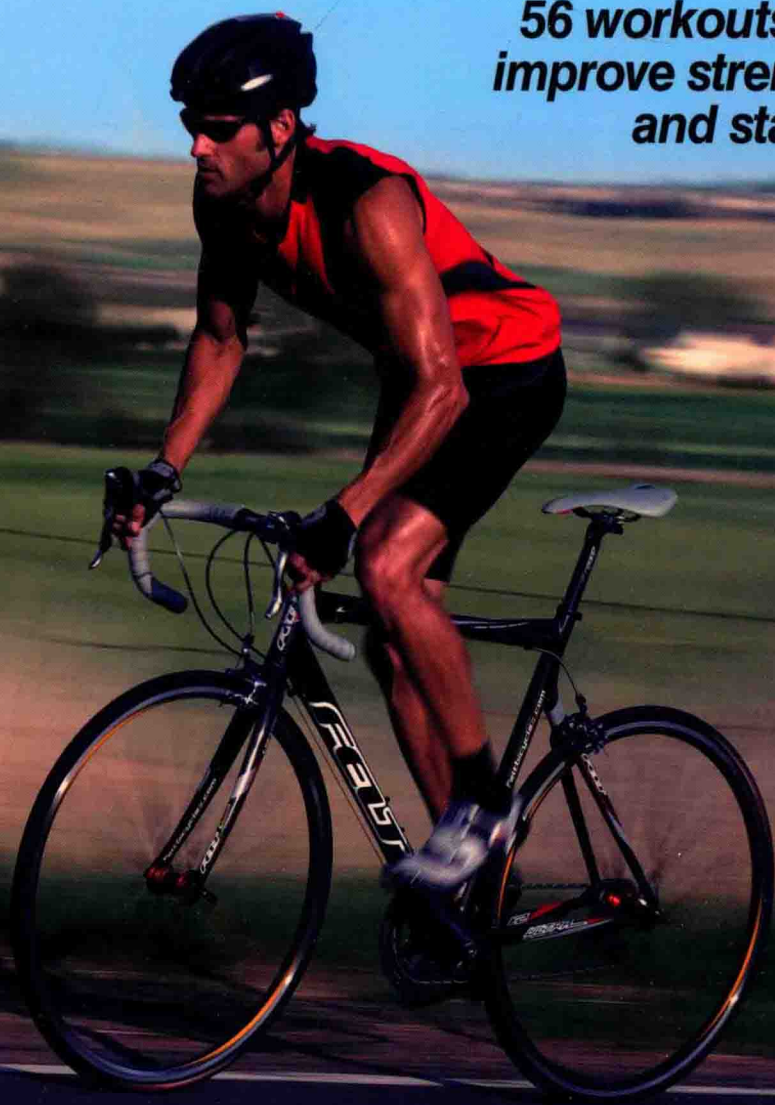


FITNESS **CYCLING**

*56 workouts proven to
improve strength, speed,
and stamina*



Shannon Sovndal, MD

Foreword by Tyler Farrar

FITNESS ***CYCLING***

Shannon Sovndal, MD
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Human Kinetics

Library of Congress Cataloging-in-Publication Data

Sovndal, Shannon, 1970-

Fitness cycling / Shannon Sovndal, MD.

pages cm

Includes index.

1. Cycling. 2. Cycling--Equipment and supplies. I. Title.

GV1041.S65 2013

796.6--dc23

2012050503

ISBN-10: 1-4504-2930-0 (print)

ISBN-13: 978-1-4504-2930-6 (print)

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The web addresses cited in this text were current as of February 2013, unless otherwise noted.

Acquisitions Editor: Tom Heine; **Developmental Editor:** Bethany J. Bentley; **Assistant Editors:** Claire Marty and Elizabeth Evans; **Copyeditor:** Patrick Connolly; **Indexer:** Dan Connolly; **Permissions Manager:** Martha Gullo; **Graphic Designer:** Nancy Rasmus; **Graphic Artist:** Julie L. Denzer; **Cover Designer:** Keith Blomberg; **Photograph (cover):** Tim DeFrisco/Stellar Stock/age fotostock; **Photographs (interior):** pp. 1, 57 Tim DeFrisco/Stellar Stock/age fotostock; p. 7 © Tom Bayer/fotolia; p. 21 Odilon Dimier/PhotoAlto/age fotostock; p. 35 © Minik29 | Dreamstime.com; p. 47 © Bambi L. Dingman | Dreamstime.com; p. 71 © Doug James | Dreamstime.com; p. 87 © homydesign/fotolia; pp. 101, 115, 181, 193 Franck Faugere/DPPI/Icon SMI; p. 129 Corey Nolen/Aurora Photos; p. 145 © Maxim Petrichuk | Dreamstime.com; p. 165 Andreas Pollok/Cultura RM/age fotostock; **Photo Asset Manager:** Laura Fitch; **Visual Production Assistant:** Joyce Brumfield; **Photo Production Manager:** Jason Allen; **Art Manager:** Kelly Hendren; **Associate Art Manager:** Alan L. Wilborn; **Illustrations:** © Human Kinetics; **Printer:** Versa Press

