



»DAN BULLOCK«

# SWIM DEVELOPMENT

There are constantly new ideas and approaches when it comes to swim development and how well athletes will progress. This month *Triathlete Europe's* resident swim coach, Dan Bullock, looks at some of the latest ideas on swim development, and then offers his own theory based on his years of experience as a swimmer and coach.

Reading the latest material regarding swimming development I was left feeling a little uneasy. As a coach with the American Swim Coaches Association, the Amateur Swimming Association and involved with many swim groups on LinkedIn, I get memos, newsletters, research and findings from around the world. Some great stuff comes from the Australian Institute of Sport, the National Collegiate Athletic Association - where I raced in the 1990s - and from a worldwide network of colleagues who are coaching and racing.

## TREMENDOUS LEVELS OF EXPERTISE COULD BE ACHIEVED THROUGH HIS NEW APPLICATION OF LEARNING, SWIM AIDS AND SWIM IMAGERY.

It was not so much the conflict, but more the complete spectrum between those who felt it was impossible to become a good swimmer, and those who felt it was entirely possible to become good. Is it possible to improve significantly? Why can't we be sure of what is possible and how to go about it? Why do some people make great progress

while others seem limited? I have my own theories, but first two examples from the extreme ends of the spectrum.

One coach put forward a theory that made for fairly depressing reading for any adult learning to swim. He proposed that as cavemen we spent most of our days running. This was either chasing or being chased, and we had great aerobic capacity in our legs muscles. Our arms were mostly anaerobic because we survived by throwing spears and hurling stones to catch dinner.

With this in mind, most swim club youngsters spent their teenage years developing more efficient aerobic movements in their arms, so they could spend four or more hours per day pulling their way through the water. If you can swim 50 metres fast but suffer over 200 metres, this might sound familiar and be worrying that learning to swim is a hopeless mission this late in life.

This left me thinking I had been wasting my time this past 15 years coaching, but then along came some good news from the opposite end of the scale in terms of swim progress

possibilities. Another coach with many years of experience felt tremendous levels of expertise could be achieved through his new application of learning, swim aids and swim imagery.

The theory runs along the lines of how the brain has a plastic capacity in terms of how we learn. It is no longer the static organ it was once thought of but can change throughout life. From years of his research into neuroplasticity, neurological training, motor coordination and applied teaching through the removal of filters to learning, this coach feels it is possible to focus the brain on learning new physical movements. Rather than swimming remaining an aerobic model, his new idea believes teaching will help it become a neurological one. This certainly sounded better than the first message of doom and gloom, but how could two ideas be so far apart?

I have seen enough people improve their swimming significantly over the past 15 years of coaching to know

## A SPORTING BACKGROUND, EVEN IN A NON-RELATED SPORT TO SWIMMING, WILL BE OF HELP.

change is possible. A great deal of change, mostly for the better, can take place if instruction is good, and the student is diligent and enthusiastic. This might not always be as much as the swimmer hoped but this always depends on the expectation, the coach and the athlete's commitment and belief of what is possible.

A sporting background, even in a non-related sport to swimming, will be of help. The rate of ability to change movements and make them permanent seems easier if the swimmer has come from a sporting background. This is possibly to do with hand and eye coordination, control of breathing, timing and proprioception skills.

I think the fashion for instant results in our digital age, combined with a lack of patience are not helping, and people become disillusioned too quickly, which can lead to disappointment. I have said it before, but learning to swim is more akin to learning a language or a musical instrument. With the added

complication of practicing this skill with the face under water where air is not readily available makes it tough. A great deal of time needs to be put into swimming for it to be performed well and to feel natural.

I am going to stay neutral for the moment in terms of the two earlier extremes, but I am keen to explore the idea of the brain allowing more swim development and will report on that in the future. Depending on your definition of becoming a good swimmer you could say both ideas are accurate. A sub 21-minute 1500 metres for example is a good swim if you came from a non-swimming background, but it's not going to make a county final at a young age group swim club level.

