

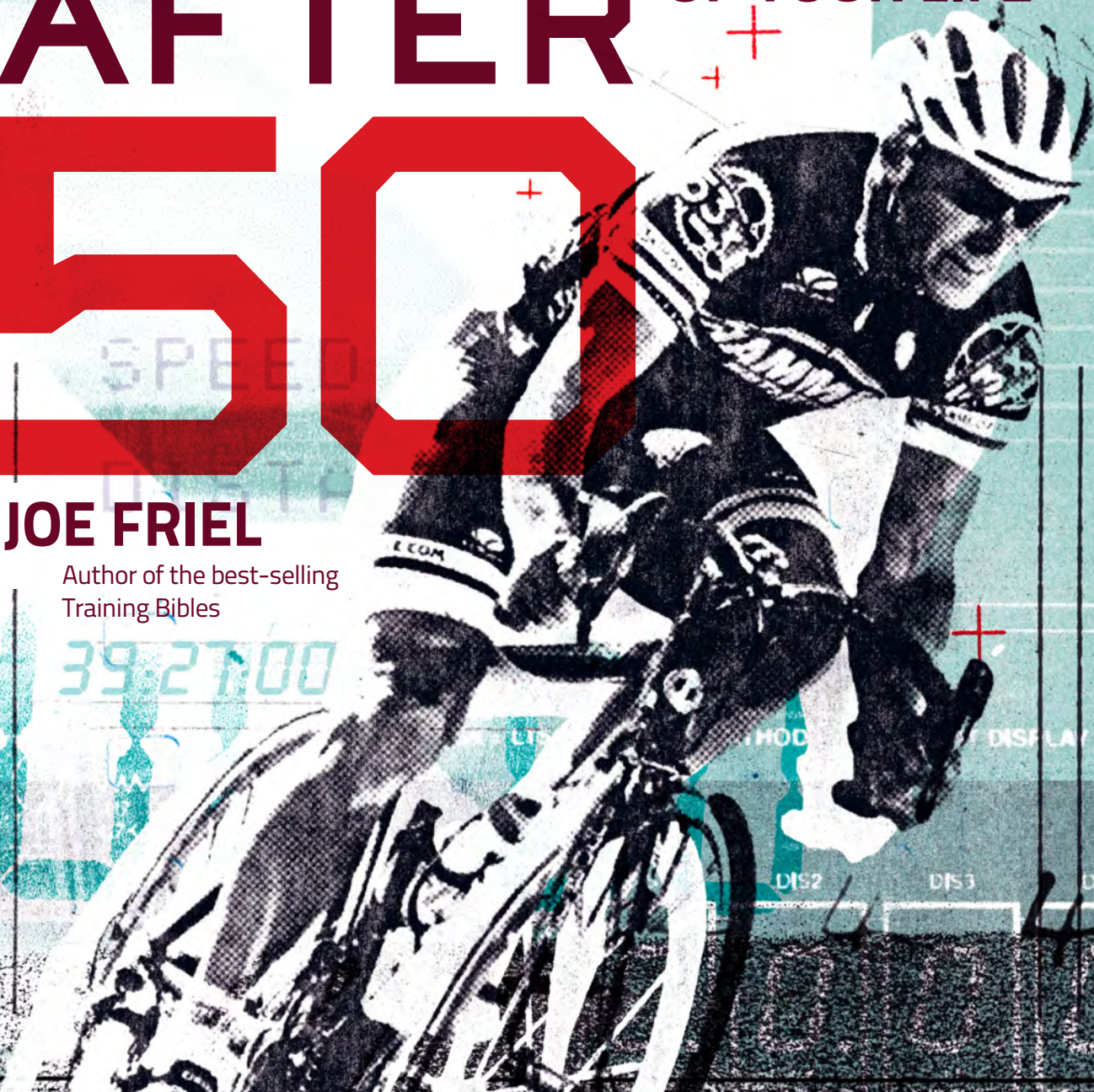
FOR ALL ENDURANCE ATHLETES: CYCLISTS, RUNNERS, SKIERS, SWIMMERS, TRIATHLETES

FAST AFTER 50

HOW TO
RACE STRONG
FOR THE REST
OF YOUR LIFE

JOE FRIEL

Author of the best-selling
Training Bibles



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Prologue

I'm 70.

There. I've said it.

That dreaded birthday arrived shortly after I started writing this book. None of my previous many-candle birthdays—40, 50, or even 60—got my attention. But 70 did. Somehow, 70 seems really old, a *lot* older than 69. It seemed different enough to me that I had been contemplating the start of my eighth decade of life for the better part of a year. My greatest concern was that it might signal the beginning of the end of my lifelong adventure as a serious athlete. I simply didn't know what to expect.

