

Drafting in the Open Water (Triathlon Swim)

By Kris Hildebrand

Should you draft or not during a triathlon swim? Drafting definitely works on the bike, but does it work in the water? Further, is it worth possibly annoying other athletes? In my opinion, yes, yes, and yes.

Draft whenever possible.

There are two places a swimmer can draft;

- 1) directly behind the lead swimmer
- 2) immediately to the right or left with your head between the lead swimmer's hips and shoulders.

Both work, but with different advantages and disadvantages.

In the first type, you draft directly behind the lead swimmer getting as close to the lead swimmer's feet as possible. The wake directly behind the lead swimmer will reduce your frontal resistance (less drag) and you will get a slight pull from the water being pulled along by the lead swimmer. The advantages are numerous; if the lead swimmer is faster than you are, you can draft behind them and let them control the pace, giving you a nice psychological boost. After all, you just have to "hold on" rather than push to go faster. Studies indicate that you can gain as much as a 5% speed increase^{1,2,3} in speed. In theory, the lead swimmer will also get a very slight performance increase because of the longer keel* in the water created by you (I have not seen any direct studies done in this area, however, in boating racing, the boat with the longest keel has the least resistance in the water). There are disadvantages though. If the person you are following goes off course or slows down, you may not realize at the time and lose any speed advantage gained by following the other swimmer. Though the speed of kick that the lead swimmer uses does not cause you to go faster or slower⁴, some people do not feel comfortable swimming in the turbulence caused by a faster kicker. You also run the risk of following too closely and getting kicked.

In the second type of drafting you place yourself on the right or left of the lead swimmer, with your head between the swimmer's hip and shoulders. In this position, you will "ride" the series of bow waves created by the lead swimmer, staying higher in the water (less frontal resistance), getting pulled along. The lead swimmer should get a slight ride from your bow waves (no

data exists for this theory). Through practice, you will find the various sweet spots that exist, where you will feel higher in the water and use a little less energy. This drafting area only yields a slight performance advantage, between 1-3%^{1,2,3} (with a lower gain as you move farther away from the lead swimmer). However, this area allows you to do your own sighting and speed adjustments. This position also allows the drafting swimmer to surge forward and take the lead from time to time, thus you and the lead swimmer can work together to increase the pace and take turns drafting. The main disadvantage is that the lead swimmer can see you and possibly do things to discourage you from drafting such as swimming into you or slowing down.

Some triathletes do not like you drafting off them. They consider it unsportsmanlike behavior⁵.

Further, the slower or smaller the lead swimmer, the less wake and or smaller bow wave that they produce, and thus the less draft you will receive. Drafting does take practice to perfect, so practice whenever you can find a big fast swimmer who does not mind you drafting.

***Definitions:**

Wake: The water that gets pulled long behind the swimmer.

Keel: The bottom portion of the vessel submerged in water.

Bow Wave: The wave produced by the swimmer displacing water. The wave moves laterally away from the front of the swimmer.

References:

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