### How Does It Get better?

Slowly. After some early rapid breakthroughs that can excite, the rapid trajectory plateaus and improvements seem to reduce for a while, which can be frustrating. Aligning better pathways of

the propulsive limbs will make for instant improvements to speed because they can be completely wrong early on. Less drag will reduce fatigue, so early on progress can seem quite easy. Practicing these movements to the degree that they are on autopilot and in the subconscious takes a lot of time.

Most people that come to me for an initial consultation can swim 25 metres in 25 seconds, some can swim 1:40 for 100 metres, but few can swim 25 minutes for 1500 metres. These are all the same speed. I don't need you to get faster but to keep doing what you did for 25 metres. If breathing is relaxed and under control this should be a lot easier in terms of effort compared to average efforts biking or running. To make the stroke repeatable, accurate and sustainable with low levels of effort takes time and a lot of relearning after erasing bad habits. Swimming more often at this stage, as long as it is done with some instruction and correct movements, is key.

## HOW CAN I TELL IT'S GETTING BETTER?

1. When each movement that makes up the stroke no longer needs a conscious effort and the stroke appears to stop being a sequence of separate movements stitched together. The mechanical edge to the stroke reduces and the movements take on a fluid appearance. It might not appear graceful or without faults, but you can see now that some of the movements are happening with less conscious effort.
2. The breathing sequence becomes as relaxed and seemingly under your control like you were on dry land. Swimming is one of the few activities, which restricts your breathing in such a way. The rate at which breathing happens, the timing and lack of options when it is not possible, create some major challenges. The other triathlon disciplines allow for a smooth exchange at your leisure. Swimming on the other hand can be tough, especially in the early stages before you fully master the stroke mechanics. This is because the stroke dictates when you get to breathe. As you improve as a swimmer the more control and relaxed you'll be in all aspects of your stroke.

## HOW CAN YOU TELL IT'S GETTING BETTER?

If you're swimming on your own without a coach the lack of instant feedback is a major issue to swim progress. Activities on dry land are easier to record and measure. Water complicates our ability to measure things because it makes exact 100 per cent repeatable movements unlikely. Purely measuring time, laps and heart rate may not always be conclusive. I am sure that many of you have experienced those hard sprints where the effort went in but no reduction in time was found. This is notorious and sometimes swimming feels unfair because it does not always reward effort. As you improve I would hope you experience some of the following 10 senses:



1. A surge forwards over the locked in 'anchor hand' when the catch works well in conjunction with a well streamlined body position.
2. At a more advanced level the ability to swim slow, medium and fast, yet still take a similar number of strokes per length.
3. Hand starting to exit close to where it entered in relation to your position against a lane rope as the body travels efficiently forwards and over your locked in hand.
4. The stroke never feeling so rushed that you are uncomfortable when trying to get the breath in.
5. Legs only kicking with a board and not going backwards. Not moving is okay, going forwards is tough and may be a longer term project.
6. A general relaxed state and a feeling of being comfortable in the water.
7. Being able to exhale under the water and inhale above the water, and feel very much in control of this action.
8. The ability to start even splitting

- (swimming evenly throughout) or at some point negative splitting (swimming faster over the second half) your longer swims.
9. Thinking of your wetsuit as an aid to speed rather than a life jacket.
10. Open water swims being looked forward to rather than dreaded.

I don't think swim improvements for adults are futile so I will continue to coach. Equally, I know it will not be as easy as some make out when they promise rapid improvements. The body does not work that way. I do think you can accelerate the rate of learning by utilising a well-rounded approach. I enjoy looking into other areas of technique development and coaching to utilise them to present an overall approach to swim progress.

One technique I recently came across is the Bowen technique. I believe this works wonders given the importance of breathing and its timing making swimming much easier.

Caroline Kremer, a respected Bowen technique practitioner, said: "A fuller, smoother and diaphragmatic breathing pattern lowers blood pressure. It also aids health generally by massaging not only the heart, but all the internal organs at least 20,000 a day, and vitally for swim technique, it increases mobility in the upper body and shoulder girdle."

With this in mind, not everything needs to take place in the pool, but you will not progress without enough pool time. Triathletes need to appreciate the point at which they are starting and be realistic as to how you define what becoming a good swimmer may mean specifically. I think a sub 75-minute 3.8K swim is within most peoples grasp if they are physically fit, healthy and prepared to put in the time to make this happen. ☺