Six months prior to the Big Day, I decided to do something about it. I was going to read all of the aging research I could find to see if I could determine my future as an old athlete. I also wanted to learn what I could do to avoid a big decline in performance. The last time I read the aging research was in the mid-1990s when I wrote a book titled *Cycling Past 50*. I was 53 at the time. There wasn't much research on aging available back then. But with the huge baby-boom generation entering their 60s starting in 2005 and the impact of their arrival en masse on American life, I found that this picture had changed considerably.

In the past 15 years or so, a tremendous amount of research on aging had been done. I read those studies almost daily for the better part of a year. I started seeing interesting patterns in them. And so in the late summer of 2013, only a few months into the project, I decided to write a blog about what I was learning. That turned into 29 posts (www.joefrielsblog.com) on the topic of aging, which drew a great deal of positive feedback from readers. The tremendous response from older athletes convinced me that I needed to write a book on the topic to reach a bigger audience and tell them what I had learned. As it turned out, my publisher, Velo-Press, had been looking for someone to write such a book.

You now have in your hands my personal birthday present for all senior athletes. I hope it helps you answer your questions about aging, which I am sure are the same questions that I had at the start of the project. Of course, there's only one question we all want the answer to, the same one I pondered prior to my Big Seven-Zero Day: How can I slow, or perhaps even temporarily reverse, the loss of performance as I get older?

By the time we're in our 50s, it's just starting to become apparent that things are going the wrong way. The first thing athletes typically notice around that age is that they don't recover from a race or a hard training session as quickly as they did a few years earlier. And not only that—race times are slowing, there's a loss of power, hills seem steeper, and other performance markers are also looking worse. What can be done?

My purpose in writing this book is to help you answer that question by coming to understand what sport science says about the senior athlete's performance, training, and lifestyle. If you've already thumbed through the pages, you've probably noticed two things: There are lots of numbered notes in the text, and they lead to scientific sources that are collected by chapter at the end of the book. You may not be used to reading books like this. At first glance, this level of source citation may make the book look

more like a college textbook than an entertaining read. But I've included those notes and references for a reason. I believe it is necessary to provide some degree of proof about what I am proposing you do in your training to improve performance, rather than just offering unvalidated opinions.

There are two basic sources of information about aging: research and opinion. Both are valuable in some way. When it comes to the value of opinion, it depends on the source. Is the source knowledgeable and experienced with a long history of working with aging athletes and endurance sports? Does the opinion come from someone who also is an aging athlete? Or are you reading the opinion of someone who has very little background in sport, knows little about physiology, and is talking off the top of his or her head with nothing to back it up? I highly value the opinions of a few known, learned people, but pay little attention to the ramblings of most on this and related topics. Too much of what we hear about aging is based on hearsay and old wives' tales. Older athletes' thoughts on the topic can be insightful but are subject to unique situations that may or may not be applicable to others.

On the other hand, I place a high value on the thoughts of those with a scientific slant to their understanding of the world. They ask hard questions and seek answers regardless of what ideas may be popular. If their opinions are also based on research studies that control most all of the things that can influence the outcomes and are published in peer-reviewed journals, all the better. I've always relied heavily on science to help shape my opinions when it comes to training. That's especially valuable with topics such as aging and sport performance since there have been so few older athletes preceding the boomer generation whom we could rely on for answers. I also didn't want to simply give you my opinions on such an important topic without some solid evidence to back them up. That's why you see all of the references in my notes.

All of this doesn't mean my opinions aren't included. They most certainly are, as the research studies still need to be interpreted and applied to real life. What you will read in the following chapters, therefore, are my opinions on aging as shaped by the research.

If you also need to understand why things are the way they are, you can trace the origins of my opinions by finding the sources in the notes at the end of the book and doing a quick search for each one online. The best source of research abstracts (a brief summary of a study) can be found online at PubMed. This website (<http://www.ncbi.nlm.nih.gov/pubmed>) is owned and operated by the U.S. government's National Center for Biotechnology Information, a division of the National Institutes of Health. Once you've found a study's abstract, you can learn even more about the topic by chasing down the related research studies listed on the right side of the page. Most readers will probably find this tedious and unnecessary. If so, you can simply ignore the notes and references. But the option is there should you want to know more about some topic or see how I came to my conclusions.

I hope you don't take this to mean that science knows everything about aging and how you should train and live your life in order to perform at a high level. It certainly doesn't. The best we can hope for is to be pointed in the right direction. Sport science has an especially poor record when it comes to paving new pathways in sport. It has nearly always lagged behind most of the important changes that happen.

For example, sport science didn't come up with the Fosbury Flop high-jump technique. It was conceived and first used in the 1960s by Dick Fosbury, a college athlete, not a scientist. But later on, after high-jump records started falling because of this new technique, science explained why it was so much more effective than the eastern roll, western roll, and straddle methods that had been used for the better part of a

century. (The key is that with the Flop technique, the jumper's center of gravity passes under the bar rather than over it.) Now all world-class high jumpers do the Flop.

