

# pilates

for the outdoor athlete

Lauri Ann Stricker

## pilates *for the* outdoor athlete

Over the past 60 years, the Pilates Method of conditioning has been proven to be a superior form of cross-training for all athletes. This book will empower you to do Pilates safely and effectively with cross-training routines designed specifically for your sport.



### CLIMBING:

With Pilates cross-training, not only will you log more pitches in a single day, you'll climb them in better style.



### BIKING:

Whether you're a roadie, dirt lovin' mountain biker, or recreational cyclist, Pilates will help you ride smoother, pedal longer, and avoid injury.



### HIKING:

Whether you go by foot or snowshoe, for a day or many nights, Pilates is the perfect complement to your cardiovascular fitness training.



### PADDLING:

Core strength reduces strain on the shoulders and arms and improves everything from hip snaps to Eskimo rolls.



### RUNNING:

The quality of a runner's posture, fitness, and breathing can mean the difference between a fluid and efficient stride and a hobbling one.



### SKIING:

On double-black diamond runs where moguls become monsters, you'll appreciate the additional core strength gained from Pilates.



### MULTISPORT:

Whether your goal is to do an Ironman, an Eco-Challenge, or a sprint-distance triathlon, Pilates cross-training is an integral part of performing your best and staying injury free.



Text © 2007 Lauri Ann Stricker  
 Photographs © 2007 Stewart M. Green  
 Photography, unless otherwise noted.

PHOTO CREDITS:

Page v: Courtesy of Eric McCallister  
 Pages 1, 6–7, 9, 10: Courtesy of the Pilates  
 Method Alliance®  
 Page 51: Courtesy of Katie Cahill Volpe  
 Pages 61, 91, 97, 103: © Randy Levensaler  
 Pages 71, 81: Courtesy of Rachel Linger  
 Page 115: Courtesy of Raoul Rossiter

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

This book is written as a source of information only. The information contained in this book should by no means be considered a substitute for the advice of a qualified medical professional, who should always be consulted before beginning any new exercise or other health program. The author and the publisher expressly disclaim responsibility for any adverse effects arising from the use or application of the information contained herein.

Library of Congress  
 Cataloging-in-Publication Data

Stricker, Lauri Ann.  
 Pilates for the outdoor athlete / by Lauri Ann Stricker.

p. cm.

Includes bibliographical references and index.

ISBN-13: 978-1-55591-591-9

ISBN-10: 1-55591-591-4

1. Pilates method. 2. Physical fitness. 3. Exercise. I. Title.

RA781.4.S77 2006

613.7'1--dc22

2006018659

Printed in China by P. Chan & Edward, Inc.

0 9 8 7 6 5 4 3 2 1

Design: Ann W. Douden  
 Editorial: Faith Marcovecchio, Jill Amack,  
 Haley Berry

Fulcrum Publishing  
 4690 Table Mountain Drive, Suite 100  
 Golden, Colorado 80403  
 800-992-2908 • 303-277-1623  
 www.fulcrumbooks.com

*Contents*

*Foreword by Eric J. Hörst* . . . . . v

*Acknowledgments* . . . . . vii

*Introduction* . . . . . 1

**Movement Matters**

*Chapter 1* Joseph Pilates and His Method . . . . . 5

*Chapter 2* Movement, Posture, and Gait:  
The Good, the Bad, and the Ugly . . . . . 11

*Chapter 3* Know Your Gear:  
Basic Biomechanics of Movement . . . . . 23

*Chapter 4* Self-Assessment:  
What's the Body Got to Say? . . . . . 33

*Chapter 5* Your Vision:  
Cross-Training Goals . . . . . 45

**The Pilates Prescription . . . .  
15 Minutes a Day**

*Chapter 6* Rock and Ice Climbers . . . . . 51

*Chapter 7* Road Cyclists and Mountain Bikers . . . . . 61

*Chapter 8* Hikers, Backpackers, and Snowshoers . . . . . 71

*Chapter 9* Paddlers . . . . . 81



<i>Chapter 10</i>	Road and Trail Runners . . . . .	91
<i>Chapter 11</i>	Skiers and Snowboarders . . . . .	103
<i>Chapter 12</i>	Multisport: Write Your Own Ticket . . . . .	115

