

## **Breaststroke**

Breaststroke is the slowest of the four strokes due to the glide or streamline portion, when no action is taken that contributes to forward propulsion. Extra diligence is needed to minimize the resistance throughout the stroke. It can be done. You just have to work consistently at every detail.

Learn where drag takes place in your stroke and find techniques to reduce that drag. Doing so will leave you feeling stronger, faster, and slipping through the water in a smoother and easier fashion.

### **The Body Line**

“The key to fast breaststroke is to eliminate resistance in every part of the stroke and in your body position—horizontal with just a little undulation above and below the water,” says Olympian and Go Swim coach Glenn Mills. “Master streamline and you minimize resistance.”

Mills hits on a key point—maintaining a horizontal position. Too much up and down creates resistance. The larger the surface of your body you expose to the water, the more resistance you create.

Each stroke in breaststroke should start and end in a streamline, which, ideally, is just under the surface of the water. You want to feel like you are slipping through the water, not muscling through. Maintaining a good bodyline and working that streamline, will get you into the magical rhythm of the stroke.

**Streamline is essential**—in all phases of your stroke

During the pullout of your starts and turns

In each stroke, streamlining into full extension

At the finish of your race, streamlining into the wall

What failure to streamline does to you

Resistance, resistance, resistance

Inability to maximize your pull or your kick

Inability to keep your hips high, causing imbalance and ... resistance

### **How to improve breaststroke streamline position**

Know the elements of the perfect streamline: no gaps, flat back, full extension, legs held tightly together, toes pointed, arms fully extended—picture an arrow shooting through the water

Keep the area between your belly button and pelvic bone taut—pull in your rib cage

Pinch those butt cheeks!

Practice in front of the mirror

Transfer that to the pool—every time you leave the wall.

Improve your core with strengthening and stabilization exercises

Streamlining by race

Hold your streamline longer in the 200 breaststroke, slightly less in the 100, and barely in 50. Even though the glide is minimal in the 50, you must finish each stroke in full extension!

## The Head

If your head isn't getting in the way of thinking too much on breaststroke, it can get in the way of your treasured streamline if you aren't careful. The head does not move in breaststroke. Keep the back of the head and the neck lined up with your entire spine. Hinge from the hips, not your neck.

Think of a connection between your head and hips. As Mills notes, "You need to connect your hands, head and hips as you go to air and as you go to streamline." If your head is out of alignment—by even 1-2 inches—your hips compensate by riding too low or too high. You will lose your bodyline, ruin your streamline and create resistance instead of minimizing it.

### About your head position

Keep your head in line with your spine—don't move it

Focus your eyes at the pool bottom during the glide

As you rise to breathe in the stroke (using shoulders and hips, not your head), the eyes peek up a bit – maybe 1-2 feet out in front of you, but not to the pool end. Keep that head lined up with the neck, which is lined up with the spine.

Hands and head need to hit full streamline at the same time

## The Front End—Hands, Arms, Shoulders

The front end

Your front end consists of your hands, arms, elbows and shoulders. Yes, breaststroke is leg driven, but ignore the front end at your own peril. Along with providing additional propulsion, your hands and arms lead your body, break the water and create an opening for your head and shoulders to pass through, contributing significantly to your streamline. The shoulders shrug to narrow your upper body width during the in-sweep. The hands, arms and shoulders work with the hips to create a pocket of air in which to catch your breath.

### About the front end of breaststroke

Get your thumbs down and palms out at end of your glide, ready to start the next stroke

Keep fingers loose, removing tension from your hands

Your hands and forearms act as one unit—pretend you have a steel plate running from your palms to your forearms

When transitioning from out-sweep to in-sweep, "turn the corner" near your head

**Don't let your elbows collapse**—elbows should be locked on the out-sweep and into streamline from the shoot through and high on turning the corner and the in-sweep

Shrug your shoulders and pull your elbows in towards each other on your in-sweep and shoot-through. **Keep your elbows in front of your shoulders—don't let them get trapped under you.**

As soon as your chin is over your hands on the in-sweep, immediately drive your hands forward for the shoot-through

According to both world-class breaststroke coach Jozsef Nagy and renowned sports physiologist Genadijus Sokolovas, the best hand position on the shoot-through and recovery is palms down. Second best, prayer recovery. Worst position is palms up. "If you recover your hands up, this slows your recovery because you have to flip them to start your stroke," Nagy says.

## The Middle—Hips

The hips get a lot of press in freestyle, backstroke, and butterfly. Many swimmers, however, are surprised to learn just how much their hips play a part in successful breaststroke. Your hips are a fulcrum point in breaststroke. When you're breathing, your hips assist by driving down and forward. Coupled with the shoulder shrug in-sweep, they provide a pocket in which to catch that much-needed breath, without having to lift your head. After the in-sweep, and as the hands shoot forward, the chest drives down and the hips return up to or near the water's surface. The hips are also key in your kick: it's important to keep your kick behind you, and not drive your knees too far forward of your hip line.