Sport science also didn't invent aerodynamic handlebars for the bicycle. They were the brainchild of a Montana ski coach turned cycling enthusiast by the name of Boone Lennon. Sport science later reported on why they work so well (they greatly reduce drag caused by the body, which is the greatest impediment to going fast on a bike). If you're a triathlete or road cyclist who does time trials, you know all about this. The list of things sport science figured out after the fact could go on and on. It's rare for science to lead the way on anything substantial in sport.

There are useful exceptions, however. Training periodization, which nearly all serious athletes use to design their seasons, originated from sport scientists in the Eastern bloc countries in the early 20th century and continues to be refined by scientists to this day. A good example of recent development comes from sport scientist Vladimir Issurin, who is largely credited with coming up with a highly focused training method called "Block Periodization" that is used by many elite athletes. More recently we've seen the development of training concepts, technology, and related analysis tools from sport scientists such as Eric Banister, David Costill, Tim Noakes, and Andrew Coggan.

Of course, many scientists these days are also athletes. Their and many others' contributions to sport have had a significant impact on how athletes train. But such breakthroughs in training aren't common. It's largely athletes and coaches, not scientists, who do the innovating.

To further confound the matter, what research there is on many aspects of lifestyle and sport performance has not been done using older athletes as subjects. So we have to decide whether studies using young subjects are applicable to us as senior athletes. Even worse, the subjects in these studies

are often not athletes, and they are seldom women. Men make up by far the greatest portion of the subjects in studies on aging as well as nearly all other sports-related topics. Scientists used to think that men and women were the same in all areas of study that weren't directly related to gender, such as menopause. But that's now changing as many scientists begin to realize that women differ from men in subtle ways. Hence, there is a growing but still small body of research dedicated to men- or women-only subjects. All of this means that even though there may be research on a given topic, it may not match our unique needs as senior athletes.

And so we come back to performance with aging and how athletes and scientists are revising the way we think about growing old. Defining the "aging athlete" is difficult, especially in the conventional way with a number representing age. Yet with each new number comes change. We know that change will happen with aging; we just don't know how rapidly it will occur. Some athletes continue to produce amazing performances well into their later years and remain competitive even with other athletes half their age. Locally they are thought of as legends and are held in high regard by younger athletes. Others with the same number of birthdays appear to age quickly and see significant drops in performance. Why the difference? How is it that some seem to have found the fountain of youth while others have missed it? Genetics can probably explain much of this, but not all as you'll read in the following pages. Some older athletes have also discovered what it takes in training and lifestyle to keep performance decreases from reflecting aging increases.

For example, consider the remarkable accomplishment of Diana Nyad, who in 2013 swam from Cuba to Florida—111 miles and nearly 53 nonstop hours in shark- and jellyfish-infested rough water—at age 64. She obviously knows something about aging, performance, and especially motivation. I'm sure you've read of her accomplishment. But she isn't the only

aging athlete turning in amazing performances. We haven't learned of most of the others as their stories rarely make the front page. Hundreds of aging athletes achieve exceptional sport feats that most of us never hear of. One is Bob Scott.

At age 75, racing in the Ironman® World Championship in Hawaii, Bob Scott set a new course record of 13:27:50 for his age group. That's a good time even for athletes in their 30s and 40s. Winning and breaking triathlon records is nothing new for him. Four years earlier, he set the men's 70–74 age-group record at 12:59:02, finishing more than 90 minutes ahead of the second age-group finisher. If the sport of triathlon supplied a list of age-adjusted race winners, Bob would nearly always take the gold medal.

Or how about Libby James, age 76, of Fort Collins, Colorado? She set a new half-marathon world record of 1:45:56 for her age category in 2013, demolishing the previous record of 1:55:19. Few women half her age can run such a fast time. As it happens, running does provide age-graded results, and Libby's record time topped all other half marathoners for that year regardless of age or gender.

A list of such amazing accomplishments from aging athletes could go on and on. You may never swim from Cuba to Florida or break course or world records, but I expect you are capable of achieving far more than you are currently accomplishing. How can you do it? How can you be fast after 50? That's what I hope you will learn by reading this book.

The book is arranged in two parts. Part I, Chapters 1 through 3, will describe the many challenges facing the aging athlete. In Part II, Chapters 4 through 8, I propose solutions to those problems. These involve not only training solutions but also those that we consider to be part of the way we live—our lifestyle. The two really can't be separated.

