to take a breath, the head will look forwards and take a quick breath with out letting the hands come apart.
2. **Shotgun Barrel (SBK) Kicking**- Kicking on one side with the chin over the shoulder to promote a proper hip rotation. *Swimmer should be swimming on their side like a fish. With the lead arm in front, thumb down and the other arm at their side with the wrist bent up, elbow straight, fingers pointing to the sky.* When in this position the swimmers should have one eye above the water and one eye just below the surface of the water.
3. **Right Arm or Left Arm Free**- This drill can be done one of two ways either with the non stroking arm up or down depending on what we are working on.
  - If we are trying to develop power in the back portion of the stroke then the non-stroking arm should be in the front of the body, and *the swimmer should breathe to the side of the body that is doing the work.* This drill develops recovery speed and power. The hand should finish fast and snap the back of the stroke past the hips.
  - If we are trying to work the catch phase, hip rotation, or trying to develop a better feel for the water then the non-stroking arm should be at the side of the body to simulate an exaggerated hip rotation. The swimmer should breathe to the side of the body in which the arm is down, as soon as the hand is about to enter the water. This drill helps to develop a better feel for the water and correct entry positioning of the hands. The correct entry is right in front of the shoulder, not in front of the face.
4. **Tip Drill**- We will use this drill in warm ups, in warm down, in stroke sets, and pull sets. This drill promotes a high elbow recovery, proper hip rotation, correct breathing, and most importantly proper balance in the water. The swimmer should swim Freestyle concentrating on sculling deep, deep water during the pull phases, with the elbow leading the hand during the recovery phase, promoting the high elbow recovery that is so

crucial in Freestyle. The object of this drill is to have your fingers drag along the surface of the water. If done correctly then the hand and the forearm will form a triangle with the water. The hand should be completely relaxed from the elbow down to the fingers. The elbow should appear to be pointing to the ceiling over the head and the hands should enter the water index finger first just at or slightly outside the shoulders, NOT in front of the face.

5. **Hand Drag Drill**- a variation on the “tip drill” the swimmer will swim Freestyle and drag their whole hand under the surface of the water similar to “Doggie Paddle” *The swimmer is actually pushing the water with the back of the hand (the whole hand) under the water.* This is used in conjunction with the “tip drill”. It is slightly more difficult than the “Tips Drill”.
6. **Polo Drill**- This drill is essential for hand speed and leg power. This drill should be done at full speed or even with fins for added benefit. The arms will take shorter strokes than normal and will appear to rush the stroke, driving forwards and trying to grab deep water. The hands must be kept moving at a high rate of speed or the swimmer will *sink* down in the water. The swimmers have to keep a very fast kick, and their head should be out of the water paying attention to where their hands enter the water. *Their head should be completely still and held high to keep the pressure on the legs.*
7. **Double Touch Drill**- *Swimmers should spend most (2/3rds) of their race on their side not their stomachs.* To accomplish this one helpful drill is “double touch” the swimmer is to swim Freestyle and at the back of the stroke the swimmer should concentrate on finishing their stroke with their hands touching the water behind their opposite hip. This is an over exaggerated rotation of the hips in the Freestyle.
8. **Catch up Drill**- This is a great drill to develop DPS or distance per stroke. The swimmer will leave the wall in a perfect streamline position and will swim one arm at a time. When the stroking arm has completed a full cycle it will “catch up” to the other arm. The catch will appear that the stroking hand actually touches the other hand and glides along the top of the opposite hand before the next stroke begins. The swimmer can maximize the benefits of this drill by counting the number of strokes they take, the fewer the better.

## **Backstroke Drills-**

1. **Streamline Kicking-** *To try and develop power and speed while decreasing the resistance of the body on the water.* This Drill can be done one of two different ways depending on what the swimmer is working on.