### Let your hips play the role they need to

Keep them high in the stroke as much as possible. *This really comes into play after your arms recover and you move into streamline. Drive your chest into the water in that streamline so that your hips rise.* This helps you better set up for a stronger kick.

The second role is in the middle of your stroke. When you lift to breathe, your hips should drop down and forward allowing your heels to lift up to your butt. *Think of pulling your hips to your hands and maintaining a line from shoulders to hips.*

**Minimise the hip bend when drawing your heels up.** The more you can keep your knees near the natural bodyline, instead of drawing forward, the better your kick will be. The legs are the most powerful part of breaststroke—perhaps 60-80% of propulsion in the stroke comes from your legs. Working on your ankle, knee and hip joint flexibility can really help your kick handle the weird angles required for a powerful and efficient kick.

Strengthening your low abdominal muscles and low back muscles also help.

We talk about "the line" in breaststroke. This is the invisible vertical line between your torso and knees. The more you move your knees forward of that line, the more resistance you create.

***To minimise how much you break the line, imprint on your brain that your kick starts by bringing your heels up to your hips. Don't start the kick sequence by drawing your knees up under your body. This exposes the body's largest muscle mass, the thighs, and creates a huge wall of resistance.***

Kicking breaststroke vertically, with the front of your body pressed up against a wall, or horizontally, right on the bottom of the pool are both very effective ways to teach the sequence that heels drive the first move and that your knees bend in your kick, not your hips.

## The Back End—Thighs, Knees, Ankles, Feet

About the legs

The more you break the line the more resistance you create. That happens when you draw your knees forward

Bringing your heels up, with feet slightly separated, is your first step. **As you draw them up, aim the feet for the hips, not the centerline of your butt.** That keeps your knees narrow. Your ankles should flare and go wider than your knees

Hide your knees and thighs within the frame of your body

The faster you recover the feet, the faster your breaststroke

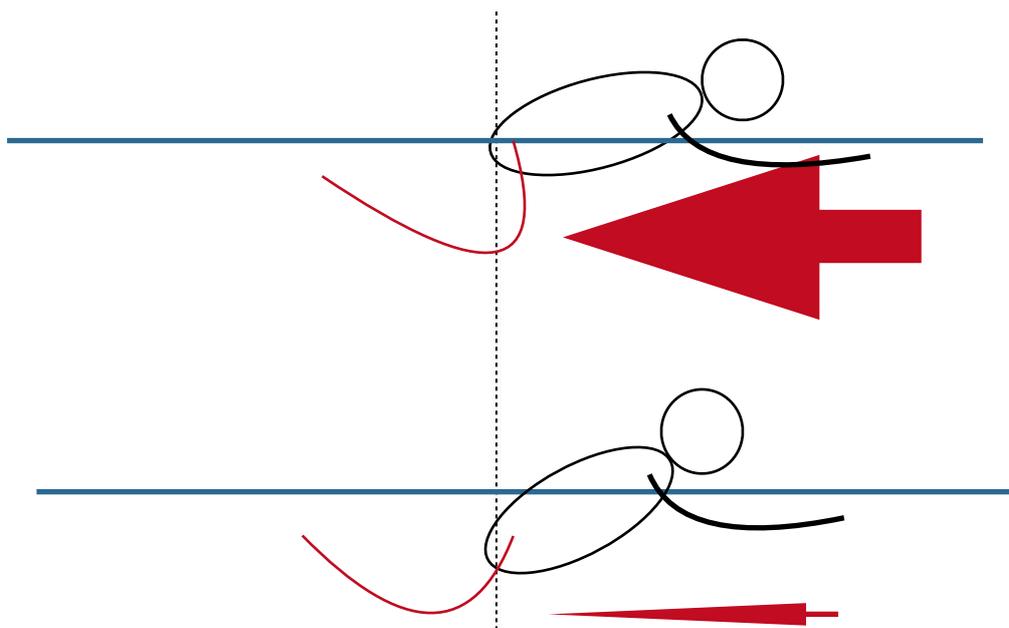
The closer you can draw your heels to your hips, the more powerful your kick will be. Work to gain flexibility to bring those heels as close to your rear end as possible.

Finish both feet and legs firmly

Point your toes at the end of every kick

## Summary

Breaststroke is always a work in progress. If you have the opportunity, get filmed both above and below water to see your weak points and find where you are creating drag. There are so many great breaststroke drills that teach you how to minimize resistance in the different phases of the stroke. Use those drills to improve your bodyline, head position, the front end, your hips, and the back end.



Drills - place foam noodle under the armpits for breaststroke to stop over pulling  
- forearm fulcrum paddles  
- sculling

Under-gliding - 2 kicks to one pull, link thumbs at front, streamlining.

Over-gliding - watch the tiles, don't let them slow down  
freestyle legs with breaststroke pull

Kicking with hands at side or behind back, forces the hips down and promotes hiding the thighs behind the body

Head position - swim with tennis ball under chin