

Breaststroke Head Positioning

Terry Laughlin, from Yellowsprings (OH), is founder & Head Coach of Total Immersion Swimming and of the Hawks Swimming Association in New Paltz, NY. Read more articles like this at www.totalimmersion.net

Laughlin's Tip:

Last week, our technique tip was about the advantages of a "neutral" head position in freestyle. Since head-spine alignment is a fundamental of how the body's biomechanical systems work best, it follows that a neutral head position is desirable in the other strokes as well. This week, let's examine how you'd apply that when swimming breaststroke.

In coaching developing swimmers, the most common stroke error I see is a "nodding head." They lift the chin as they begin the breath and thrust the forehead down after it. This leads to what I call "sea serpent breaststroke," in which the swimmer travels through the water like a roller coaster, rather than always moving forward.

In trying to copy the undulating strokes of top breaststrokers, many young swimmers try to make it happen with head movement, but in fact a head carefully held in a stable position, as *the body* rises and falls, is the key to channeling the energy and momentum of the body in a *forward* direction. Former Stanford swimmer, USA National Team member and 1997 World Champion, Kurt Grote, described his thinking to me by saying "I want to feel like I'm wearing a neck brace when I breathe in breaststroke."

As I described last week, the mechanics of the head's relationship to the body have tremendous influence on the movements of the entire body. Because (a) unlike dry land, water is an unstable, unsupportive medium, (b) the head weighs about 10 lbs., and (c) that weight is a long way from your body's center of balance (hold a 10-lb. weight as far from your body as possible to understand what this means) excessive head movement can be almost deadly to your ability to make your body go where you want it to.

Last week I pointed out that fish and aquatic mammals have the head and body as part of the same structure. So think of video (or live action) you may have seen of dolphins as they shoot over the surface and dive back in. No head-nodding there. Here's how you can imitate the "dolphin-head" action in your breaststroke:



- Spread your thumb and forefinger about as widely as possible, then place your thumb against your breastbone and your forefinger under your chin. Press your chin down on your forefinger – firmly enough that you can easily commit this position to muscle memory. Commit to keeping this angle as you breathe. Keep thinking "neck brace."
- As you breathe, focus on seeing only the water just in front of you – and never seeing the far wall.
- After breathing, focus on laying the head *forward* between your arms, and not driving your forehead *down*.

And here's how you can make that 10-lb. weight work *for* you. If you can synchronize the movement of your head, arms and torso – *and get all that body mass moving in the same direction at the same time* – you'll add a lot to your body's forward momentum. So complete each stroke by having your head tuck between your arms *at the exact moment* your arms reach full extension.



Butterfly Head Positioning

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Continuing with our series of tips about head position, this week we'll focus on butterfly. In our last installment I talked about the dangers of doing breaststroke with too much up-and-down head movement. Excessive head movement can be even more damaging to efficiency in butterfly.

In breaststroke you can compensate somewhat for excessive head movement by driving the hands forward on recovery. In butterfly, when you drive your head down, you often drive your hands down on entry as well, causing the body to dive well under water...which means you have to climb back out again on the next stroke.

The USA Swimming DVD Swim Fast Butterfly, featuring Michael Phelps, illustrates butterfly head position that's about as good as it can be. Navigate to the Rhythm and Timing section, which shows great views of Michael's head position. On the surface segments watch for the following:

1. His chin stays in the water throughout each breath.
2. His head moves ever so slightly forward – by only a few degrees – at the beginning of the breath, then *immediately* returns to its original position, without pause.

When you watch the underwater segments look for this:

1. As soon as he begins his insweep, his head starts to move toward the surface. Michael doesn't lift his head -- he keeps his nose and chin angled slightly downward – but his head moves diagonally toward the surface, as a result of the lift produced by his insweep.
2. Michael's head re-enters the water just before his arms do and nods down every so slightly – by the same few degrees you see it move forward as he surfaces –then immediately returns to its original position without pause.

What is most striking in both the underwater and surface views is how subtle and smooth his head movements are. When coaching an unskilled or developing young butterflyer, the first aspect of stroke I work on teaching them is to control their head movement, striving to make it look more like Michael's. Smooth and subtle head movement is the key to efficiency in the whole stroke.

If you'd like to make your head position and breathing more like Michael's here are a few ideas to start with.

1. Keep your head as close as possible to a neutral position – i.e. the way you hold your head when you're not swimming – at all times.
2. As you land, allow your head to simply fall into the water, but resist the common temptation to drive your chin to your chest. (Because your body is moving forward as your head fall, its movement should be diagonally forward.)
3. After your head finishes falling, it should immediately begin moving up again -- without pause. Move your head forward – not up – for the breath.
4. Keep your chin in the water as you breathe and try to keep it moving throughout – forward to get a bite of air and return it to its neutral position without pause.

A good exercise for learning to breathe like Michael is the Sneaky Breath. Ask your coach or a friend to watch as you swim five to eight strokes. Breathe at least twice – each time trying to take a breath without your observer seeing you do it. You may not be able to be as "sneaky" while breathing during a race, but this will be good practice for making your race-breathing smooth and seamless.