Six Steps to a Better Breaststroke Kick

By Terry Laughlin

Among all the strokes, breaststroke is unique in one regard. In all other strokes, the upper body contributes 60 to 90 percent of propulsive power with the legs playing a fairly minor role, in some cases doing little more than stabilizing the body or assisting in rotation. In breaststroke the relationship of arms to legs is turned on its head. For "born" breaststrokers with a great natural kick, the legs may provide up to 80% of propulsion. But even for "made" breaststrokers – those who don't walk with feet turned out – the kick accounts for at least half the propulsion.

Many of these non-natural breaststroke swimmers focus on the stroke in order to balance their Individual Medley swimming, but many swimmers aim to master it simply on the merits or for a new challenge. For all those not born to the stroke, the kick is always the most challenging part to master. The key is to use your core body, and not your legs, as the source of your power. Here's how to do it.

1. Start each stroke cycle in full-streamlined extension, slipping your fast-gliding body through the smallest possible hole in the water, completely under water where drag is far less than at the surface. Near the end of your glide, begin to angle slightly upward toward the surface.

2. As you break through the surface, anchor your hands "at the corners" and use your abs to bring your hips toward your hands, rather than trying to move your body forward solely by pulling wirh your arm muscles. This recruits powerful core muscles into the propulsive effort and links your upper and lower body in a cohesive synergy.

3. Use your arms and abs to draw your fully extended bodyline forward. All the energy for this action comes from the up-and-down movement of his torso. The key efficiency skill during this phase is to "sneak" your legs forward. Since they are moving opposite to the direction of propulsion, it's critical they be kept inside the body's "shadow."

4. This is the first moment when natural breaststrokers, with their duck-feet, gain a great advantage over the rest of us. As the legs reach their maximum flexion, the heels turn in and toes turn out to provide maximum purchase on the water. The inside of the feet will provide most of the backward thrust that drives the body forward. The hips are poised to launch the body forward to the next stroke.

5. The kick's propulsive phase is perhaps one of the most misunderstood among those learning breaststroke. The feet do not kick out and back together again. From the point where the feet "grab" the water high behind the buttocks, they should drive directly back, with feet circling just outside the knees, using the glutes and quads for power. The closest physical analogy for this action is that it's very close to jumping out of a squat into a dancer's plie.

6. As you finish the kick, it's important *not* to simply let the feet drift together or finish somewhere out in space. Drive the feet together forcefully, as if you could "clap" them together. Point your toes and figuratively "squeeze all the water out from between your legs." As you do, your body is once again in its starting position with everything from fingertips to toes squeezed into the longest, cleanest line you can imagine. Lean on your chest throughout the glide to elevate your hips and set up the "short-axis" rotation that will power the next cycle. After you've maximized your glide and before losing too much momentum, you separate the hands and slide them toward the corners to start the whole process again.

Happy Laps!

Faster Breaststroke

How can you improve fastest in your breaststroke races?

-Fact: 40 % of the 200 short course breaststroke is composed of the start and 7 turns.
-Fact: The faster Olympic swimmers hits the water at 8 mph (11.9 ft/sec) (3.6 meters/sec.) -If they could continue to swim at these speeds they would complete 50 yards in 12.5 sec. --The average 25 sec. per 50 yd. masters swimmers hits the water at around 5.7 miles per hour (8.3 ft/sec.) (2.5 meters/sec.). For a 50, this would be 16.7 sec.
-The average 30 sec per 50 yards master swimmer hits the water at around 4.7 miles per hour (6.9 ft/sec.) (2.1 meters/sec.). For a 50, this would be 21.4 seconds.
-Fact: The fastest breaststroker in the Olympics swims at 1.64 meters per second. Most masters swim at about 1.1 to 0.8 meters per second. Therefore most people swim breaststroke 2 to 3 times slower than the dive speed.
-It's not how fast you swim but how fast you slow down.

Breaststrokers are usually more heavily muscled than swimmers of the other strokes, and as such have more resistance from the water. Additionally the stroke is swam more in and under the water. This makes you slow down faster than the other strokes. Researchers have proven that Breaststroke takes more strength and more energy (calories) than the other strokes (yes even butterfly)! If velocity increases, the resistance increases by the square, and energy used increases by the cube of that amount. Thus, you must never try to overcome the resistance that you create by going faster. You must focus on eliminating resistance, not overcoming it. Therefore improving your streamlining and reducing areas that slow you down are very important for Breaststrokers.

Easiest ways to eliminate resistance
-On the dive go through one hole with no splash, this is worth 6 feet!
-During the underwater glide, put arms *behind* head in a tight superman streamline, not next to ears. This is worth 2 feet per length, or as much as 16 feet in a 200 short course race!
-On the underwater pulldown, when hands reach the hips, move hands between legs and shrug shoulders together. Worth 1 foot per length.
-On the first stroke after underwater pullout, time arms so maximum width of outscull as head breaks water surface- worth .2 sec. per length. The hands on the out ward scull go just barely past the shoulder width, on the insweep there is no pulling back, just a scull inwards around the chin area. Pulling too wide or too far back causes more resistance slowing you down.
-During the insweep shrug shoulders up and together, to reduce frontal resistance.

Put head down between arms and glide with head underwater during kick. Your kick portion is faster underwater than on top fighting the water. Kick back and down, almost like the down kick in butterfly but with the feet grabbing water. The toes should point to the bottom of the pool not backwards. This kick has more forward propulsion and causes the hips to rise, just like in butterfly. If you kick correctly, your hips will rise out of the water, and you can recover your legs with far less resistance. This kicking style is worth 2-4 seconds per 100.

Shave down!