



Faster Breaststroke

Its all about the underwater streamline

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!
