Monthly Manager Moments – Article #4

Breaststroke Basics

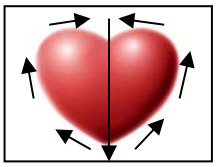
Last month, we looked at the backstroke and some of the details that should help you to perform it better. This month's article takes on quite possibly the most difficult stroke that you'll learn – or at least attempt to learn: the breaststroke. Breaststroke is the slowest of all the competitive strokes, because of the increase in drag, and its short arm pull. It's performed in the prone position, and the body is considerably more diagonal than either crawlstroke or backstroke. Doing this stroke incorrectly is not so hard, but doing it properly is very difficult indeed! Why? Because each component is difficult to master on its own, and then you have to combine them all too! Let's break it down.

Kick -

First, you must learn to do the whip kick. It's not the frog kick, nor the scissors kick – both common errors in doing the breaststroke. The whip kick is named after the whipping motion that your legs and feet make during the power phase of the kick. Whip kick has 4 phases – glide, recovery, catch, and power phase. The kick begins with a glide: your legs are straight, together, and your toes are pointed. Glides are for resting and preparing for the next stroke. Relax your legs during the glide. As your momentum slows, recover your legs simultaneously by flexing at the hips, and lifting your heels toward your bottom. Lift your heels as far as your range of motion will allow. If you've got good flexibility, this should be within a couple of inches of your bottom. Recovery should be slow, because the motion is in the opposite direction of propulsion. A super fast recovery can actually make you go backwards. Your heels should be just below the surface, not more than a couple of inches down. Flex at the hips just enough to keep your feet underwater, but no more, since your thighs will create a "bulldozer effect." The more your hips are flexed the more they'll be perpendicular to your forward motion, like the blade of a bulldozer. Whip kick has much more drag than flutter, because of this hip flexion, as well as the separation of your legs (form drag) into the catch position. That brings us to the next part – as you recover your legs toward your bottom, dorsiflex your feet (hook them) to prepare to catch the water with the inside of your feet. Your knees stay within the width of your shoulders, and your feet whip outside of your knees during the power phase. In the catch position your heels are very close to your bottom, knees are shoulder width apart, your feet are outside of your knees, just below the surface, and are dorsiflexed. Immediately after catching the water with the instep of your feet, whip your feet around and back forcefully, pointing (plantarflexing) your feet as you do; essentially throwing the water back with the inside of your feet. It's like the follow-through when throwing a ball; where you snap your wrist at the release point. Relaxed ankles are a must with this kick, because the whip is not just the motion of straightening your legs to glide, but the catch and throw with your feet. Use this phrase and practice with a kickboard: glide – recover – kick – glide – recover – kick – glide, etc. *Whip kick is VERY difficult to master, and it's not just recreational swimmers who struggle with it, plenty of lifeguards do as well!*

Arm motion -

If whip kick hasn't frustrated you, let's add the next component – the arm motion! The arm motion has 5 components: glide, catch, mid-pull, finish, and recovery; and forms the outline of a heart. Starting with the glide (the tip of the heart) – your arms are straight, palms down, thumbs overlapped, fingers pointed. Catch the water by flexing your wrists and starting to pull the water out and back, in a small sweeping motion; following the heart pattern.



This motion is small and does not extend past your shoulders. Pulling your hands all the way back to your waist is one of the most common errors with breaststroke. At a point just in front of your shoulders, you'll reach the transition between the mid-pull and the finish of the arm stroke. This is the point of most efficiency, where you're pulling water nearly straight back. Continue to sweep your hands to complete the heart pattern. The hands come back together under your chest, and are usually palm up when they touch together. This completes the heart shape. Most swimmers will then roll their hands back into the pronated (palm down) position as they recover their arms and extend them back into the glide. This is what I call "cutting the heart in half" and you can see it by the arrow through the center of the heart in the picture above. As you move your arms through this, much of the pattern is plagued with drag, and the only really efficient part (between the end of the mid-pull and beginning of the finish) is very short. Overall - the arm motion produces considerably less propulsion than the kick; which is very unusual in swimming. Now practice the heart pattern draped over the edge of the pool, standing and bent over at the waist, or in the water using a pull buoy between your legs. You can use the phrase: "draw a little heart, and cut it in half" to help you develop the pattern.

Breathing and Timing -

But wait, there's more! As promised, every component is challenging, including the next one, the breathing and timing. The timing for the breaststroke is usually described by the phrase: pull-breathe-kick-glide. However, it might be more descriptive to write it like this: "pull - b r e a th e – kick - g l i d e," because the actual cadence more closely matches the words stretched out this way. There are at least two other phrases that accurately describe the timing: "pull your head up, kick your head down and glide" or "scrunch it all up, stretch it all out and glide." Before I get specific, remember the arm pattern that draws a little heart, then cuts it in half, and that the pattern is completely in front of your chest? The incorrect pattern of "kick-pull, kick-pull" is the most common error in the timing – where the arms pull all the way to the waist, hesitate for a second and sweep in a large circle originating at the waist. The correct glide in breaststroke is with arms extended in front of you (the tip of the heart). The arms don't stop moving anywhere else in the pattern when done correctly, and they NEVER go past your chest. A few specifics: start in the glide position (stretch it all out); start the pull, and recover your legs just after starting the pull (scrunch it all up). When you finish drawing the heart and start to extend/recover your hands back to the glide, your legs should be in the catch (you've finished scrunching up), and now begin their whip back to their glide position. You'll essentially "kick your hands back in front of you" then stretch it all out and glide again. The first two phrases that I listed above describe the timing of the breathing, which is head straight up to at least chin level. "Pull-breathe" or

“pull your head up” means that at about 2/3 of the way back on the arm pull your head is up and you take a breath. Your head submerges again as you kick (kick your head down).

Body position –

I already mentioned that this is more diagonal than crawlstroke or backstroke, due to the hip flexion required for whip kick. Of course, it’s more complicated than that! Breaststroke has morphed a lot over the last 10-15 years, and has incorporated some elements of butterfly – primarily undulation, or wave action of the body. By pressing down the chest during arm recovery and pressing down the hips as you do the whip kick, faster times were achieved. For awhile, swimmers were lifting their hands out over the water during recovery and diving them back in for the catch. This position works well with the undulation of the chest and hips, however that trend has faded to where the hands break the surface some, but are not lifted above it. Still, a hands recovery position that is higher than traditional breaststroke remains today. See photo of Michael below.

Good luck with breaststroke! You’re gonna need it!

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Have a specific stroke question? Send me an email and I’ll be happy to answer it.