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Why Swimming is Different

and how to make the difference work for you

Terry Laughlin

The world's best swimmers move through the water with grace, economy, and flow, while novices are awkward, clumsy, and inefficient. But the rest of us can learn to swim well if we take the time to master swimming as an art before tackling it as a sport.

How many land-based athletes have concluded that swimming requires some exotic or elusive kind of fitness after an experience like this: Joe, who can breeze through a 5-mile jog without breaking a sweat, decides to try a pool workout one day. Within a few minutes, he's panting for breath and wondering, "How will I ever get in a decent workout if I can't even make 100 yards without dying?" Experiences like that convince many adult athletes that swimming is only for those who swam competitively as kids and leave them suspecting that the time and effort required to master swimming may not even be worth it.

But mastering the "swim challenge" is decidedly worthwhile. Not only is it ideal as a restorative, general fitness workout for virtually any aging athlete; learning to swim well also gives you the option to try triathlons or Masters swimming. And I've yet to meet an otherwise well-rounded athlete who could not learn to swim well enough to stay fit or tackle a triathlon. All they have to do is discard everything other aerobic activities such as running have taught them, as soon as they enter the pool.

Anyone from occasional joggers to dedicated marathoners knows this fundamental truth: increase your mileage or intensity and your running improves.

But when they apply the same logic to swimming, most novices quickly achieve what one of my former students christened "terminal mediocrity"; after a few months, no amount of effort produces further progress.

Here's why: The world records for the mile run and the 400-meter swim are virtually identical. If you were to run once around the track with Alan Webb, America's best miler, he'd beat you easily, but—even if you're purely a recreational jogger—by running easily and efficiently, you could nearly match the number of strides he took to cover 400 meters. If, on the other hand, you tried to swim 100 meters with American record holder Klete Keller, not only would he beat you easily but—assuming you could complete 100 meters—the difference between his stroke count and yours would be staggering. Keller and other elite freestylers can easily swim 25 yards in 7 or 8 strokes (counting each hand entry as one stroke), while novice swimmers typically average 20 to 25 strokes for the same distance.

And that threefold difference in stroke efficiency is only half the story. A worldclass runner is about 90% mechanically efficient, meaning that 90 of every 100 calories expended produce forward motion, while approximately 10 are lost to muscle heat, ground friction, wind resistance, etc. Because water is 900 times thicker than air and highly unstable as a medium for applying power, a world-class swimmer is only 9% mechanically efficient—which means the typical novice swimmer achieves energy efficiency of perhaps 3 percent. Thus, the path to swimming improvement is not to make more energy available through training; it's to

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waste less energy by improving your stroke. If you can increase your mechanical efficiency even modestly— from, say, 3% to 4%—that will translate into a 33% improvement in your swimming capacity. No workout program can produce those kinds of results, but I've routinely seen swimmers in Total Immersion workshops achieve that sort of gain in a single weekend.

Running is a sport; swimming is an art

What makes swimming different? Simply put, running is a natural activity, while swimming is a "natural struggle." The world's best swimmers move through the water with grace, economy, and flow, while novices are awkward, clumsy, and inefficient. You needn't lose any sleep if this describes you; my extensive teaching experience suggests that very few people have the innate ability to swim fluently. But I've also learned that the rest of us can learn to swim well if we take the time to master swimming as an art before tackling it as a sport. When you focus on swimming more and more yards, you just imprint what I call "struggling skills." Instead, focus on swimming short distances slowly without fighting the water or yourself, then patiently develop your ability to do that for progressively greater distances or at marginally faster speeds. Here's a quick plan for learning to move like water in the pool:

1. Swim slowly. Racing the clock—or other swimmers—will only cause you to thrash and splash. Swimming slowly is the best way to begin developing habits of efficiency and economy. And while swimming slowly, practice the following points.

2. Count your strokes. Your best measure of efficiency is how many strokes you take getting across the pool. Set an initial target 10% lower than your norm. If you usually take 22 strokes per length (SPL), make 20 your goal, using ease, not strain, to make it. After any length that exceeds your target, rest longer—try five or more deep slow breaths as a recovery interval—before starting again. Allow at least two to three hours of cumulative



practice, over several 30-minute sessions, to adapt before trying to reduce your SPL further.

3. Look down. Forget the old rule about looking forward; a high head position is bad for your neck and back and creates extra drag. Look directly at the bottom and focus on a long "headspine- line." Ask a friend to check that no more than a sliver of the back of your head is visible above the surface.

4. Swim silently. Noise and splash are the clearest evidence of wasted energy. Anything you do that results in a quieter stroke will also increase your efficiency, lower your SPL, and reduce fatigue.

5. Swim less, drill more. If you find yourself unable to reduce your SPL to a consistent 20 or fewer strokes per 25 yards, your stroke inefficiencies are so stubborn that every lap you do simply makes them more permanent. The quickest way to build new "fishlike" movement patterns is to practice skill drills rather than conventional swimming. Try doing up to 80% of your laps in stroke drills for the next month or two and see how your stroke reacts.

Happy laps!



Terry Laughlin is the founder and head coach of Total Immersion Swimming and the author of *Triathlon Swimming: Made Easy*. Read more articles like this at www.totalimmersion.net.