- If the swimmer is working on proper head positioning, and body alignment, then the hands are up. The swimmer should kick backstroke kick on their back while maintaining a perfect streamline, locking the elbows straight, and by pointing the fingers up towards the sky. By pointing the fingers to the sky the swimmer locks the elbows straight which decreases resistance in the water and forces the head to remain still.
- *The head should be in a relaxed comfortable position resting on a small pillow of water. The water should pass directly under the earlobes, with the head remaining relaxed. The tops of the thighs and hips must be held in a high position for the stroke to be efficient.*

If the swimmer is training the hip rotation (for added torque and power) then the swimmer can kick on their backs with their hands at their sides and snapping their hips as fast as they can from side to side. The swimmer can check to see if they are doing this drill correctly by looking down their arm, and checking to see if they can see their hip. If the hip and the whole length of the arm including the wrist are visible before the next hip “snap” then the drill is being done correctly.

2. **Right Arm or Left Arm Backstroke** –Swimming with one arm is a great way to work on the mechanics of the recovery. The hand should enter the water behind the shoulder pinkie first, sweep down and out towards the bottom of the pool, the hand should then accelerate and pull the water up towards the hip, then throwing all of that water towards or past your feet. The hand shall exit the water thumb, or back of the hand first, reaching for the sky with a straight elbow, and finally drive back behind the ear. The swimmer should take off the wall with a backstroke start, using small powerful fast underwater fly kicks, pop-up to the surface and concentrate on working the one arm throughout the lap. This drill is great for exaggerating the hip rotation. The swimmer should rotate the side of the body that is not stroking as if their arm was doing the work. Rotate to both sides.
3. **Catch Up Backstroke-** One of your more difficult drills to do. The swimmer must start with a backstroke start, work the breakout portion of the race, pop-up to the surface, and start swimming with *both hands overlocked pointing straight up to the ceiling so the arms are perpendicular to the water.* The swimmer will take one powerful stroke

and must slap the other hand to start the next stroke. This drill develops power and hand speed. It may be helpful to do this one with fins.

4. **Sit and Spin or RPM Backstroke**-*This drill activates all of the fast twitch muscle fibers that are lying dormant. These fibers must be activated well before a taper is implemented.* For this drill the swimmer lies with their body higher than normal in the water and tries to rush the arms to move as fast as they can possibly move. Mechanics are not the object here, **speed** is! Again this drill can be made more beneficial by adding small cut fins (zoomers).
5. **Recovery Drill** – This drill is to help develop the proper recovery positioning with the body and the hands. The swimmer takes off the wall like all other backstroke drills, except when the swimmer gets to the surface then the swimmer lowers their hands to their sides. The swimmer then begins the recovery of the stroke by leading with the thumb or the back of the hand. *The swimmer continues the recovery until the hand is facing directly overhead, the swimmer then gently places the hand back down in the water at their sides (where the recovery started).* This is then repeated with the other hand, the whole time trying to over rotate the hips so that the swimmer is on their sides.
6. **Exaggerated roll Drill**- This drill helps the swimmer become aware of where the hips are during the stroke. *The swimmer swims a normal lap of backstroke while over rotating the hips to ensure the swimmer is swimming at least 2/3rds of the race on their sides.*
7. **RALA x 3 Drill**-One arm backstroke for three strokes, then three strokes using both arms, reaching for the sky, and sprinting the three middle strokes. Then go back to the three strokes with the other arm. *There is a pattern 3 right-3sprint middle-3 left (R,R,R-L,R,L-L,L,L)*
8. **Lane Line Pulling Drill**-This drill is trying to develop the proper technique of the scull portion of the backstroke. The swimmer will swim one arm backstroke right up against the lane line. The swimmer will enter the hand in the water behind the shoulder pinkie down. The swimmer will then grab the underneath of the lane line (above their head) and will then proceed to pull the lane line down towards their feet simulating the full and complete stroke. This drill should be done with both arms so they are both trained equally. The swimmer can maximize the benefit of this drill by rolling the opposite shoulder and the opposite hip. Hip rotation is the key to a fast backstroke.

