Gearing Up for Faster Swimming

If you want to find another gear when the moment calls for it in your next triathlon swim leg, you need to train for it, writes swim coach Wayne Goldsmith.

Words: Wayne Goldsmith | Images: Thinkstock

When it comes to the swim leg, there are two types of triathlete: pacers and racers.

Pacers have a 'one-speed-fits-all-occasions' approach and swim at the same pace – usually threshold pace – over and over again at training. In short, they swim their slow work too fast and their fast work too slow.

Pacers can experience a reasonable level of success – particularly in long-course events – but without the capacity to change speed and without learning how to 'change gears' during their swim leg, their ability to meet the challenges of competitive triathlon is limited.

Racers on the other hand are an entirely different breed of triathlete.

Racers practise varying their speed in training and in doing so learn the skills necessary to match every competitive situation they face during the swim leg of their races. If they need to break away from the pack they're swimming in...they can do it. If they need to pick up the speed to get to the next pack...no problems. If they need to change direction or strategy during a race in response to a change in swell, wind direction or water conditions...easy.

Racers are able to deal with whatever is thrown at them in a swim leg because they've practised changing speed through 'changing gears' in training.

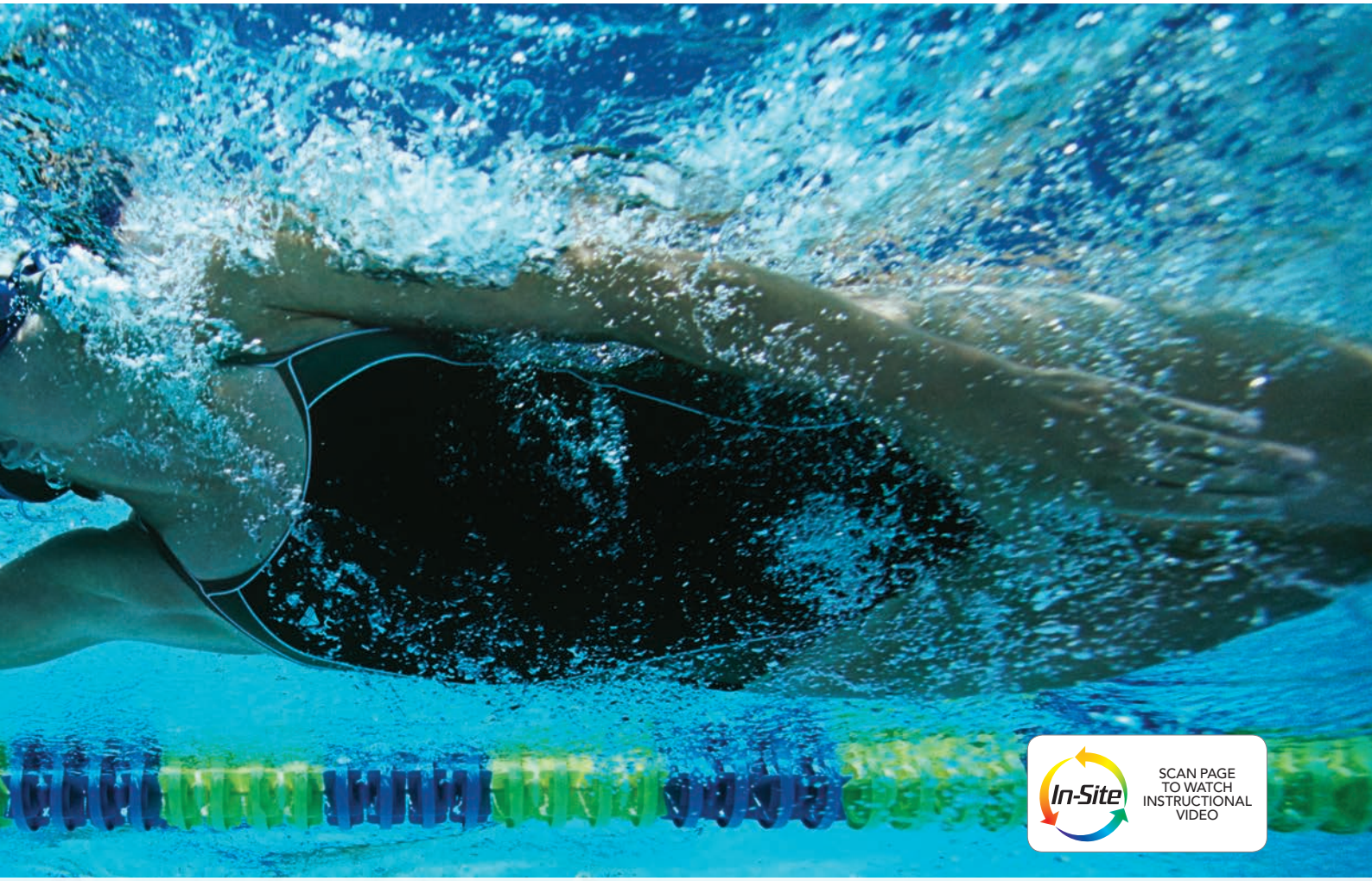
Gear changing – what is it and how to learn it?