We thank Streets Fitness in Louisville, CO, and Durst Cycle and Fitness in Urbana, IL, for assistance in providing the locations for the photo shoots for this book.

Human Kinetics books are available at special discounts for bulk purchase. Special editions or book excerpts can also be created to specification. For details, contact the Special Sales Manager at Human Kinetics.

Printed in the United States of America 10 9 8 7 6 5 4 3 2 1

The paper in this book is certified under a sustainable forestry program.

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To the love of my life, Stephanie.
Thank you for inspiring me and everyone
around you. You're amazing.

Foreword

Everyone wants to ride their bike faster. Whether you are a professional cyclist working towards the Tour de France or simply looking to have more fun on weekend group rides, nothing is more satisfying than training hard and being rewarded with better performance. Approaching your training with a systematic approach supported by science is the key to realizing these performance breakthroughs. In *Fitness Cycling* Shannon Sovndal will provide you with the tools you need to train more effectively, climb stronger, sprint faster, and become a well-rounded cyclist.

I was drawn to the sport of cycling simply because I loved to ride my bike. The freedom of climbing onto a bicycle and taking off in whatever direction was intoxicating. Quickly I developed a hunger to become a better, faster cyclist. This desire drove me to seek knowledge about training and performance. The potential to maximize my performance through smarter training was astounding! Not only could I still experience the freedom of an open road, but I also discovered the pleasure in setting a goal, building a training program, and then executing my plan to achieve my objective. This formula, repeated throughout the years, allowed me to realize my dreams and become a professional cyclist, competing in the biggest events in the world.

I have worked with Shannon since 2009 as the team doctor for the professional cycling team Garmin-Sharp-Barracuda. Not only is he a great guy, but he has a skill for translating complex scientific principles of health and training into layman's terms. We have had many interesting conversations over the years that have opened my eyes to ways of riding my bike faster. He has helped me to come back from injuries quicker and stronger than before and helped me to understand just what is going on in my body as I work toward my goals. Shannon's medical background, years of competition as a cyclist, and hands-on experience working with world-class athletes give him a unique perspective of training and performance.

As with anything worthwhile, becoming a better cyclist requires hard work and commitment. But without a comprehensive plan to address both your strengths and your weaknesses, it is incredibly difficult to recognize your true potential. In this book, Shannon will help you to set goals and understand the necessary steps to get from where you are now to where you want to be.

Good luck and enjoy your training!

—Tyler Farrar

Tyler Farrar is a member of Team Garmin-Sharp-Barracuda. He has won stages in the Tour de France, Giro di Italia, and Vuelta a Espana and is also an Olympian.

Preface

Cycling is a fantastic sport! Enjoying the outdoors, seeing the sights, experiencing the thrill of riding fast, and improving your fitness are all rolled up into a simple activity that most of us learned when we were children. *Fitness Cycling* is written to take you to the next level of your cycling and to help you get the most out of your time on the bike. If you've picked up this book, you've likely been out riding your bike and exploring the sport of cycling. But now you want more—more knowledge, more direction, and more motivation to really improve your riding technique, skills, and fitness. *Fitness Cycling* can help you do just that.

Performance Rider

If you are time constrained, are tired of the same old ride, and want to get the most out of your time on the bike, then this book is perfect for you. Many cycling books approach fitness as if you're training for the Tour de France. In reality, most people have too many other commitments to solely focus on riding and training.

Fitness Cycling is written for the performance rider, an athlete who is interested in more than merely "going on a ride." This book is designed to take you from the basics of training to the details of creating your own training program. I understand that life is full of stresses and that numerous aspects are constantly pulling you every which way. That's why I wrote *Fitness Cycling*—to give you concise and focused direction in your training.

