CHAPTER 1

Why Swim?

The main goal of this book is to create your own best stroke and training. This book gives you the tools you need to improve your swimming. Upon finishing this book, you can expect to have a proven plan to improve your swimming. Then all you need to do is follow it.

Over 20 years ago, I started working with athletes to improve their swimming, but my coaching philosophy was developed 10 years earlier. When I was 12 years old, I started swimming year-round. I was below average for my swim club, but I was an above-average baseball player. At 14, I felt I needed to choose between being a competitive swimmer and a baseball player. It was a hard decision, made worse by the fact that my swim coach suggested I stay with baseball! When I finally made up my mind, I realized I was choosing swimming for the challenge of it and my love for the sport. I was out to be the best I could be.

My main focus was freestyle mostly because it was the fastest stroke and that excited me. My approach was to learn everything I could about technique and training. What I quickly realized was that my idols (including Mark Spitz) at the time were not all swimming with exactly the same technique. That was the key: to find my own perfect stroke. That is what you must do, too. I and other coaches

will offer the framework, but I propose to you that anyone who says that he or she has the exact and only recipe for swimming is off base (no pun intended, regarding baseball).

My technique philosophy is simple: Learn how to relax and breathe in the aquatic environment, and use basic physics and some cutting-edge techniques to create an effective individual stroke. Reinforce the physics and new techniques with lessons from studying the fastest swimmers in the world.

WITH LIMITED TIME TO TRAIN, WHY SPEND IT SWIMMING?

If you feel like you get a better workout in 30 minutes of running than swimming for the same length of time, you would be partially correct. Running is more taxing on your body than swimming because of gravity. In addition, you do not have the water to cool you when running, so your body has to work harder to cool itself down. Or maybe you are a triathlete and believe that because swimming is a small portion of the triathlon, training on the bike will pay bigger dividends. True; however, "the beauty is in the balance," and you must consider and realize these overwhelming facts:

- Swimming is a lifetime activity.
- Swimming can save your life.
- You need to be able to swim to participate in all water-related sports.
- Swim technique is challenging, hence rewarding.
- Swimming is a great recovery for all other sports and life's stresses.
- Swimming efficiently not only will make you faster in the swim but can leave you with more energy to perform better in the bike and run in a triathlon.

We have established that it is worth our time to swim, so the important question is, How long should we swim?

HOW MUCH TIME IS WORTHWHILE?

The answer is three to six times per week, three being the minimum to provide you with some carryover benefit and the reinforcement

effect for your technique work. More than three sessions is for the athlete who is looking either to improve rapidly or to reach a very high level of fitness. Another exciting thing about swimming is that these sessions can be as short as 20 to 30 minutes and still be an effective training session for both technique and fitness.

In sports like running, more is not necessarily better, but in swimming, usually more is better. How many sessions per week and how long they should be are dependent on the following factors:

- How much time do you have available? Let's face it, you may want to swim for 2 hours, but if you have only 45 minutes, then it is what it is. Make sure your training sessions match your lifestyle and schedule, or you will be frustrated.
- Are you new to technique training? It may be challenging to make technique changes. It requires a great deal of focus and visualization. For this reason, shorter sessions with more frequency are the most beneficial.
- What are your goals? If you have an Ironman triathlon race in 2 months, you'd better schedule a 60- to 90-minute swim workout at least once per week. On the other end of the spectrum, 30 to 45 minutes would suffice if you are training to stay fit or prepare for the local sprint triathlon.
- What level of competition and fitness do you desire? Is competition for you about simply improving fitness? Or are you out to see what your absolute potential is? These are two very different reasons for swimming and will obviously require different amounts of time and energy.

Chapter 6 will take you through the nuts and bolts of training.

IS SWIMMING AGELESS?

What are the main variables for improvement in an aerobic sport?

- **Technique.** Technique entails how you use your body to apply forces and reduce resistance. This is the technical aspect of training.
- **Training.** This is the workout, where the intensity is the focus, not the technical aspects of the activity.

- **Recovery.** Recovery involves many areas that allow the body to regenerate—eating, sleeping, getting a massage, doing easy exercise, meditating, reading, stretching, laughing, and just plain relaxing.
- **Psychology.** Many coaches believe that this area holds the greatest potential for an athlete. Sport psychology involves techniques such as visualization, positive thinking, and acknowledging and releasing blocks.
- **Nutrition.** Bad habits have a way of creeping up on us. The basics are pretty irrefutable: Hydrate, eat whole foods, and customize your diet with the foods and percentages of macronutrients that suit you best.

The techniques in running and biking certainly have their complexities, but compared with swimming, they are relatively simple. While this distinction may create some frustration for the swimmer, it also contains a large potential for improvement. This is what allows swimmers to improve in spite of the aging process.

Have you ever been to a masters swim competition? Something happens at national and world masters swimming that does not happen in running or cycling: 40-, 50-, and 60-year-old athletes setting personal records! Many of these swimmers were competitive when they were in their 20s; some were even Olympians. How is this possible? Are they stronger? More flexible? No, they are using different techniques and training methods. In spite of being less powerful and flexible than in their youth, they are swimming faster! That is pretty exciting—who does not want to look forward to an improvement curve that can last a lifetime?

