

Butterfly Made Easy

Here's how to build a butterfly so smooth and efficient you'll want to show it off

By Terry Laughlin

Butterfly's reputation as being the most difficult stroke is richly deserved. There's something about that breathing action, in which you have to climb out of the water for precious air. Consequently, butterfly wannabes often end up putting so much effort into breathing and recovery that there's nothing left for the actions that move you forward.

Jenny Thompson was a world-class freestyler before she arrived at Stanford, but she's added butterfly to the list of events in which she now can swim with the world's best. And Jenny and her coaches view her fly advances as a likely stimulus for improvement in her freestyle, in which her times have been fairly constant for six years.

"Jenny is still a freestyler," says Stanford Head Coach Richard Quick, "but her evolving fly technique has freed her up to improve her freestyle. The same things that have proven helpful in butterfly--not pushing water back, emphasizing weight shifts forward instead--are working for her freestyle too and she's swimming it with more stroke length than at any time in her career."

Jenny's freestyle refinements might not have happened if she had not been hungry to swim a better butterfly. "Jenny felt freer to experiment in butterfly," adds technique coach Bill Boomer, "and she didn't have to break old habits." Boomer describes Jenny's butterfly as a "forward-balancing, forward-attacking fly, not a 'push-back' fly." He lists four key technical aspects of this approach.

1. Breathe "inside" the body motion. A common mistake of novice flyers is to breathe as though it's necessary to "chase" air with the head. This leads to jutting the chin on the breath, which breaks the line of the stroke, and minimizes the ability to generate power. Jenny keeps her head as close as possible to its natural position at all times, both during and after the breath.

2. Channel your energy forward. Jenny is never concerned with pushing water toward her feet. She gives far more attention to catapulting her hands to the front and directing momentum forward during the recovery.

3. Anchor and unload early. "We work on getting Jenny to anchor her 'paddles' early so she can whip her body over the anchors. As soon as her center of mass passes over the anchors, she immediately flares out into a ballistic recovery." Translation: Instead of pulling back, use your hands to hold onto the water as far in front of your body as possible. As soon as your body moves over your hands, release the water and whip the hands out and over the body again.

4. Develop force and tempo in the core. Jenny swims stronger and faster by moving her torso more powerfully and quickly, not by pulling or kicking harder.

The same learning techniques and practice strategies that have helped Jenny become an Olympic medal contender in butterfly can help you learn to swim the most painless 25 yards of butterfly you've ever imagined--or help you make your first Senior National cut in the 200 meters. Though she was already an NCAA butterfly champion as she began her senior season in 1994, Jenny didn't hesitate to go all the way back to basics to mold an even better stroke. Here's what you can do to build a butterfly so smooth and efficient you'll want to show it off.

Learn or improve through drills, not by trying to bully your way through more laps. According to Boomer, the most important basic skill of butterfly is “learning to manipulate your body down the pool in an undulating manner.” Jenny did thousands of yards of very simple body coordination drills while trying to teach her muscles a new way to swim butterfly. Of all the strokes, butterfly is by far the most difficult to swim in whole-stroke, but the drills for butterfly are among the most simple. You can learn to undulate as Boomer describes above simply by floating in a balanced position with your arms at your sides and pulsing your chest gently and rhythmically, to create a body “wave” that ripples down to your legs. Wearing fins can help your legs pick up the signals much more readily. This is called a “head-lead” drill and it’s among Jenny’s favorites. Among the best lessons of this drill will be the benefit of remaining relaxed and supple so you don’t waste energy. Once you can undulate in a relaxed and rhythmic manner, shift your attention to breathing. Breathe inside the line of the drill and avoid jutting the chin. This will be easier to learn if you breathe only once every 5 or 6 pulses.

Once you feel comfortable and fluent, switch to a hand-lead drill – same action but with the arms extended and streamlined. Beginners could beneficially do little more than these two drills for the first couple of months of learning butterfly. More advanced swimmers can substitute them for kickboard sets.

Don’t fight gravity. The double-overarm recovery of butterfly is difficult, but it’s manageable if you learn to sweep your arms forward without trying to climb out for a breath as well. When you swim whole-stroke for the first time, try doing just 3 to 4 non-breathing strokes, then switch to head- or hand-lead drill the rest of the lap. Then start again from the other end with 3 non-breathers. Think about one of these tips on each length as you practice:

Minimize up-and-down movement in your head and shoulders. Imagine you’re swimming inside an air duct and avoid bumping your head on the ceiling. Keep your shoulders near the surface and your head in line with your spine as you channel all your energy toward the far end of the pool.
Land forward, not down, as you complete each recovery.

Anchor your hands early, then sweep them in toward your chin. As soon as your torso moves forward over your hands, karate-chop them to the outside to help catapult them forward again.

Sweep the arms forward (no lift), leading with the face of your wristwatch. Keep hands and arms relaxed as they fly forward.

Breathe with your body, not your head. Once you can swim 3 to 5 smooth, long, forward-attacking strokes, it’s time to add breathing. Let Richard Quick tell you how: “Breathe with body movement and keep your head looking down slightly throughout the breath, just as in breaststroke. And whatever you do, don’t jut your chin forward.” The most important idea here is to keep your head in line with your spine during and after the breath. One way to practice is trying to “hide” your breath. Imagine someone watching you as you swim. Try to breathe so that it would be hard for him to see you take the breath. When you start learning to breathe with your body, rather than your head, just add one breath to those short segments of 3 to 5 strokes, as done above. Then add another. Your goal is to be able to breathe every stroke with no loss of balance. As Coach Quick advises, “Don’t hide your mistake by not breathing. If you breathe correctly, you should be able to breathe any time you want, including every stroke, and that will help you finish races better.

Don’t practice “butter-struggle!” Don’t feel as if you have to plow through that set of 10 x 100s butterfly to prove your character and toughness. More advice from Richard Quick: “Jenny does very little practice butterfly over 50 meters nonstop.” In fact, she does a large percentage of her butterfly training in 20-yard repeats in a diving tank (see below). This is even more important to the beginning butterflyer. Once you start to get your butterfly into decent shape, keep practicing with those half-lengths of whole-stroke, followed by a half-length of drill. Swim only as many strokes as you can while maintaining a balanced, long stroke. At the first stroke that starts to feel like a struggle, switch immediately to a drill, until you’re ready to swim beautiful butterfly again.

Jenny Thompson's favorite butterfly set:

Jenny does this set in Stanford's 20-yard diving well. The entire set consists of single widths, done in various ways with varying rest between 20-yard repeats. The interval cited is how long she has to swim the width, then rest before doing another. If she takes 10 seconds to swim a width and the interval is :20, she rests :10 before starting again.

10 x 20 on :40. These are done at 100% effort with a 100-meter race breathing pattern.

20 x 20 on :20. No breathing. The emphasis is holding a certain stroke count. Jenny holds each at 5 strokes.

Rest 2:00

20 x 20 on :15 Same set as above but less rest. This is Jenny's endurance training.

10 x 20 on :40. Same as the first set.