

HOBART MASTERS SWIMMING CLUB SKILLS AND DRILLS NOTES

HOW TO PACE LONG DISTANCE SWIMS

The key to swimming a longer distance like 800, 1500 or longer (think open water) well is to know what pace to swim at from the start, and doing it. This is the pace that you know you can sustain throughout the swim. The aim is to swim every split distance (usually every 100) at the same pace. If you start too fast (at a speed you cannot sustain for the entire swim) you will burn valuable energy early that cannot be regained during the swim, and consequently your pace will get constantly slower. The total result will be a slower swim than if you had started off at a slower pace, maintained the same pace throughout the swim, and finished with a burst of speed.

You need to work out what your target pace per 100 is and then practise swimming at that pace until it becomes second nature to you. You can practise this by swimming multiple repeats of 100, 200, or 400, with relatively short intervals between each swim and closely watching the clock to check your times. The intervals are important to improving your aerobic fitness. Longer intervals allow more recovery and therefore reduced aerobic benefit. Here are some sample sets for training for a 1500 swim:

- 20 X 100 with a 20 interval
- 10 X 200 with a 30 interval
- 5 X 400 with a 45 interval

Your target pace is also known as your critical swim speed (CSS). One way of calculating your CSS for 800 or 1500 is to swim a timed 400m swim, followed soon after by a timed 200m swim, and then by using a CSS calculator (such as the one available online on the Swim Smooth website: [CSS CALCULATOR](#)) find out what your CSS per 100 is, based on the difference between these two timed swims. Alternatively, subtract your 200m time from your 400m time (in seconds) and divide the difference by 2 to get your 100m CSS in seconds. Note that your CSS for long course and CSS for short course will usually be slightly different.

Note also that the calculator throws up some surprising results where there is an inconsistent difference between the 400 and 200 times, and if the 200 time per 100 is slower than the 400 time per 100 it throws up an error message. The formula works well where the 200 time per 100 is a few seconds faster than the 400 time per 100. Where the differential is much greater, the CSS seems to throw up surprising results. Use your CSS as a guide, and be prepared to make adjustments that work for you.

Once you know your CSS you can go ahead and practise swimming at that speed until it becomes very familiar to you. This involves watching the clock as you train, and at the end of each 100 being precise with monitoring your times for each 100. Aim for as little variation as possible from one 100 to the next, and no more than about 2 seconds. If you find you are struggling to maintain your CSS in a training session, just make an adjustment to your CSS for this session so that you can maintain the adjusted CSS time. Do not adjust the interval. Do not practise swimming progressively slower, because that is what you will probably do in your event. Also, do not swim faster than your CSS when doing CSS sets.

Note that your CSS needs to be reviewed as your aerobic fitness improves. If you find you are regularly and comfortably swimming faster than your CSS then reduce the interval by 5 secs and see if you can maintain the CSS. Check your CSS by doing the timed 400/200 swims described earlier when you next get a chance. Note that you need to continue to do speed sessions as well as CSS sessions to activate those fast twitch muscle groups and elevate your heart rate, so do not become totally absorbed by CSS training. The two forms of training are complementary.

When training at your CSS, be prepared to round up or round down the interval so that you start each 100 on a 0 or 5 (this makes it easier to monitor your times per 100 and manage the interval). Another option is to push off on a set time, such as every 1 minute 55 seconds, knowing that this will give you the appropriate interval after each 100. Be prepared to agree an interval with your training buddies. As a rule of thumb, if you are doing 100s then the interval should be no longer than 20secs, 200s/30secs and 400s/45secs. These intervals ensure you gain an aerobic benefit from the training session. If your times per 100 increase by more than about 3 seconds, it is probably a sign that you need to adjust your CSS for the session or end the CSS set and take a break.

With a background of solid CSS training in your system you can confidently start your long distance swim at your CSS pace knowing you can sustain it. The time for going for extra speed in a long distance race is towards the end, when you can gauge how much you feel you have left in the tank, rather than at the start when you have little idea how much you might have left at the business end of the race.

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