



## Triathlon Swimming – Developing a Well-Rounded Technique

By Coach Morgan Hoffman

Anyone who has ever raced in a competitive triathlon swim (i.e. one with a large, fast front pack) can vouch for the fact that it is dramatically different from a pool swim at the same level of competition. It is not uncommon to see exceptional pool swimmers come to triathlon and wonder why their performances in the open water are not comparable, and why in fact they are getting beaten by athletes they could comfortably beat in the pool.

There are four primary components to a successful open water race for short course athletes aiming to come out with a lead group (or just closer to the front):

1. Strength
2. Technique/form
3. Mental preparation
4. Race strategy

We'll be addressing all four of these components at our junior elite training camps throughout the course of the coming season, but today I'd like to address the technique component with an examination of the different methods of creating effective forward motion, specifically in the short course/draft-legal triathlon swim.

At Playtri, when we define great open water freestyle technique we use the metaphor of the four "gears." Just like on the bike, the swimmer has multiple gears he or she can access to achieve forward motion. We define these four gears as **hydrodynamics**, **stroke power**, **stroke cadence** and **kick**. Pool swimmers in general have great hydrodynamics and stroke power, meaning they move through the water very efficiently and get maximum forward motion out of every stroke (kicking with this group seems to be on a case-by-case basis – some have a strong kick, but many are deficient, relying more on core strength and rotation). While these two skills are a strong foundation for triathlon swimming, the issue we run into with these athletes is that there are three big problems with relying solely, or even primarily, on hydrodynamics and stroke power in the open water:

1. The amount and variety of disturbances in the character of the water
2. The amount of disturbances to the athlete's stroke
3. The need for quick reactions and changes in direction throughout the race

Let's break these down.

**Disturbances in the character of the water** – Pool swimming takes place in a reasonably controlled environment. Any swimmer will tell you there are "fast" and "slow" pools, but even the differences in those pools are miniscule compared to those that occur in the open water. Current, waves and other

swimmers can all create a turbulent environment for swimmers to move through, making it more challenging to consistently achieve max power and efficient forward motion from each individual stroke.

**Disturbances in the athlete's stroke** – A large pack of swimmers comes along with a lot of moving parts, and it's common for athletes to repeatedly come into contact with other swimmers during the stroke cycle. These interruptions in the momentum of the athlete's stroke often negatively impact his or her movement through the water, as well as the ability to effectively "grab" the water to create forward motion through power.

**Need for quick reactions and direction changes** – Not to get too far into the strategy of open water, but these swims require athletes to continually respond to what the race field is doing, as well as adjust course on a fairly regular basis. This means that athletes need to be able to make quick, oftentimes unannounced adjustments to speed and direction regularly throughout the course of a race to be both competitive and efficient (always considering that there is a maximal effort bike and run following the swim).

Because pool swim coaches rely primarily on hydrodynamics and power to create competitive pool swimmers (as research indicates that they should, by the way), triathlon coaches often take the same tact, to the detriment of their athletes. As seen by the three points above, a competitive triathlon swimmer does not have the luxury of relying predominantly on hydrodynamics and stroke power – instead, they must *equally* develop and have at their disposal all four gears as described above. This is why we emphasize the importance of a "well-rounded" open water freestyle technique for triathlon swimmers.

When we work with triathlon swimmers we use some of the following tactics for developing the two aspects of freestyle that we most often see neglected – stroke cadence and kick.

1. **Reverse stroke count drills** – Challenging athletes to get as many strokes as possible during an interval while maintaining proper technique (rotation timing in particular has a tendency to be negatively impacted for athletes used to a slower stroke).
2. **Vasa cadence drills** – This moves into the realm of strength training, but creating Vasa goal sets with high cadence goals can be invaluable in developing an effective high cadence stroke.
3. **Flutter kick time trials** – In our experience, kick times can be almost as indicative of open water success as freestyle times, especially at longer distances.
4. **Kicking with a leg band** – Having athletes perform regular kick sets or even freestyle swimming with a loose kick band (we utilize the Finis yellow band) at a hard kick effort.

Many athletes and coaches will wonder if emphasizing the kick is a good idea when athletes have to put forth maximal efforts on the bike and run immediately after the swim on race day. This is a valid concern, to which I will make two counter-arguments:

1. **With a properly developed kick (and some swim-to-bike training)**, the athlete should not be excessively fatigued from engaging a stronger kick during different portions of the swim. He may even be able to engage a strong kick throughout the swim without excessive detriment to the bike and the run.

- 2. Building on the above point**, the athlete should not necessarily be engaging this stronger kick throughout the entire swim unless it is necessary to stay with the lead pack (this gets into strategy, which I will address at a later date). Ideally the athlete has a strong enough swim to only “turn on” that strong 6-beat kick at various “reaction” points – i.e. during attacks, turns, other course changes, etc.

### **Summary**

Successful short course draft-legal triathlon swimmers must equally develop stroke power, high stroke rate, body position and kick to reach their optimum potential in the open water.

This is just a brief taste of what we'll be covering in regards to triathlon-specific swimming at our junior elite training camps this coming season – we look forward to sharing our knowledge with your athletes. To learn more about our first camp, visit [www.playtri.com/holiday-draft-legal-camp](http://www.playtri.com/holiday-draft-legal-camp)

For those interested in individual triathlon swim technique work in our Endless Pool, please email [morgan@playtri.com](mailto:morgan@playtri.com) or [ahmed@playtri.com](mailto:ahmed@playtri.com) to schedule an analysis or private lesson.