Recently during a swim workshop, an athlete asked me, "Do you ever get tired of doing these swim seminars?" I gave that some honest thought and responded, "No, I never get tired because there are so many technical aspects of swimming to work on that I am always challenged to find the best approach for each swimmer to help him or her improve."

An exciting aspect of swimming is that it is a lifelong sport. Every athlete I know enjoys the lifestyle of being an athlete and staying fit. Hopefully all of us will live healthily and happily into our 80s, 90s, or beyond. While the pounding from running and the possibility of

a crash and a broken hip from cycling seem too risky at those ages, swimming remains the perfect activity for athletes of every age.

The challenge, the goal: Find your own unique "perfect" stroke. Hopefully this perspective will have you rushing down to the pool to do some technique drills to work on getting more streamlined and more powerful. Before you run off to the pool, be sure to have a plan for improvement (Chapter 3 gives you this plan).

IN PRAISE OF SWIMMING

I find triathletes' perspectives on swimming fascinating. A significant number of triathletes view swimming as a "necessary evil," an event to get over with (as fast as possible) so they can get on with the triathlon. A similar attitude is common among fitness swimmers: They love the feeling they get from swimming, but the actual activity of swimming they see as a means to an end. While evolution has helped foster these feelings due to biking and running being land activities and us being land mammals, consider another perspective that I hope will empower you to higher levels of enjoyment and performance: The challenge and journey of working and seeing your swimming improve is itself a rewarding activity.

Two of the most common goals listed on the data sheet at our triathlon camps are "to remain active and healthy as long as I can" and "to improve as much as I can for as long as I can." Out of the three disciplines in triathlon, swimming offers the most opportunities for these types of goals.

Without question, the number one activity prescribed by health advocates and doctors alike is swimming (and other water activities). The reasons are numerous, most surrounding the fact that swimming is a no-impact sport that has few injuries and can be done in spite of many physical conditions (minor and severe). You would think that with this fact, swimming would be hands down the number one exercise in terms of participation. It is rated pretty high, but certainly not number one. Why? Swimming is not an activity that everyone knows how to do (as is walking or jogging); it is a learned skill in an unfamiliar environment, it is not required for survival, and the technique involved is challenging.

If you are not proficient at something, your enjoyment is diminished. The better you are at swimming and the more you see your speed and efficiency improving, the more you will enjoy and do it. But first there is something holding all of us back (some more than others).

THE CHALLENGE: WHAT HOLDS US BACK?

We are land animals. Okay, so this may not be the most earth-shattering news you have ever heard. However, this fact is one of the reasons swimming is such a difficult skill to master. Depending on your beliefs about evolution, humans may have "walked" out of the water at some point in his development (did you know human embryos have gills?), but in 2005 and for many years before then, humans have been land animals.

Why is this fact so important? Most people experience a tension that is either subtle or very apparent when they are in the water. This tension in many ways is a survival instinct. It keeps us alive. Without question, swimming can be a life-or-death activity. As soon as your head goes under the water and you are no longer able to breathe, the natural reaction is to hold your breath and try like heck to get your head out of the water to breathe again. Makes sense, but the problem is that you send your entire mind and body into the "fight or flight" mode, which makes swimming efficiently virtually impossible.

Analyzing many beginning swimmers, we realize this phenomenon is quite obvious. We see them literally jerking their head up out of the water with every stroke to get a breath, usually accompanied by short, fast arm pulls mostly pushing the arms down to keep the head up. In other swimmers, the signs may be subtler, but the effect on the swimmers' efficiency can still be very significant. It then becomes a vicious cycle that is reinforced every time you swim unless a change is made. Unconsciously, this is the conversation the brain is having with the muscles: "Push arms down to keep the head up to breathe and see"; "I have to push down, and again I am sinking"; repeat. . . .

The results of this knee-jerk reaction of being uncomfortable in the water, with your arms pressing down to lift your head to breathe, are as follows:

1. **Breathing is short:** Reduced oxygen intake occurs due to holding of breath and the body going into fight-or-flight mode.
2. **Legs sink:** As a person lifts her upper body vertically, the lower body must go down. This increases the drag (resistance) created since the area of the body creating resistance is increased tremendously.
3. **Pull is short:** This reaction happens because the feeling a person gets is "If I stop pulling, I will sink"—and this is correct because the body position and direction of the pull are causing the vicious cycle described earlier.

These results lead to lots of energy expended with a poor return in terms of distance swum.

The good news is that along with being land mammals, we have a large capacity to think, reason, and experiment to develop better ways of surviving. Once the body can get out of this survival mode, a whole new world opens up: the endless road of improving efficiency and speed.

To fully appreciate this point, we need a little history.

A BRIEF HISTORY LESSON

It is amazing how much freestyle swimming has improved in the last 100 years. Virtually every improvement has come from a swimmer trying something different and getting faster. It is generally accepted that all swimming strokes developed out of some form of breaststroke, which makes sense, because breaststroke is the easiest stroke during which to breathe and see where you are going. Drawings unearthed in the Middle East and dated back to 9,000 B.C. depict people swimming something resembling the breaststroke. Breaststroke training was also a standard part of both ancient Greek and Roman military training.

Many credit the American Indian with first doing a "crawl," having the arms recover (move from the end of the pull back to the beginning of the pull) over the water. In addition to this looking like a crab "crawling" through the water, swimming speed increased significantly because of the following factors: