



National Triathlon Training Centre
Centre National d'Entraînement
en Triathlon

"Building Excellence in Multi-Sport"

Victoria, British Columbia Canada



Swimming Training for Triathlon

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September 15, 2003

Neil Harvey is the Swimming coach for the National Triathlon Training Center in Victoria. He has been coaching this program since it's inception in 1999. This article is the first in a series.

My intent with this series of articles is to take the reader through the various aspects of preparing for the swim portion of the Triathlon. Much has been written on swimming, both for Triathlon and for competitive youth and masters swimming. The initial list of headings for this series includes: essential swimming technique, seasonal training and specific race tactics.

Regarding the reader, I assume you can swim reasonably well, and have been training regularly for a while. I will talk in a general sense about technique and training and will use examples from the National Triathlon group I am currently coaching.

Swimming *well* begins with efficiency of movement. Efficiency is defined as economy or ease of movement through a particular motor pattern (e.g. freestyle). Economy of movement results from countless repetitions performed close to perfectly. In swimming, efficiency means to travel further, and then faster, with less effort. Efficiency is the first important issue in swimming. How do we learn to swim efficiently? By swimming *well* a lot!

Olbrecht (2000) defines 2 types of technical training drills: those which teach and correct movement patterns, and those which help to automate the patterns. Teaching drills must be done at the beginning of a training session following the warm-up. You are fresh and ready to learn new skills at this time. Use 25's and 50's with ample rest for best results. Plenty of feedback from the coach and video is very important. Automation drills are done during gradually longer and more intense training. Many repetitions done close to perfect form at training intensities is the goal.

Swimming *fast* is about using efficient strokes at a relatively high rate of turnover. You will translate your highly efficient, long loose strokes into high rate swimming, without losing your hold on the water. Before beginning this type of training, you must have mastered the previously mentioned technical aspects of the stroke. When you are ready, use short distances such as 25's to work on increasing the stroke rate, while maintaining a

maximum of efficiency. You will be able to measure this by swimming faster each time you increase the rate. When you swim slower at higher rates the swimming efficiency has begun to break down. Perfecting this type of training takes years of practice.

Here then is the simple equation which determines swimming speed: Stroke length (efficiency) x Stroke Rate = velocity. You need to perform both variables well in order to truly swim fast. I would place a greater emphasis on stroke length for the majority of your training. This will strengthen your length and allow you to maintain a higher percentage of efficiency as you increase the rate.

Triathletes come from various backgrounds. Not all have had the opportunity to participate in properly coached and organized competitive programs in all 3 disciplines at a young age. Regular swimming (and running) at a young age in a competitive club produces highly efficient swimmers. During the years 8 to 14, the musculo-skeletal system is in a highly receptive state for skill development. Accurate skill correction plus thousands of repetitions results in efficient swimming strokes.

The triathlete who has started swimming a bit later than 14 or 15, faces a high number of correct repetitions in order to learn to swim efficiently. Unfortunately the musculo-skeletal system is a bit slower at learning the older it gets! Swimming at medium speed for gradually longer periods of time is a good way to improve efficiency. You should have a couple of key technique aspects in mind when doing this type of training. A video camera is useful to capture your stroke. Watch for smooth movements, loose easy arm recovery action, very little head movement and clean overall forward body movement with little or no deceleration.

The next article will focus on drills and other methods to bring the stroke length up and the stroke rate down during training.