## Your Toolbox

<i>Chapter 13</i>	Joe's Mat Work . . . . .	127
<i>Chapter 14</i>	Pilates Mat Maximizers . . . . .	171
<i>Chapter 15</i>	Stretch Yourself . . . . .	211
<i>Conclusion</i>	. . . . .	222

## More Tools

<i>Appendix A</i>	Pilates Exercise Reference Chart . . . . .	223
<i>Appendix B</i>	Create Your Own Pilates Prescription . . . . .	228
<i>Appendix C</i>	Common Injuries to Outdoor Athletes . . . . .	230
<i>Appendix D</i>	Additional Pilates Routines . . . . .	235
<i>Appendix E</i>	Modifications . . . . .	242
<i>Glossary</i>	Pilates and Basic Anatomy Terminology . . . . .	243
<i>References and Recommended Reading</i>	. . . . .	247
<i>About the Author</i>	. . . . .	248



## Chapter 7

## Road Cyclists and Mountain Bikers



**Posture, pedal cadence, and technical skill make the elite rider shine.** Whether you are riding a century or tackling mountain-biking obstacles, physical and mental fitness contribute to better balance, agility, and handling skills. To

maintain a low aerodynamic position and maximize pedaling efficiency, a rider must possess core strength, flexibility, and good alignment. Technical skills such as standing, sprinting, and hopping require upper-body strength. Dealing with obstacles and persevering when the going gets tough require mental fortitude. Improving your mind-body connection begins with improving your breathing.

Road cycling and mountain biking utilize the same major muscle groups yet build fitness slightly differently. Road cycling builds fitness by maintaining constant cruising speeds over long periods of time, whereas mountain biking builds fitness by placing variable demands on a cyclist's energy and power. The cross-training needs of the two vary in that a mountain biker requires more upper-body strength, agility, and balance, while a road biker requires leg strength, cardiovascular fitness, and pedal technique. By participating in both types of riding, you can further improve your overall fitness and riding skills.

Whether you're a roadie, dirt lovin' mountain biker, or recreational cyclist, Pilates will help you ride smoother, pedal longer, and avoid injury. While cycling improves cardiovascular fitness and lower-body endurance, Pilates boosts core strength, flexibility, and muscle balance. Core strength is



essential to maintaining a still torso while the legs generate force by pedaling. If your core is weak, the force generated by your legs will be absorbed into your back. A strong core is key to achieving pedaling power and efficiency. By stretching your upper body, you will gain greater range of motion and health in your shoulders, arms, and torso. By improving flexibility and muscle balance, you'll minimize energy expenditure, be less prone to injury, and experience a more comfortable ride.

Before diving into the Pilates for Cyclists routines, familiarizing yourself with common overuse injuries and the training needs of cyclists will serve you in your quest to perform your best and enjoy many more rides.

## Overuse Injuries

The harder you ride, the more at risk you become for an overuse injury. The following is a list of the most common riding injuries. For more information about these injuries, please refer to Appendix C.

### Feet:

- Achilles Tendonitis

### Knees:

- Chondromalacia
- Patellofemoral Pain Syndrome (Runner's Knee)
- Patella Tendonitis (Jumper's Knee)
- Plica Syndrome

### Legs:

- Iliotibial-Band Syndrome
- Biceps Femoris Tendonitis

### Neck:

- Sherman's Neck

### Hand and Wrist:

- Carpal Tunnel Syndrome
- De Quervains Disease (DQD)
- Ulnar Neuritis (Biker's Wrist)

Most cycling injuries affect the knees. Pedaling is a repetitive and labor-intensive motion that creates muscular imbalances in the legs and hips, stressing the soft tissues of the knee. The average cadence of a road cyclist is 90 revolutions per minute. That equates to 5,400 strokes per hour. This is a faster cadence than in mountain biking, but it is also steadier. Mountain bikers change their pedal cadence continuously as they adapt to changing terrain, often requiring them to shift up to 100 times per hour. For this reason, road cyclists tend to experience more injury to the knees and mountain bikers tend to experience more injury to the hands and thumbs.

