Finding Your Perfect Endurance Training Interval

and Setting Goals to Swim Faster!

by Danielle Newton

Have you ever overheard a swimmer say, "I'm a distance swimmer and I've got 1 speed in the pool - moderate pace. I could swim that pace all day! I hate it when the coach gives us sprint sets like 20 X 25's and asks me to swim fast. It's impossible for me."

Or maybe you've pondered this quietly to yourself in the middle of a rest interval, "I'm so out of shape, I feel horrible in the pool because I can't keep up with so-and-so. I'm feeling like I'll never get faster. I'm trying too hard. I'm going to burn out too quick today. I wish I had a set that was made just for me and my swimming endurance right now!"

Well, guess what Mr. 1-speed Man and Miss No-Endurance - I've got the perfect set for you to try! It's guaranteed to increase your endurance and speed (but only if you work it!)

The first step is to swim a Test Set to find out your Anaerobic Threshold Pace. Don't worry if you don't understand what those terms mean. I'll explain them later. Have your coach or a friend time you while you swim 10 X 100 Free at a moderate-fast pace (about 80-85% of your all-out effort). Don't concern yourself with how long it takes you to finish each 100. In fact, it's better if you don't even look at the pace clock or wear your wristwatch on this test set. The test set is just between you and the water and no one else! Remember: there is no "failing score" on this test.

At the end of the 10th 100, your coach or friend will stop the stopwatch and add 10 seconds to the total time. Then it's time for a little basic math. Convert the minutes to seconds. Divide your total time in seconds by 10. See example below:

Time to finish 10 X 100 with 10 seconds rest in between each: 16:10
Add 10 seconds: 16:10 + 10 = 16:20
16 minutes X 60 sec/min = 960 seconds
960 seconds + 20 seconds = 980 seconds
980 seconds ÷ 10 = 98 seconds (or 1:38)

Now what does that number mean? First, you will round up to the nearest :05 interval. So 1:38 becomes 1:40. 1:40 is what I will call "your interval". It means that your average swim time for each 100 with 10 seconds rest was 1:38. Or, not factoring in the rest time, your average time to complete a 100 was 1:28, or what I will call your endurance speed. So, if I asked you to swim 10 X 100 Free moderate-fast on your interval of 1:40 a couple days later, I'd expect to see times equal to your endurance speed for each 100, which would give you 12 seconds rest before your next send-off.

Remember above, where I said that the Test Set we swam was going to determine your Anaerobic Threshold Pace? What exactly does that mean? Well, we can work out in the pool in 2 main ways:
1.) Go easy-moderate pace and not be out of breath after we finish a certain distance (Aerobic exercise)

2.) Go hard and fast and be out of breath after finishing a certain distance (Anaerobic exercise)

So, where's the middle ground? In between Aerobic and Anaerobic, of course! That "threshold" is the fine line between the 2 types of swimming. In the example above, if you train at or near your threshold (1:28), you are working hard, but not "too hard". If your coach tells you to swim 4 seconds faster than your threshold, you know you're going to have to kick it into high gear, pull harder and stronger, turn your arm tempo up a bit and kick a little more. All of that will in turn make you swim anaerobically and definitely say, "Ugh, this is HARD!" No one can train anaerobically for more than about 5 minutes without their swim technique being affected. And we all know that there's absolutely no point in swimming fast if our technique is junk!

Now what do I do with "my interval" of 1:40? This is where Mr. 1-speed Man will be challenged! And Miss No-Endurance is going to get that "heavy arm" feeling from a build up of lactic acid! Establish one day per week to be your Hard Set Day. Let's say Wednesday. For the next 6 Wednesdays, these will be your Main Sets. (Don't forget to have a good warm-up of at least 1000 yards before starting these Main Sets.)

Wednesday#1 8 X 100 Free moderate-fast on your interval. Your goal for all 8 is to swim at, or as close to your endurance speed as possible. Rest for 1 min. Then swim 4 X 100 Free on your interval. Your goal for these 4 is to swim at least 1 second faster than your endurance speed

Wednesday#2 Swim 12 X 100 Free on your interval. On the odd numbered repeats, your goal is to beat your endurance speed by at least 2 seconds. On the even numbered repeats, your goal is to swim *slow and easy* and just make your interval.

Wednesday#3 Swim 13 X 100 Free on your interval.
        On #1 and #2: SWIM FAST! (Try to beat your endurance speed by at least 4 sec.)
        On #3 and #4: On #3 and #4: slow and easy and "j-m-i" (just make interval)
        On #5 and #6: SWIM FAST!
        On #7 and #8: *slow and easy* and j-m-i
        #9: SWIM FAST!
        #10: *slow and easy* and j-m-i
        #11-12: SWIM FAST!
        #13: *slow and easy* and j-m-i

Wednesday#4 Swim 14 X 100 Free on your interval
        On #1-3: SWIM FAST!
        On #4-6: *slow and easy* and j-m-i
        On #7: SWIM FAST!
        On #8: *slow and easy* and j-m-i
       Rest for 1 minute
        On #9: SWIM FAST!
        On #10: s*low and easy* and j-m-i
        On #11-12: SWIM FAST!
        On #13-14: *slow and easy* and j-m-i

Wednesday#5 Swim 12 X 150 Free on your interval X 1.5
        On #1-2: SWIM FAST! (Try to beat your endurance speed X 1.5 by 6 seconds)
        On #3-4: *slow and easy* and j-m-i
        On #5: SWIM FAST!
        On #6: s*low and easy* and j-m-i
       Rest 1 minute, and repeat the above to make a total of 12 X 150's

Wednesday#6 Swim 20 X 100 Free on your interval
        On #1-3: SWIM FAST!
        On #4-5: *slow and easy* and j-m-i
        On #6-8: SWIM FAST!
        On #9-10: *slow and easy* and j-m-i
       Rest 1 minute, and repeat the above to make a total of 20 X 100's

After the 6th week of doing these sets (which get progressively more challenging, as you can see!), I guarantee you that your Anaerobic Threshold Pace has gone down a little bit. You might want to retest yourself with that 10 X 100 Test Set and see the difference!