## **Breaststroke Drills-**

1. **Breaststroke kick on your back**-*The best drill there is to promote a proper kicking motion for the breaststroke kick. The swimmer should be lying on their backs hands in a streamline position, elbows locked, and fingers pointing towards the sky. The swimmer should be looking back towards their feet so they can look at their knees. The swimmer should try and take a breaststroke kick and kick themselves in the butt, snap the feet at a downwards angle to sweep deep water, and finally try and clap the heels together at the surface of the water. If the knees at any time break the surface of the water then the swimmer is not moving the feet around the knees. They should not see the knees break the surface of the water.*
2. **Breaststroke kick on you stomach (no board)**- This drill is the same as kicking breaststroke with a board. The swimmer must keep the head held high and still. Have the swimmer take their hands and overlock them so that the swimmer is in the streamline position. *Try not to move your hands while kicking, this will keep all of the pressure on the legs.* Try and kick one complete kicking cycle per second.
3. **Knuckles to Palms drill**- Have the swimmers start the lap as if they were going to do the kicking drill above. *Think of swimming breaststroke, with straight locked elbows, sculling in and out.* Have the swimmer concentrate on swimming with their hands together thumbs down (knuckles). As the swimmer starts their outswEEP have the swimmer take the hands and press quickly outwards (palms out) and then quickly press the hands back together. This drill should look similar to normal breaststroke except that the arms should not bend.
4. **Cobra Drill**- *The swimmer is trying to develop power in the kick and a lunging motion in the front of the stroke: which is referred to as "pressing the T".* Have the swimmer do a normal pullout but on the first stroke have the swimmer concentrate on bringing the hips up under the shoulders so the swimmer give the impression that they are cobra ready to strike. The swimmer then should drive their upper body forwards and press the chest towards the bottom of the far end of the pool. At the completion of the "shoot" the chest and the shoulders should be lower than the hands and the hips as if the swimmer was going downhill. The theory here is the higher you can get over the tops of the elbows the farther you can get out on the lunge portion of the stroke. Have the swimmer think about bumping a volleyball; this will snap the elbows straight forcing a faster recovery. *This drill is the same drill as the sea horse drill.*
5. **Breaststroke Arms with a freestyle kick**- *This drill is primarily used as a kick set although it is a great drill for developing hand speed, or the turnover rate of the hands, and the "shoot" in the recovery of the breaststroke.* The

swimmer leaves the wall in a streamline position and starts kicking freestyle. As the swimmer approaches the surface of the pool they start to take breaststroke sculls one after another. This process must be repeated quickly as if the swimmer does not kick or move the hands fast enough then they will sink down in the water. This is a speed drill and must be done at all out pace or it is not effective. **Tip:** *If the swimmer can increase the kicking tempo at the top of the stroke then the drill will be easier.*

6. **Butterfly kick with breaststroke arms**- Very similar to the previous drill except that the kick is a butterfly motion not freestyle. The tempo of the kick has to be fast, and the body motion is also key. The swimmer should think about the body action and the “wave” like motion similar to the butterfly. This popping up and shooting the hands out in front will speed up the recovery and set up the next stroke. Again remind the swimmer to bump a volleyball this will speed up the recovery and return the swimmer to the crucial “base position” faster.
7. **2-3-4 Kicks and one glide**- *This drill is working on the recovery speed of the feet and the legs in breaststroke.* The swimmer should take 2-3-or 4 kicks under the water one following immediately after the other. A fast tempo of the kick is important to set the body up for the next stroke. After the allotted amount of kicks have been completed have the swimmer take one big arm pull. The wider the pull the more water the swimmer can use to “pop up” on top of when it is time to breathe. As the swimmer is taking the breath the swimmer must concentrate on keeping the head in line with the spine, looking down. As the swimmer is recovering the hands just at or right below the surface of the water, have them bump the volleyball, as this will increase the snap motion and speed up the recovery. *At the end of the extension the swimmer should think about pressing the “T”.*