All cyclists should have goals for their riding. Goals keep you focused and give direction to your training. In this book, you'll learn how to use your riding to improve your fitness and reach your full potential as a rider. Whether your goal is besting a personal record up a hill climb, completing a century, or just improving your fitness, you will achieve remarkable results if you have a planned approach to your riding.

Philosophy, Training Science, and Improving Your Performance

Fitness Cycling will provide you with a solid foundation in the sport of cycling. Although the primary focus of the book is providing focused workouts and training plans, it will also cover valuable information on bike equipment, proper position and fit, and training theory.

Training is more efficient and effective when you have a solid foundation in the science of training. *Fitness Cycling* will lay out the basic principles of training. It will also show you how to assess and track your fitness and training effort. Don't worry, my plan isn't to bore you to death with technical training information. I hope that the explanations are clear and concise and that the information will help you design your own training programs in the future.

Workouts and Programs

The workout chapters are at the heart of the book. Each chapter covers a specific aspect of riding—base training, climbing, flatland threshold training, time trialing, and so on. The beginning of each workout chapter includes an explanation of the importance of that type of training and how it fits into a training program.

In each workout chapter, you will find detailed descriptions of 8 to 10 entertaining and effective training rides. Each workout includes specific cycling tips that will help you build your knowledge about riding, training, and cycling. Finally, sample workout programs are provided at the end of each chapter. My hope is that after you get through the book and use these programs, you'll be able to piece together a training program—mixing and matching the workouts provided—to create your own personalized training plan.

So, no more time to waste! Let's get started!

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1

Setting Cycling Fitness Goals



For many people, cycling is a passion. If you've cracked open this book, then you might feel the same way. Cycling is a phenomenal form of cardiovascular exercise for people of all levels of fitness, age, and ability. It can provide a safe haven of solitude after a difficult workday, or it can serve as a social get-together that helps you bond with friends. You can push the limits of your perseverance and performance all from the solitude of your own brain. Cycling allows you to test yourself, to strive to be better, and to gauge your progression over time.

This book is all about helping you get the most out of your rides. It is written for the performance cyclist, for the rider who isn't satisfied with doing the same ride day after day. You may not have dreams (at least realistic ones) of winning the Tour de France, but you undoubtedly want to improve, build on your fitness, and test yourself and your ability on the bike.

Sport physiology and science can be a bit overwhelming. We've learned so much about training efficiently and effectively that the volume of information can become confusing. This book helps make that information understandable and applicable to your daily riding. No matter what your goals are, you need to get the most out of every ride. That might simply mean having the most fun or going farther than ever before. Whatever you set out to do, you should do it with drive, passion, and a plan. Just because you're not paid to ride your bike doesn't mean that you can't apply the same types of systems that professionals use to reach their utmost potential.

Training Goals

So, let's not waste any more time. If you want to train more seriously, you need to have a plan. Every time you get on your bike, you are essentially training. The question is whether you're training effectively or just gaining some conditioning through random episodes of exercise. If you are brand new to the sport, you will see great gains in your riding fitness, skill, and comfort simply by getting out on rides. Your body will respond to the stress of riding and will adapt accordingly. But, you can achieve much more progression if you take the time to establish a plan of action.

Effective training is what this book is all about. Most of us have other commitments—family, work, friends, and so on. That's why cyclists need to make the most of the time they spend on the bike.

As a performance cyclist, you should always be striving to improve, and you should focus your attention on your cycling goals. If you want to hit the target, you first have to define that target.

What are your goals? Why are you riding your bike? Are you riding in order to stay healthy, to beat a friend up a local climb, or to complete your

first century? Every person has a different goal, and that's the point. You own your goals and all the training that you complete—every pedal stroke, every climb, every Saturday you drag yourself out of bed and onto the road.

Goals can be intimidating because they come with an inherent chance of failure. A goal that is easy to achieve and includes no chance of failure would be ineffective because it goes against the very premise of this book—getting the most out of your riding. The possibility of success or failure is the crux of a good goal. You need to struggle to improve, and the only way to truly struggle is to know that there is a risk of failure. It is the risk, the chance of failure, that drives you toward success.

To help ensure that you establish attainable goals, you should apply the Four Ps of goal setting: personalized, positive, perceivable, and possible.

Personalized means that the goals are your own. Only you can determine what is important, what will motivate you to keep your commitment, and what will give you a sense of accomplishment.

