

# Technique = Speed

The critical role technique plays towards a fast swim is two-fold:

1. Minimizes drag
2. Improves propulsion

## DRAG IS YOUR BIGGEST ENEMY!!!

Being in the water means you're working with plenty of resistance, and resistance equals drag, which is the opposing force against your forward motion in the water. The good news is drag can be kept to a minimum with proper swimming technique.

While technique specifics will vary across the different strokes, there are a few common elements that will help reduce drag.

- **Streamline off the walls.** This position provides the least amount of drag because you're underwater, moving in a tight line, and taking up less space in the water. The key is to stay in a firm, horizontal line from your fingers to your toes – one hand on top of the other, elbows pushing in towards your head, head down, core tight, legs straight, and toes pointed.
- **Maintain good body alignment.** No matter what stroke you're swimming, staying horizontal near the surface of the water will be your most efficient position. Losing your alignment even slightly – pushing your head too far down, lifting it up, kicking too high out of the water, or sinking your lower body – will block your forward momentum.
- **Master your breathing.** Learning how to breathe when swimming is crucial to actually be able to swim for a considerable amount of time and length. But incorrect breathing technique will slow you down. The key is to minimize the time it takes to complete a breath without disrupting body alignment or the flow of your strokes.
- **Do not pull with your elbows.** For any stroke, dropping your elbows at any part of the pull (including recovery) will increase drag instead of propelling you through the water.

## PROPULSION IS THE WAY FORWARD

Propulsion is the driving force that pushes you forward through the water. In swimming, propulsive force comes from kicks and pulls (and everything that comes with it – i.e. rolls, rotations, undulations, and arm recovery).

The first instinct might be to simply kick harder, or put more force into the pulls. But because you're in the water and fighting against drag, you can't just muscle your way to a faster swim. Having good strength and power only contributes to a faster swim if accompanied by correct form and good stroke efficiency. Good swimming technique for any stroke ensures you're able to get a firm grip of the water and not slipping through. It also enables you to position your body so that you're actually pushing the water in the right direction, using the momentum of your pulls and kicks to generate forward speed. This improves your swimming efficiency, allowing you to swim faster without exerting as much energy