

TRIATHLON FREESTYLE SIMPLIFIED

SWIM STRONGER, BETTER, FASTER

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PREFACE

Swimming — the discipline triathletes love, hate, or simply tolerate. For many, it is an impenetrable source of overwhelming frustration. Unlike in running and cycling, swimming does not necessarily reward brute force or suffering. For type-A triathletes used to excelling at everything they do, this reality can be vexing. On the bike or run course, an increase in effort leads to an increase in speed. Period. It is satisfying and reliable. Unfortunately, this rule does not usually ring true for swimming, and brute force is rarely an efficient way to improve swim technique, fitness, or performance.

The Struggling Triathlete

Triathletes face unique challenges, and those without strong swim backgrounds probably suffer the most frustrating hurdle, which is how to get good at swimming as an adult. We often hear the same question from these swimmers: “Why, when I am so “fit,” can I not keep up with life-long swimmers who are, very obviously, not as fit as I am?”

As you might expect, there is no single explanation for why many triathletes struggle in the water. There are, however, vital issues that we see ailing many swimmers—beginner through advanced—and our goal in this book is to illuminate them and offer solutions for improvement.

Often, adults who enter the sport of swimming through the avenue of triathlon lack the proprioception that comes naturally to children or experienced swimmers. It is more difficult for adult-onset swimmers to “feel” the water and refine their stroke. This weakness means that the likelihood of adults teaching themselves to swim well through trial-and-error or traditional high-volume training is low. Apart from being marginally beneficial, the standard prescription “you just need to swim more,” although good advice for some, is not practical or wise for many time-strapped athletes. Busy swimmers and triathletes juggling the competing time and energy priorities of cycling and running may not have the ability to swim more.

Why We Wrote this Book

Through years of coaching hundreds of athletes, it has become clear that adult-learned swimmers and triathletes benefit from a unique, distilled, and deliberate approach to training. Our purpose in writing this book is to convey an efficient and effective method of swim training for adult-learned swimmers, multisport athletes, and open water swimmers, which will allow them to improve fitness and technique efficiently.

In addition to new or struggling swimmers, we believe that experienced athletes will benefit from reading this book and assimilating time-efficient principles into their training. If you are a seasoned athlete looking to launch off a plateau, this book will help reframe your perspective and offer guidance to tweak your approach so that you can capably reach the next level through deliberate practice.

Insight from World-Leading Coaches & Athletes

Apart from providing our own views, we sought the ideas and advice of highly successful and experienced coaching colleagues and triathletes (including World Champions and Olympians) for the best strategies to improve your swimming. We avoid taking a dogmatic view of what it takes to get better and, instead, aggregate and sift through opinions — some traditional and some contrarian — for how athletes of all levels should approach swim training and racing.

Throughout this book, you will find underlined, bold-faced words that represent links to articles, videos, and other relevant content. If you obtain the e-book version of this book, you can navigate to linked content by clicking on the hyperlinks directly embedded in the text. If you are using the print version, you can still easily access the content by using the link index at www.triathlonfreestylesimplified.com.

When reading this book, we encourage you to contemplate the principles herein and assimilate them into your training. By adhering to principles of efficiency and simplicity that foster consistency, we are confident you will swim stronger, better, and faster. Perhaps more importantly, you will enjoy the process and learn what you — specifically you — need to do to improve.

INTRODUCTION

Two Swimmers, Two Different Experiences: Sam & Mitch

Stroke, breathe, stroke, breathe, stroke, sight, breathe...

Sam adjusted his stroke to stay in the slipstream of the swimmer in front of him. As he approached the swim exit, he was shocked to see the front pack just a few meters ahead. With each proficient stroke, Sam reached, anchored his hand and forearm in the water, and pulled powerfully. When his fingertips brushed the sandy bottom of the lake near the swim exit, he stood to the loud cheers of screaming spectators and wryly smiled at the exuberant cameraman. A surge of adrenaline pulsed through his veins. He was entering T1 among the leaders, and never before did he feel so strong coming out of the water (with photo evidence to boot!).

Ten full minutes later, Mitch thrashed towards the swim exit. His arms felt like wet noodles, and his whole body was depleted. It was not a good swim. For reasons inexplicable to him, he could not find the same rhythm he felt during his pool swims. His neck and shoulders ached more and more with each desperate stroke. As he staggered to shore, he gazed disappointedly at the transition area. Over half the bikes were gone. Although a competent cyclist and runner, Mitch, exhausted, was out of contention after the swim, and the race had only just begun.

What Separated Sam and Mitch

From a physiological perspective, Sam and Mitch are comparable. Both are fit amateur triathletes with body composition conducive to high performance in endurance events. However, their open water swim ability differs dramatically, with Sam swimming over 30% faster. Neither had extensive swim experience as children or adolescents, and neither possess the traditional “swimmer’s build” — both are of average height and ordinarily proportioned.

So, what separates these two athletes? Unlike what you may be thinking, Sam’s performance edge does not come by way of volume; in fact, Mitch spends disproportionately MORE time in the water than Sam. What separates these swimmers is their approach to training. While one doesn’t necessarily work harder

than the other, Sam adheres to certain swim training principles of which Mitch is ignorant. Our purpose in writing this book is to convey these principles. For a brief glimpse, let's pull back the curtain and, by way of analogy, analyze each of these token athletes' swims to explore how their respective approaches to training impacted their performances.

The Start Line: Confident or Fearful

We will start with Sam, who, even before the race began, appeared more prepared than Mitch. Sam exuded confidence and took solace in the fact that he was stronger than ever—both physically AND mentally. Over the last few months, Sam shifted the way he thought about and trained for the swim. As a triathlete who mainly races in open water, he realized that his obsession with achieving a “pretty” swim stroke was misguided. Instead, Sam broke down the discipline into essential components and intentionally focused on the most critical aspects of technique (how to minimize drag and maximize propulsion). He concentrated on building strength, endurance, and power, rather than drilling himself to a theoretically perfect text-book swim stroke. He was not afraid to swim hard during workouts, prioritized consistency and frequency of purposeful stimulus over an arbitrary weekly swim volume, and integrated tools (weights, swim cords, a Vasa SwimErg, etc.) to build fitness when he could not travel to a pool or open water. He also spent a more significant percentage of training developing a strong pull and honing open water tactics. When he lined up at the start and looked at the rough water, he knew his approach would pay off. He was calm and self-assured.

Meanwhile, Mitch looked at the swelling lake and wondered how he would fare. Used to swimming in a smooth, glassy pool, the chop of open water was a new variable for him. Having spent most of his training time figuring out how to emulate the swim strokes of his favorite Olympic swimmers, he never found his own effective style. Although he spent a lot of time in the pool, he spent most of it doing drills that he *heard* would make him a better swimmer. Timidly contemplating the long buoy line in front of him, he questioned his training: *did I swim enough?*

Swim Start: Capable or Spastic?

As soon as the race started, Sam and Mitch's respective psychological states manifested in the way they performed. Sam began the swim assertively yet calmly, unafraid of the other swimmers splashing around him. He never doubted his ability to continue his stroke when it was interrupted by waves, swells, or other swimmers. Confident in his strength and fitness, Sam put in a short surge to break away from

the main pack. Shortly after, he settled into a steady pace, positioning himself in the draft of a small group of competent swimmers.

Mitch's experience contrasted sharply. Within the first 50 meters, the turbulent water and chaos (in his eyes) led him to panic. After swallowing a mouthful of lake water and missing a breath, he began hyperventilating. Riddled with anxiety, he turned on his back to calm his nerves and control his breathing. After swimming hundreds of thousands of meters in the pool over the last year, he could not believe what was happening. He was underwater in more ways than one!

Mid-Race: Strong or Weak?

As the race progressed, Sam was in total control. Although the water was rough, Sam harnessed a high stroke rate to maintain momentum and cut through the swells. He sighted quickly, smoothly and often, to ensure that he stayed on course. To reduce drag, he focused on maintaining a long, taut bodyline. He was deliberate with each stroke, anchoring his arm and moving as much water as possible to maximize propulsion. His breathing was rhythmic and calm. Having spent time working on race-specific pacing in training, Sam knew he was exerting the appropriate effort relative to his ability.

The middle of Mitch's race, however, was a struggle. After spending a few moments on his back to regain composure, he continued his swim. Unlike in the pool, he had difficulty achieving a balanced stroke. With each pull, it seemed like he would only move forward a few inches before a wave stalled his progress. Rather than slice through the water, he felt like he was fighting it—a victim of conditions. His issues led to fatigue and an inability to feel the water, which further exacerbated inefficiencies. After a few hundred meters, Mitch's neck, shoulders, and arms ached, and it was all he could do just to make forward (albeit slow) progress.

The Finish: Energized or Exhausted

In the last quarter of the swim, Sam continued his tempo. Although his effort was steady, he never over-extended himself. His strong neck, back, and core muscles enabled him to apply propulsive power and maintain form throughout the race. Even as he tired a bit, he was able to retain a feel for the water, adjusting to its ebb and flow. As he approached the swim exit, rather than feeling dizzy or fatigued, he was eager to perform a smooth transition and immediately get to work on the bike. It was, by all measures, a near-perfect swim.

Mitch's race, on the other hand, was decidedly imperfect. As he progressed towards the finish line, his pace slowed drastically. Although the anxiety he felt at the

beginning disappeared, he was uncoordinated and weak. The rhythm, balance, and power that he could generate in the pool did not translate to open water. His neck ached each time he lifted his head to sight. When he reached ahead, he had difficulty anchoring his arm and gripping the water. In the pool, Mitch felt competent. He considered his stroke to be smooth and efficient, but, during this race, the phases seemed disconnected. He felt his arms slapping and slipping rather than gripping and ripping. When he finally reached the shore, he was pale and exhausted—already wondering how he could schedule more pool time into his busy life (hint: for Mitch, more mindless pool time is not going to lead to efficient improvements).

Your Unique Swim Situation & How to Use this Book

The purpose of this book is to guide you to determine the following :

1. Where you currently are in your swim journey, and
2. How to establish a simple and actionable plan that will enable you to make improvements efficiently relative to your current proficiency, available time, and ambitions.

Everyone's situation is different. Some can conveniently swim five times a week in a pool or open water, while others are limited to two short sessions. Some come into the sport as world-class swimmers who can complete a 1500-meter open water swim in 17 minutes or an Ironman swim in 45 minutes. Others are beginners who can barely swim the length of a short course pool without stopping. Most, perhaps like you, Sam and Mitch, fall somewhere in between.

Establishing what type of swimmer you are will govern how you use this book. As such, we will help you determine where you fall on the experience scale, how you should think about training, and how to best structure swim training in light of your time availability and goals. We will then dive into proven swim principles that will form your foundational understanding of the physics and general concepts that govern efficient, powerful freestyle swimming. Next, we will focus on the intricacies of training, including traditional and new approaches for improving form and fitness.

Athletes who are experienced competitive swimmers and who have the ability and time to swim substantial volume will likely find higher value by focusing on the chapters that offer insight into building high-end strength and maximizing fitness.

Athletes who consider themselves beginner or intermediate level swimmers will benefit by paying particular attention to the sections about technique and the development of foundational strength and endurance.

All triathletes who read this book will learn how best to approach their swim training to maximize performance through simple, efficient training, and leverage the time-saving strategies available today. We have purposely “cut through the fluff” to guide you to identify and focus on the specific elements you need to maximize your potential within the context of a balanced life.