All your goals should be **positive**. Negative energy sucks! At Disneyland, they live by this philosophy. If you ask the workers when the park closes, they will respond, "The park *stays open* until 8 o'clock." You should set a goal to accomplish a desired result rather than to avoid failure. Word your goals so that the outcome is positive.

You need to set goals that have a tangible outcome. Your goals must be **perceivable** to yourself or to others. This aspect of goal setting is all about accountability.

Finally, your goals need to be realistic but challenging. When you think about your goal, you should have a strong sense that the desired outcome is **possible**, but by no means assured. You need to believe even with the possibility of failure. This will help you suffer a little longer, struggle just a bit more, and get the most out of your training plan.

Don't think that goals are only for professionals or racers. EVERY RIDER NEEDS GOALS. Think of goals the same way you think of the rest of the training program. Training is all about progression, and goals should follow suit. They start with more obtainable outcomes. But with each accomplishment, the task becomes more difficult. Each goal builds on the last in a stepwise fashion (figure 1.1), until you find yourself faced with your ultimate accomplishment.

Four Ps of Goal Setting

1. Personalized
2. Positive

3. Perceivable
4. Possible

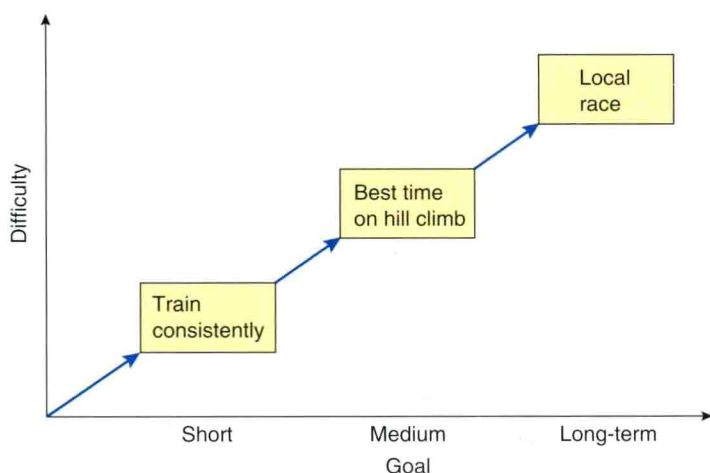


Figure 1.1 Goal progression.

Be sure to write down your goals. For each time frame—short, medium, and long—fill in your primary and secondary goals (figure 1.1). Again, these goals can be anything. They should be whatever motivates you to train when you might feel like flicking on the TV instead. There is something about actually writing down your goals. This brings them outside your brain and into the real world—an accountable world.

Training is all about commitment, discipline, and perseverance. It is a slow grind, and sometimes you feel as though you're going backward instead of forward. But if you stick to your program, you **WILL** get better. Writing down your goals is the first barrier to overcome.

Goals will perpetually be included in your training program. Every time you reach a goal, you can have a little celebration, even if it is internal. Treat yourself to a double half-caf, mocha chai latte if that's your thing. As soon as you are finished basking in the glory of the accomplishment, write down a new set of goals. Stay on target!

RACE

My training philosophy includes four fundamental aspects that will help you reach your goals. *RACE* is a simple acronym that represents each of the key components: rest, accountability, consistency, and efficiency (figure 1.2).



Figure 1.2 Key components for reaching your goals.

Rest

In discussing a training philosophy, it may be odd to start by talking about rest, but that's exactly what I'm going to do. You don't get better while you're training. You get better while you're resting. Resting is where it all goes down; it's where you grow mitochondria, increase your vascularization, enhance your oxygen delivery—in other words, all the things that make you go faster on the bike.

Many athletes waste significant effort because they fail to give their body time to adapt to their training load. The purpose of your training is to stress your physiology, causing an alarm reaction and the subsequent adaptation. On a fundamental level, training damages your muscles. This damage needs time to heal, and the healing process is what takes you to the next level. Your fitness gains don't come while you're suffering on the bike during a hard training ride. They come after you've finished, when you take time to rest, sleep, and kick up your feet.

Chapter 2 will cover how your body adapts to training. If you train too much, your body can become exhausted. Another term for this is *overtraining*. As you train, each ride places a stress on your physiology. This stress results in adaptation, but the cost of the stress is fatigue. If you don't give your body enough rest, then the fatigue takes over and derails the entire train.

Accountability

We all need accountability. It helps us stay true to our goals and our training plan. Self-accountability starts with you documenting your goals and your plan. Your master training plan lays out the course of action that will help you reach your goals. That's why you need to write down your goals and why you should keep a training diary. By documenting your performance day to day, you'll have a record of where you stand. You'll know the areas that you're excelling in and the areas where you're deficient. Don't be intimidated by documenting and reading over your faults. Use them to your advantage to revamp your training so you can reach your goals—even if it takes a bit longer than you originally anticipated.

If you have a spouse, a coach, or a good riding partner, let this person know about your goals. Fill the person in on how you hope to reach your goals and the basics of your training plan. This person can offer support and advice when you struggle or lose confidence. Also, when you know that someone besides yourself is aware of what you expect to accomplish, it adds another level to your commitment.

Consistency

Success is all about consistency. Conditioning requires commitment and sacrifice for a long period of time. Your fitness increases in baby steps, one step building on top of the other. But as soon as you take a break, or stop

training, you start to move backward. This is called reversibility, or detraining. A difficult thing about training is that you lose your fitness faster than you gain it. So, the more time you spend not riding, the longer it will take to get back to your original level of fitness.

That's why being consistent is so important. We all have busy lives, and unless you make your living racing a bike, other things will have to take priority, regardless of how committed you are to riding. If you can predict your busy or stressful times, you can plan your training program to accommodate them. For example, a "rest" week might conveniently be planned during a big work project or a family vacation. If you unexpectedly have to take a break, try to limit your loss. Even a ride once a week can slow your deconditioning. Don't get down on yourself if your training takes a hit. It will at some point. That's just life. You need to focus on the long haul. You'll get your conditioning back over time. Just keep plugging away and try to limit your losses as much as possible.

Efficiency

Every time you get on your bike, you should have a purpose. At first glance, this might sound a little extreme, but it will help you get the most out of your time on the bike. Rather than just "going on a ride," think about the reason why you're rolling out of the garage. Endurance, weight loss, speed, fun, and stress relief are all reasons why cyclists clip into the pedals and hit the road. If you consciously think about the purpose of the ride before, during, and after it, you'll find that your body responds. Focusing on the purpose enhances your training response. If you start to become bored or lose focus with your training program, change it up. You must stay fired up and excited about the bike.

It is easy to skim over this first chapter thinking that you'll get into the real meat of training in the later sections. That is the wrong approach! Setting goals before you begin is extremely important. The RACE acronym holds true for all levels of athletes, and if you are able to continually think about each aspect—rest, accountability, consistency, and efficiency—you'll find that your training brings you to new heights.

2

Understanding Training Concepts



Cyclists train to improve their endurance and to become faster and stronger. Each physiologic system is stressed by the imposed workload, and over time, the cyclist tries to get the amount of training just right, bringing about better performance.

Economics teaches the fundamental principles of supply, demand, and scarcity. These drive the rise and fall of businesses, industries, and even countries. These same principles are also fundamental to the performance cyclist. Athletes use energy supplied from their cardiovascular system to power their musculoskeletal system. To simplify, this energy comes from a combination of calories and oxygen, and as an athlete increases his intensity, the supply cannot always keep up with the demand. Energy becomes scarce, and the athlete's physiologic system becomes limited in its capacity to do work.

That is why athletes train. The Olympic motto is "Citius, Altius, Fortius"—which means swifter, higher, stronger! To reach the next level, you need to understand a few points that will guide your training program. A physiology lesson is beyond the scope of this book, but this chapter covers some broad concepts to help you gain a general understanding of the reasoning behind your workouts and training program.

Adaptation

Obviously, training makes you better. But why? The answer is adaptation. The human body resists change. Like Newton's first law, a body at rest tends to stay at rest. Your body wants the status quo. In physiology, this is called homeostasis.

On a fundamental level, your body's innate desire is to remain stable and unstressed. Training messes this all up. When you work out, you place a new stressor on your system. The alarm bells sound, and homeostasis is disturbed. As a result, your body tries to mitigate any future experience with this stress. It adapts to the workout and therefore better tolerates the increased demands in the future. This all takes time, and your training program is built around the concept of stress and rest, leading to the resultant adaptation.

Figure 2.1 shows how your body responds to a training stress. Immediately after the stress, your body is fatigued. But slowly, your body adapts, and your fitness jumps to a higher level. If you did the same workout again, your body would be ready, there wouldn't be any real fatigue, and you would stay at the new higher level.

You need to keep a couple of key points in mind. The first is that you can't always do the same workout. If you do, your body will eventually have no