# **Butterfly Drills**

1. **Butterfly kick on your back-** *This promotes fast feet and fast hip motion which is needed in order to be a fast butterflyer.*  
The swimmer should leave the wall using a fast “shimmy” kick, coming from the core of the body, on their side, rotate to their back and surface as if it were a back stroke race. Have the swimmer maintain a streamline position, and kick small fast kicks on their backs.
2. **Butterfly kick on your side with one arm pointing towards the sky-** *This drill promotes a fast hip movement and forces the swimmer to do the kicking motion correctly.* The swimmer will swim with one arm above their heads lying their ear on the arm as if it were a pillow, while the other arm is at a right angle to the body pointing to the sky. If the swimmer does not perform the kick correctly of the swimmer is not kicking fast, or hard enough then the swimmer will find that they will sink and the drill will be extremely difficult to do. It is almost imperative that the swimmers wear their fins during this drill.
3. **Triple Kick Butterfly-** *This drill promotes not only a fast hip movement but proper breathing as well.* The swimmer shall leave the wall in a perfect streamline. The swimmer will take three fast kicks under the water before surfacing for the breath. Remind the swimmer that it important for them to breathe in the power phase of the stroke, as the hands are beginning the insweep. The swimmer must complete the breath and have the head lowering towards the water as the hands are finishing the stroke out away from the hips. The recovery must be with straight arms not bent elbows. If the swimmer has a habit of bending the elbows in the fly it could be a result of a few problems:
  1. Lifting the arms out of the water, the arms should not be lifted. The arms should finish with a snap out and past the hips if this is done correctly then the momentum and the Pressing of the “T” will be what throws the arms in front.
  2. Leading the recovery cycle with the thumbs. If the swimmer is rotating the arm in a way that they lead with their thumbs then the arms will bend. The Trapezius muscle at the base of the neck will tighten up, causing a drastic loss of energy, and tiredness early on in the race.
  3. Improper breathing. If the swimmer breathes to late in the stroke then the swimmer is forced to lift the arms, and lead the recovery with the thumbs pointing forward. If the swimmer can work on breathing during the power phase of the stroke the other two problems seem to diminish somewhat.
4. **One Arm Butterfly-** The swimmer will do this drill with fins so that they can maintain proper body positioning in the water. The swimmer will leave the wall in the proper streamline with small fast kicks, as the swimmer reaches the end of their breakout they will take a full stroke with both arms. At the completion of this stroke the swimmer will recover the arms to the streamline position and continue with just the use of one arm. This will enable the

swimmer to concentrate fully on the three phases of the butterfly stroke. This drill should always be done with both arms: 6 x 50 on :55 (3 Right – 3 Left)

5. **Rala x 3**-Very similar to the one arm drill above except that there are three transition strokes in between the right and left arm strokes. The swimmer will take three strokes with the right arm, and then the swimmer will take three strokes with both arms, then the swimmer will take three strokes with the left arm only, the swimmer will then go back to the right arm. This will enable the swimmer to concentrate on pulling with one arm at a time and mixing in some speed work with using both arms as the transition.
6. **Heads up fly** –This drill will allow the swimmer to understand how crucially the body position plays a role in stroke efficiency. The body will follow the head and the head must be in a relaxed state when not breathing. Have the swimmer swim a series of 25's starting with the head held high out of the water trying to see the hands enter the water. As the swimmer realizes that it is easier to swim with the head relaxed let them try and lower the head on the second lap, a little more on the next and so on until the head position is in line with the spine.
7. **Clap Drill**- This drill is designed for the swimmer who can not swing the arms around the body all the way with out hitting the water. There are two places in which to clap, I suggest mastering one before the second, and both individually before combining them into one drill. Have the swimmer swim normal butterfly down the pool when the hands swing around to the front of the stroke have the swimmer “clap” their hands in front of their face to ensure the swimmer got the proper length out of the stroke. The other way is to have the swimmer “clap” the hands underneath the body to assist them in the acceleration of the hands, and to promote a wide outswEEP in the front of the stroke.