CHAPTER 1

The Ubiquitous Time-Strapped Athlete

Across the globe, a growing number of people are learning to swim as a result of triathlon, open water swimming, and SwimRun events. According to U.S. Masters Swimming, approximately 20% of their members identify as triathletes, with swim ability ranging from unskilled beginner to world-class. Although the skill spectrum may be broad and immediate goals may differ, beginners, top amateurs, and professional triathletes all face the same daunting challenge: how to maximize fitness and race performance within a time-constrained life.

The Chronically Overscheduled, Underperforming Triathlete

Triathlon especially is riddled with frustrated athletes who, although otherwise fit, swim poorly relative to their cardiorespiratory fitness. These fledgling swimmers who chug away in slower lanes often wonder what they are doing wrong. It may feel like they are following all the right steps: head down, early vertical forearm, pull back, rotate, recover, repeat, while, in reality, they lack real efficiency, rhythm and power. Perhaps their errors are invisible to them, which leads to frustration. Coaches and fast swimmers may tell these triathlete-swimmers, “you just need to swim more,” which is not necessarily wrong, though not always correct! In many cases, “less is more,” meaning it is more effective to do a lot less junk training and a lot more quality training.

Let’s play out a scenario: what if these struggling swimmers simply swam 90 minutes per day, six days a week? Would their fitness skyrocket and their subconscious activate to make radical improvements to technique? Perhaps, but it is also likely they will engrain poor habits, risk getting a shoulder injury from overuse, burn out, lose cycling/run fitness, and *probably* experience marital strife due to the massive time investment (kidding on the last one, somewhat). It is, quite simply, not feasible for most triathletes to commit to this amount of swim training volume. Due to the necessity of training for two other sports and juggling other life responsibilities — such as a career, family, maintaining a home, and raising an overly energetic puppy — allocating much more time may not be realistic or prudent.

How to Balance it All & Get Faster

The analysis on how to get faster comes down to two core questions:

1. What separates slower swimmers from fast, efficient swimmers?
2. How can athletes improve without overtraining and while staying sane, married, and employed?

The answer to both of these questions? Drum roll!!!...

The accrual of consistent, specific, high-quality swim experience through deliberate practice.

For triathletes, this means being hyper-efficient and making sure every minute of training enhances fitness, develops open-water-specific tactics, or addresses an athlete's unique swim-stroke limiters.

The Two Ways to Get Fast at Swimming

Let us consider two kinds of swimmers occupying the fast lane at your local pool.

First, you have traditionally trained swimmers who got there through massive volume. These swimmers have been swimming for years and, during at least one point in their life, were consistent with swim training. For some (especially those who swam competitively as children), progress came through trial and error and sheer volume. They likely practiced twice a day for years, competed in swim meets, and honed their stroke through hundreds of thousands of front crawl/freestyle meters (note: we will focus exclusively on front crawl in this book and will use the terms front crawl and freestyle interchangeably). Their swim-specific fitness and technical proficiency to maximize propulsion, forged through time spent in the water competing with their peers, allow them to swim circles around their less experienced counterparts.

Another kind of fast swimmer, although rarer, is the triathlete-swimmer without an extensive swim background (e.g., Sam from the "Introduction" of this book) but who still managed to progress into a competent swimmer. Believe it or not, there are thousands of athletes who, after taking up swimming later in life, have learned how to swim well (i.e., make the front pack of competitive races) without spending 10+ hours in the water each week. These athletes broke down the discipline into fundamental components and improved dramatically through the execution of a deliberate, targeted, and REALISTIC training approach designed to fit their life. A

realistic plan inspires **consistency**, and when athletes execute a quality plan that consistently attacks limiters, they get better. For these athletes, efficiency out of necessity enabled them to progress.

FROM EXPERIENCE

Note: you will find “**FROM EXPERIENCE**” sections throughout this book. Within each, you will hear perspectives, stories, opinions, and instruction from actual coaches and athletes. To learn more about each coach/athlete, turn to the COACH/ATHLETE BIOS section in the Appendix.

Question: What separates adult-learned swimmers who get fast, from those who stay slow?

Martin Hill: Those we see progress do so because they commit to swimming and doing so consistently – week after week, month after month. The sessions they perform are specific to swimming for triathlon and develop aerobic fitness and muscular strength in the upper body.

We encourage adult triathletes (performing at any distance) to commit to at least three swims per week. Each session should be broken into sets, reps and rest, and incorporate training tools that help develop strength and “feel” with the upper body (i.e., pull buoy and paddles). These not only make swimming more enjoyable (so the commitment is more manageable) but also enable fitness and swim-specific strength development quickly.

We have found that the most effective way of training triathletes is to polarize the effort, and we apply this approach across swim, bike, and run training. Most of the training is aerobic (triathlon being an aerobic sport), or easy, composed of contrasting hard strength-based sets.

Eric Neilsen: Proper technique would be the biggest thing that separates successful adult-onset swimmers from those who stay slow. The two most significant flaws are poor overall body position (which causes drag) and a monospeed pull [you want to accelerate through the pull]. I have had countless swimmers with big endurance engines come to me who work too hard while not getting much out of it. Recently, I worked with an adult-learned swimmer who improved her time by 5-6 seconds per 100 meters as soon as she was able to eliminate her monospeed pull. Double-arm pulls on the Vasa SwimErg are one of the best drills to correct for this inefficiency.”

Steven Bentley: I’ll use myself as an example: I didn’t start swimming until I was 20. I could sort of swim before that, but really just to survive. I started doing triathlons in 1986 when I was 20 and remember getting into the pool at the

University of Waterloo where I was in school and swimming a length (25m) of the pool and thinking I was going to die. Breathing heavily and exhausted, I asked, *“how can this be? I’m in great shape and shouldn’t be this tired.”* Since then, I swam with some swim coaches to learn things and get better, and eventually managed to do an Ironman swim (3800m/2.4 miles) in 58 minutes — not super-fast, but not terrible. That’s an average of 1 minute and 30 seconds/100m for almost 2.5 miles. For how hard I wanted to work in the water (both in training and racing), that was good enough for me.

To get there, I worked mainly on balance, body position, timing, and feeling my body move “over” my arms. I didn’t work harder, and I didn’t swim a lot more. The most I ever swam was three times a week.

What worked for me was establishing excellent technique, body position, timing, and movement awareness through the water, and then just working hard enough in the water to be able to maintain that.

Lesley Paterson: Those who I see make progress work on a combination of speed/strength and technique. My athlete, Tanja, was not a swimmer growing up. To get better, we used a multifaceted approach, which included technique training and video analysis in the pool, Vasa SwimErg training for strength, and quality speed work with plenty of rest in the pool. Combining all of these taught her to recruit/fire the right muscles and develop the fitness to apply it.

Principles of Efficiency Help Everyone

The value of training efficiently is not only limited to time-strapped athletes or new swimmers looking to improve rapidly. On the other side of the triathlete-swimmer spectrum are experienced swimmers (perhaps traditionally trained) looking to maintain their fitness while juggling two other sports. This category might include former competitive swimmers who are diving into their first triathlon, or elite triathletes striving to foster world-class performance in swimming, cycling and running. Even if these advanced triathlete-swimmers have the luxury of time, they still need to ration their effort and energy (finite resources) across multiple disciplines to improve.

In this manner, all athletes, from beginners to world-class, experience the mutual challenge of executing a consistent and rigorous training regimen on top of numerous other responsibilities. Blindly adding more training volume to improve is not always feasible or sensible. Multisport athletes especially need to approach the

sport with efficiency, and there is no better discipline to apply the concept of focused and deliberate practice than swimming.

Swimming's Enormous Time Investment

Compared to other sports, the time investment of swimming can be inordinate, mainly due to the logistics of traveling to and from the pool or open water venue, along with all the other preparations associated with swim workouts.

Picture everything in your path to complete a typical swim session. You have to find and pack your swimsuit, towel, paddles, cap, snorkel, buoy, and more. Oh, and goggles — don't forget those! Many a workout or race has been nearly soured by leaving those pesky things behind! Next, you need to drive to the pool, park the car, walk into the club, find a locker, change into your suit, realize you forgot your flip flops begrudgingly, walk to the pool, find a lane that isn't too crowded, jump into the cold (or too hot) chlorinated water, finish the swim workout, shower (while worrying about getting athlete's foot), change back into street clothes, and drive to work or back home, realize that you still smell like chlorine, shower again, apply an inordinate amount of lotion since your skin is burning because they just shocked the pool, change into new clothes again, DONE. Now, how much time did that take in total?

The time NOT spent swimming to DO a swim workout can be extensive. If your pool is 25 minutes away, then your total drive time will be 50 minutes. Add in showering and changing, and you've sacrificed well over an hour, and that's just to prep! If you include the 40-60 minutes you truly spend training in the pool, then the time cost of your swim workout is well over two hours, with most of that not even spent swimming. Then if you are not actually performing a targeted, high-density, beneficial workout, the cost-benefit analysis of what you just did tilts further towards the "too costly" side of things. Soon, your ambitions to complete four or five swims each week decrease, and you are lucky to make it to the water once a week.

Do not fall into the trap of ineffective workouts and wasted time. Barriers to completion (time, mental fatigue, etc.) impact consistency. Instead, make your workouts count and adopt efficient training solutions and principles.

FROM EXPERIENCE

Patrick McCrann of Endurance Nation on swimming's time investment.

Swimming becomes a massive time-suck for people due to the logistics around getting to the pool, swimming, exiting the pool, cleaning up, changing, and everything else you need to do, preceded by getting to where you need to go. Every swim workout has four parts - travel to, travel from, workout, and then changing back into street clothes. Depending who you are, the time of day, and where you are in relation to work, you can very easily spend just as much time traveling to and from the pool and getting dressed as you do in the water.

Imagine this in a different context. If I told you we were going to meet for a run today, but before we can run for 45 minutes, we have to spend 45 minutes just standing in place. Just standing there for 45 minutes, waiting, and you're not allowed to text (because you'd be driving or changing, both places where you can't use phones). You have to stand there and wait for 45 minutes and then run for 45 minutes. You would probably go insane. You'd probably want to punch me in the face or something. Well, get in line people! There are a lot of those folks. But seriously, that's what it is like to swim, and it's just something that we do. It's the cost of business.

However, having something like a Vasa SwimErg means that in your basement, garage, workout room, pain cave or whatever you want to call it, you have a device that you can use in street clothes, pre or post bike or run workout, and can be instantly swimming with power if you choose the ergometer option, or just swimming laps and working on your technique. In fact, you can do short swims that are 10-15 minutes focused on technique, just enough to stay sharp but not so much that it's costly, that will add to your overall swim repertoire.

Approaches & Tools that Enhance Efficiency

Over the past few years, we have seen a shift in thinking as it relates to volume and efficient training. Although many triathletes still obsess over maximizing the number of hours they train each week, the concept of training smarter is growing. The idea of emphasizing key sessions to boost fitness and structuring training cycles efficiently has gained popularity. Balanced programs that include appropriate doses of higher intensity workouts have replaced the relentless pursuit of high volume and junk mileage. Tools such as indoor cycling trainers, treadmills and indoor swim trainers have made it simpler to complete efficient, quality workouts that nearly eliminate travel and prep time, while also delivering a training stimulus that can be more effective than traditional training methods. Little has been written about how to implement these land-based training methods for swimming, and we will focus on ways you can intelligently harness these and other useful tools to enhance training and save time.



When used strategically, land-based training with tools like a Vasa SwimErg can improve consistency, boost fitness, and save time.