How about the title: Fast After 50? Will you become “fast” by applying what you learn here? The answer depends on many variables: how well

you've trained in the past few years, how motivated you are, how willing you are to make changes, how many confounding factors such as health concerns you have, and much more. As I am sure you have learned over the years, there are no automatic fixes for performance. There are only dedication and discipline when it comes to change. But I can guarantee that if you keep doing what you've been doing, you'll keep getting the same results—or worse. With aging, change is necessary.

What should you change? The answer depends on what may be holding you back from once again becoming fast. According to the research, the list is most likely to include decreasing aerobic capacity, increasing body fat, and shrinking muscles. Those three problems and their solutions are what this book is all about.

The solutions, described in detail in Part II, are high-intensity training, including intervals and heavy-load strength work; periodization changes; and lifestyle modification involving sleep, nutrition, and training recovery methods. Along the way you will learn more about how your aging body operates and the details of gently coaxing it to greater fitness despite your age. That's the book in a nutshell.

The solutions I'm going to suggest are probably contrary to much of what you've been told. The long-held traditional advice from the medical community has been that older people (usually meaning age 50 and over) should avoid strenuous exercise. It's dangerous, they tell us. You're likely to die if you're not seriously injured first. Instead of searching for performance gains, once we reach that doddering age we should walk—not too fast, mind you; work in the garden; and, at most, square dance on occasion or participate in water aerobics classes.

I suspect that since you're reading this book you don't subscribe to such advice. Your parents may have, but not you. That doesn't mean you

have no concerns when it comes to vigorous exercise. I have them, too. So I'll try to help you make decisions along the way about how great the changes should be, how quickly they may be incorporated into your life and training, and what to watch out for along the way.

Let's get started down the path to better sport performance regardless of age.

About the Author

Joe Friel is the cofounder of TrainingPeaks.com and TrainingBible Coaching. With a master of science degree in exercise science, he has coached and trained endurance athletes since 1980. His clients have included road cyclists, mountain bikers, triathletes, runners, rowers, and endurance horse racers.



He has coached athletes of all ages and abilities from novice to elite, both amateurs and professionals. The list includes an Ironman Triathlon winner, USA and foreign national champions, world championship competitors, and an Olympian.

Joe is the author of the following books: *The Cyclist's Training Bible*, *The Triathlete's Training Bible*, *The Mountain Biker's Training Bible*, *Cycling Past 50*, *Going Long* (coauthor), *The Paleo Diet for Athletes* (coauthor), *Your First Triathlon*, *Your Best Triathlon*, *The Power Meter Handbook*, *Precision Heart Rate Training* (contributor), *Total Heart Rate Training*, and *Triathlon Science* (coeditor). He helped found the USA Triathlon National Coaching Commission and served two terms as chairman.

He has been a columnist for *Inside Triathlon*, *VeloNews*, and more than 200 other magazines and frequently writes articles for international magazines and websites. His opinions on matters related to training for endurance sports are widely sought and have been featured in such publications as *Runner's World*, *Outside*, *Triathlete*, *Women's Sports & Fitness*, *Men's Fitness*, *Men's Health*, *American Health*, *Masters Sports*, *Walking*, *Bicycling*, the *New York Times*, and *Vogue*.

He conducts seminars and camps on training and racing for endurance athletes and coaches in Asia, Europe, North and South America, and the Pacific region. He also provides consulting services to corporations in the fitness industry and to national governing bodies.

As an age-group competitor, he is a former Colorado State Masters Triathlon Champion and a Rocky Mountain region and Southwest region duathlon age-group champion. He has been named to several All-American teams and has represented the United States at world championships. He now competes in USA Cycling bike races and time trials.

Joe may be contacted through his blog at joeFrielsBlog.com.

For every endurance athlete who wants to stay fast for years to come: cyclists, runners, swimmers, skiers, rowers, triathletes

Getting older doesn't have to mean getting slower! Drawing from the most current research on aging and sports performance, Joe Friel—America's leading endurance sports coach—shows how athletes can race strong and stay healthy well past age 50. By training to ward off the effects of age, athletes can extend their racing careers for decades—and race to win.

Fast After 50 presents proven guidelines for high-intensity workouts, focused strength training, recovery, crosstraining, and nutrition for high performance:

- How the body's response to training changes with age, how to adapt your training plan, and how to avoid overtraining
- How to shed body fat and regain muscle density
- How to create a progressive plan for training, rest, recovery, and competition
- Workout guidelines, field tests, and intensity measurement

Read this groundbreaking book and you'll see that with the right approach, age is just a number—and race results are the only numbers that count.



With contributions from:

Mark Allen	Tim Noakes, MD
Gale Bernhardt	Ned Overend
Amby Burfoot	John Post, MD
Larry Creswell, MD	Andrew Pruitt, EdD
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Joe Friel is the best-selling author of more than a dozen books for athletes. He is also a masters multiple champion and has coached winning athletes of all ages and abilities from novice to elite, both amateur and professional.

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