

Speed versus Effort

By Wayne Goldsmith

Swimming is a simple sport.

Jump in at one end and get to the other end before anyone else.

In the most basic analysis, it's a game of speed. Speed is the most crucial element in the sport. It's fundamental. The swimmer, who swims fastest, wins the race.

But is it really that simple? We know from biomechanical analysis of champions at major swimming competitions that the fastest **swimmer** doesn't always win. Sometimes the fastest **swimmer** (ie the person with the highest swimming speed) loses the race because of inferior skills, turns, starts and finishes.

We know sometimes the fastest swimmer doesn't win because they weren't mentally focussed in on the task.

In the end however, skills, fitness, mental attitude, flexibility and all the other elements of the sport come down to one question.....how fast can you swim?

What is swimming speed?

Technically it is the velocity that your body moves through the water.

If you ask a little kid to swim as fast as they can, they throw their arms and legs as fast as possible with lots of **effort**, but without much **speed**. They grit their teeth, tighten their arms, hold their breath and generally fight the water. They make lots of splash, but not much dash!

There is a difference between **effort** and **speed**.

Great swimmers often report that when they experience **REAL SPEED**, it seems to come with little **EFFORT**.

The great South African breaststroke swimmer Penny Heyns recently broke the world records for 100 and 200 metres. She commented:

"When I touched the wall I thought, maybe a 2:30, and this felt too easy for that," Heyns said. "I really don't know what happened."

Australia's own Grant Hackett interviewed after his amazing world record effort over 200 metres freestyle said:

"I certainly hadn't prepared to break the world record – I was having pillow fights with Ky Hurst and the rest of the team before the race"

Speed versus Effort

And it goes on.

“The swim itself just happened, just like Gennadi (coach) said it would, without really forcing it”. (Michael Klim’s comments after his world record 100 butterfly swim).

When it all comes together, and swimmers feel real speed, it seems to come with little effort. On other occasions, swimmers have reported feeling heavy, slow and sluggish, busting their guts and giving 100% **effort**, but have swum slow times.

What is the difference between **EFFORT** and **SPEED**?

Speed and relaxation appear to be somehow linked. It seems weird, but in many sports where excellence is measured in terms of how fast an athlete can move, the champions consistently say that their best performances have come when they were at their most relaxed.

When at his peak, multiple Olympic Gold Medallist sprinter Carl Lewis was an unbeatable athlete who understood speed as much as anyone. When asked about Lewis’ success, his coach remarked, “**the faster you want to go, the more relaxed you have to be**”.

The question then is can you learn to relax when trying to go fast?

1. Long, easy, even paced, even tempo swimming helps develop a sense of **rhythm**. Being in a swim rhythm is a comfortable feeling that helps develop **relaxation**. When arm stroke, kick and breathing are in a co-ordinated rhythm, real relaxation in the water is possible. From there, it is possible over time to learn to stay relaxed at faster speeds. Learning to relax at slow speeds first is the crucial step.
2. Swim techniques and drills have been developed to decrease the resistance your body experiences when swimming. Developing technical excellence means you move through the water with less effort.
3. Work on M.D.S. or D.P.S. (Maximum Distance per Stroke or Distance per Stroke) skills as a priority. The best swimmers in the world are able to maintain long strokes at top speed, when tired and under pressure. It all starts with learning to swim with less strokes in training. In warm up, try counting strokes on the first lap. Then aim to take one stroke less on the next lap and so on.
4. Try the MINI-MAX workout (MINIMUM STROKES, MAXIMUM SPEED) used to great effect by Bill Sweetenham. Count your strokes on your first 50 metres. Accurately note your time. Next, add the number of strokes to your time. For example, if you take 50 strokes and swim 45 seconds for the lap, your lap score is 95. Aim to swim a lap score of 94 on the second lap, which means you need to either swim a little faster, or stroke a little longer. Continue the process 6 times. Fewer strokes is good. Faster speed is great. Fewer strokes and faster speed is best.

Speed versus Effort

5. Work on keeping strokes long and strong at training. In every effort ask yourself "Could I do this with fewer strokes?" When doing skills work like drills aim for technical perfection, then technical perfection with the minimum number of strokes and finally technical perfection with a minimum number of strokes at maximum speed.
6. Develop real speed by thinking about swimming FAST rather than trying too hard and increasing effort during your speed. Train fast to Race fast.
7. Every turn in training is a race turn, every dive is a race dive. Every finish should be completed on the wall with power and controlled aggression. Train as you would like to race.
8. Drills should be completed with precision and with 100% concentration. Think technique first at all times.
9. Challenge yourself to swim fast when tired. In training challenge yourself to jump up at the end of the session and swim fast. When racing, challenge yourself to swim fast when tired, to swim fast heats in the morning then faster finals at night, to swim as fast on the last day of the meet as you did on the first day etc.
10. Learn to enjoy pressure situations. Being nervous is a sign that something great is about to happen. Your body is getting ready to do something brilliant. Learn to enjoy the pressure of competition.

Part of the process of understanding the difference between **effort** and **speed** comes during **TAPER** – that period of time when you are freshening up and resting in preparation for a competition. Swimmers will often say that during a taper they feel "light", that training efforts "felt easy" that they feel like they are swimming "on top of the water".

This feeling, where speed comes with little effort, is an indication that you are ready to race and that your taper has worked well.

It also comes from listening to your coach and working with him or her in your fast work. If your coach uses the expression "MAXIMUM EFFORT", your swimming response should be "**I WILL DO THIS AT MAXIMUM SPEED, WHILE STAYING RELAXED AND LOOSE, WITH MINIMUM STROKES, GREAT SKILLS AND TECHNICAL EXCELLENCE**".

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IF IT'S SPEED YOU NEED,
YOU NEED SPEED INDEED,
AND YOU NEED SOME DASH,
WITHOUT SPLASH OR TRASH,
JUST KEEP YOUR COOL,
IN THE SWIMMING POOL,
STAY RELAXED AND LOOSE,
AND YOU'LL MAKE THE NEWS.

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Speed versus Effort

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