Think of your swim stroke like the hands of a clock. When you are lying flat in the water in a streamlined body position, i.e. looking at the bottom of the pool with your arms and legs extended straight, your fingers are pointing forward to '12 o'clock' and your toes are pointing backwards to 'six o'clock'.

When your hand enters the water on our swimming 'clock', it does so at 12 o'clock, i.e. extended out in front of you. And, on the same 'clock', your hand exits the water (or 'releases' the water) at the six-o'clock position. When you are swimming slowly and easily, it is essential to practise the basics of good swimming stroke, which are:

- Stay relaxed
- Keep your hands and feet soft and loose
- Catch the water early
- Breathe deeply and exhale forcefully underwater during every stroke cycle
- Kick easily and rhythmically
- Be aware of the relationship between your head and your hips, i.e. try to keep your head, neck, body and hips all in the one line.

However, in comparison to slow swimming, when you swim fast, while all these basic fundamentals of good stroke remain



constant, the timing of your arm stroke is a little different. At slow speeds, most of the world's great distance swimmers adopt what we call a 'catch-up' or 'delayed' stroke timing technique. In catch-up stroke timing technique, one hand and arm remain stretched out in the 12-o'clock position until the other hand (i.e. the recovering hand that's moving forward out of the water) passes the elbow of the stretched out arm – i.e. when one arm 'catches up' to the outstretched arm.

This technique can be very effective for triathletes as you can learn to 'surf' on the stretched out arm on each stroke cycle. It's an excellent stroke timing technique for long-course triathletes as it potentially delivers a more energy-efficient stroke, which is vital with the critical (and energy-sapping) bike and run legs to come.

Sprint timing in swimming is a little different. When you sprint, try to think of your arms and shoulders as a single limb that together form a 'ski' or 'kayak' paddle.

Sprint timing, sometimes called 'opposite' timing, demands that you think 'entry' and 'exit' simultaneously. So, as one hand enters the water to catch, the other hand exits the water to recover. If you like, both arms, both shoulders and your upper back work together to produce pulling power in the same way you'd use a kayak or surf ski paddle to generate power.

The important thing is that 'racers' need to learn how to effectively change gears by switching between 'catch-up' timing and 'sprint-timing' as the competitive situation demands.

Revs and Gears: Stroke rate and stroke length

Think about your car when you go for a drive (or your bike when you ride it).

When you decide to put your foot on the gas, the car responds by picking up the revs then switching gears to accommodate the need for higher speed. The engine itself doesn't change – the car doesn't change shape – all that changes are the revs, then the gears, and off you go.

It's the same in swimming. Increasing your swimming speed comes down to the same factors: revs and gears...which in your swimming action means increasing your stroke rate (revs) or the frequency of your strokes, (expressed as strokes per minute) and/or increasing the length of each stroke (your gears).