## **Race Preparation**

Race preparation has to take place throughout the year and can be fine-tuned during the taper. Race Preparation has many facets from the way you approach your race, to knowing the pool and the flags, to visualizing the race in your head over and over. Race preparation is an advantage that you should try and use. It has the ability to move you from the bonus heat, to finals, if effective.

Let's start with what a swimmer can do during the season. A swimmer must know what their strengths and weaknesses are, and their opponents as well. If a swimmer is swimming against somebody with noticeably better turns, they should realize they have to be leading the race heading into the turn, they cannot afford to try and catch up on the last lap. This type of work should be covered in practice, always work fast turns, always! Things like how many fly kicks should you do off of the first turn in backstroke? How fast is your 50 breakout? How do you know when to start the kick and stretch phase of the breaststroke pullout? And what is your breathing pattern in the 100 butterfly? These are all examples of stuff that the swimmer should know, and the swimmer should be practicing on a daily basis in practice.

"The power of the mind." How many times have we heard that? If the mind believes that the body can go a 55.80 in the 100 free, the swimmer can visualize the 55.80 in their mind over and over. The whole race, from walking up to the blocks, to nailing the first turn, the under water works and the finish, then the swimmer should be more relaxed going into the championship meet.

In order for the swimmer to have their personal best swim, they need to be completely relaxed. Their body should feel super loose, almost like Jell-O, although their mind must be sharp and focused and concentrating on the task at hand.

**Tips for fast Freestyle**

Fast feet equals fast hands. Elbows should face the sides of the pool during the pull, catch, and power phases of the stroke. Never point the elbows behind you, this is called a dropped elbow and it hinders your stroke efficiency. The elbows should face the ceiling during the recovery phase of the stroke. Swim on your side, 2/3rds of your race is spent there so over rotate your hips. Exhale under the water so you can circulate oxygen to the rest of your body easier. Be first off the blocks, out of the turns and have the smoothest finish possible. Your mind is focused but your body is totally relaxed and loose.

**Tips for fast Backstroke**

Fast feet equals fast hands. Straight elbows on the recovery. Drive the hips from side to side developing torque and power. Enter the water pinkie first, drive down and out, up and in towards the hips, and past the feet. The head position must be relaxed and still. 3-5 fast fly kicks under the water and pop-up fast, race all the way to the finish by throwing the head and shoulders back at the point of the finish.

**Tips for a fast Breaststroke**

Keep the head in line with the spine during all phases of the stroke including the pullouts. Snap the back of the kick by clapping the heels together. To give added benefit and speed to the recovery portion of the kick have the swimmer take an “upbeat” fly kick, by bringing the heels to the surface of the pool. Be careful not to kick the feet down, as this will be interpreted as full fly kick and a disqualification will result. Snap the elbows, or bump volleyball to speed up the recovery. Always press the “T”, this is the most crucial thing to remember as it forces the swimmer to be in the most balanced, least restrictive, most energy conservative base position.

**Tips for a fast Butterfly**

Always remember that the body action and power comes from the hips and the core of the body. At the end of the extension, the beginnings of the out sweeps, the swimmer must press the “T” in order for the chest to submerge farther down in the water than the hands and forearms. Think about pressing the water down past, and away from the hips. Keep the legs together with the toes pointed inwards, to assist the kick. Always think about kicking in two directions: down, and up; to many swimmers only kick down. Think as if you were punching holes in the water with the feet. Always recover the arms with straight elbows, this forces correct body positioning in the stroke. Breathe in the power portion of the stroke to avoid having to lift the whole upper body out of the water or the bending of the elbows during the recovery.