Or if you like: stroke rate x stroke length = swimming speed, i.e. how fast you take your strokes x how long those strokes are determines how fast you're swimming.

Stroke length is determined by how early in your stroke you feel and catch the water and how long you maintain pressure on the water throughout your stroke.

We know from observing the best swimmers in the world underwater from a front-on angle, one thing is very clear – you can see the back of their hand through their stroke from entry to exit. In other words, they maintain pressure on the water throughout their stroke. Stroke length is very much about feel, technique and relaxation.

Controlling and managing stoke rate, however, is something all triathletes need to learn, understand and master by practising changing pace during training sets.

Some 'gear-changing' sessions to practise

1 **FARTLEK:** This is a training technique designed to help athletes 'play' with speed by changing speed regularly during a repeat. For example, try fartleking a set of 100s with a target time. You might start with something like 10 x 100 metres on a time cycle of two minutes 30 second with an aim to swim a goal time of two minutes for each 100-metre effort. That's 30 seconds rest between each 100. Instead of swimming at an even pace, try some fartlek fun by mixing up the pace, e.g.

Even pacing: 30 seconds per 25 metres = 2 minutes (120 seconds) for 100 metres.

Fartlek: 25 seconds for the first 25 metres, 40 seconds for the second 25 metres, 30 seconds for the third 25 metres and 25 seconds for the final 25 metres of the 100.

2 **FEEFS:** These are fast-to-easy swims followed by easy-to-fast repeats. They are a great way to help you learn how to change pace and swim at different speeds. In a swim set like 20 x 50 metres on 1:30, where your goal time is 50 seconds per 50 metres, FEEF works like this:

Even pacing: 25 seconds for the first 25 and 25 seconds for the second 25 = 50 seconds for 50 metres.

FEEF pacing: First 50 (fast/easy): 22 seconds for the first 25 and 28 seconds for the second 25 = 50 seconds for the 50 metres.

Second 50 (easy/fast): 26 seconds for the first 25 and 24 seconds for the second 25 = 50 seconds for the 50 metres.

3 **BLASTS.** Blasts are a lot of fun. Plan to swim a set like 5 x 200 metres. Start out swimming at an even, steady target race pace then at the 100-metre point, stop and rest for 10 seconds. Then 'blast' - swim a really fast 15-to-20 metres, before dropping back to your steady, even race pace. Take a minute to rest when you complete the 200-metre effort. On the next 200, stop and rest for 10 seconds at the 75-metre point then 'blast' 15-to-20 metres at maximum pace before going back to your steady, even target race pace through to the 200. These 'blasts' teach you to change pace quickly and decisively, giving you a deadly change of pace when you really need it in the swim of your next triathlon.

Summary:

1 There are two types of triathlon swimmers: 'pacer' and 'racer'. Pacers swim one pace throughout their training and racing and find it difficult to change speed when the competitive situation requires it. Racers on the other hand practise changing speed at training and when they need to change speed in a race they can do so quickly and decisively and gain a competitive advantage.

2 Most triathletes – particularly age-group triathletes training for ironman and 70.3 races – do their fast work too slow and their slow work too fast. They plod and plough their way up and down the lanes at the same speed – usually up around threshold pace – then wonder why they get blown away by other triathletes on race day. Practise changing speed and changing 'gears' at every triathlon swim training session.

3 The key – as always – is to get your swimming technique right. There's not one swimming technique for slow swimming and another swimming technique for fast swimming. Get the basics right and keep them the same no matter what speed you are swimming at. Swimming well at slow speed means staying relaxed, keeping your hands and feet soft and loose, catching the water early, breathing deeply and exhaling forcefully under water during every stroke cycle, kicking easily and rhythmically and remaining aware of the relationship between your head and your hips. All of these things apply equally to swimming well at high speeds. All that changes is your stroke timing and your stroke rate – and as your gears change, so too does your swimming speed.

Wayne Goldsmith is a triathlon coach who has worked for both Triathlon Australia and Swimming Australia