## Muscle Imbalances

Muscle imbalances are created from the front to the back and from the right to left leg if one leg is favored more on the downstroke. Pedal power is derived from the quadriceps and hip extensors. Although cycling uses the hamstrings continuously, the quadriceps muscles dominate. There-



fore, additional hamstring strength is required to bring the legs into balance. Structural misalignments can also create imbalance. Riders with leg-length discrepancy, wider hips, or “knock-knees” are more at risk for developing knee injuries due to the higher probability of kneecap misalignment. Pilates helps improve alignment by improving posture, muscle balance, and awareness. Leg stability and alignment are improved by strengthening the abductors (outer thighs) and adductors (inner thighs). Balanced muscles that are flexible and strong improve alignment, alleviate muscular tension on the knees, and reduce the risk of injury.

### Training Mistakes

Training mistakes such as riding too many miles too quickly, pushing too big of a gear, and inadequate warm-ups are a formula for injury. As is true with other sports, avoid increasing frequency, intensity, or mileage by more than 10 percent in a given week, and only increase one factor at a time in a given week.

### Misfits

You could do everything right, but if your bike doesn't fit, your risk of injury is magnified. Improper frame size, saddle height, crank length, stem dimensions, cleat position, and handlebar angle have been known to cause injury. A saddle that is too high causes excessive hip motion while

pedaling, whereas a saddle that is too low causes excessive knee bending and loss of power. If you plan to log some miles, it is best to get a professional bike fit.

## 7 Tips for Avoiding Injury

1. Warm up before pushing yourself, and remember to stretch after your ride.
2. Maintain uniform muscle balance in your hips, legs, and feet.
3. Maintain flexibility, strength, and range of motion in your torso and upper body.
4. While riding, engage your core and stabilize your torso.
5. Maintain good form and technique.
6. Follow the 10 percent rule. Choose to increase only one of the following three factors by 10 percent in a given week: intensity, frequency, or volume.
7. Listen to your body. If you feel pain, identify its location, what activity caused it, and monitor changes. If the pain persists, see a qualified professional before it becomes chronic.

## Creating Balance

An effective Pilates cross-training routine focuses on boosting core strength, improving flexibility, and restoring muscle balance. To begin, let's identify the overused cycling muscles that

require stretching and the underused muscles that require strengthening. Please note that some muscles may fall into both categories.

### CYCLING MUSCLES TO STRETCH AND STRENGTHEN

	STRETCH	STRENGTHEN
<b>Lower Body</b>	Quadriceps	Hamstrings
	Hamstrings	
	Iliotibial Band	
	Shins (Tibialis Anterior)	
	Calves (Gastronemius and Soleus)	
<b>Core</b>	Hip Flexors	Abdominals
	Hip Extensors	Hip Abductors
	Hip Adductors	Quadratus Lumborum
		Erector Spinae
<b>Upper Body</b>	Latissimus Dorsi	Latissimus Dorsi
	Pectorals	Pectorals
	Serratus Anterior	Rhomboids
	Neck Extensors	Neck Flexors
	Mid Trapezius	
	Upper Trapezius	Lower Trapezius
	Forearm Flexors	Forearm Extensors
	Wrist Flexors	Wrist Extensors
	Biceps and Triceps	Biceps and Triceps



## 15-Minute Pilates Prescription

The beauty of Pilates exercises is that you can simultaneously stretch one part of your body while strengthening another part. On the following pages are two 15-minute routines. They are designed to meet the cross-training needs of a cyclist. Alternate between the two routines during your practice three to five times a week. For a complete 30- to 45-minute full-body general-conditioning Pilates workout, refer to the classical routines presented in Part III. For all routines, exercise descriptions are provided in Part III: Your Toolbox. The exercises are ordered in a way that adheres most closely to the Classical Mat Sequence. The sequence is designed to warm up the body and spine and create a satisfying and continuous flow of movement. Use these pages as a reference. I encourage you to make a copy for easy use when cross-training at the gym or on a trip.

### One Size Doesn't Fit All

The type of riding you do, including its difficulty, duration, and frequency, will influence your training needs. While road cycling requires lower-body and cardiovascular endurance, mountain biking also requires upper-body strength. No matter what type of riding you prefer, core strength,

flexibility, and uniform muscle development are key. This triad creates a foundation for performing your best and avoiding injury. By no means should you feel compelled to do only the following routines. This book contains more than 80 exercises, enabling you to create a variety of routines to suit your needs. If you choose to design your own routine, use your SWOT self-analysis from Chapter 4 for guidance and refer to the Pilates Exercise Reference Chart in Appendix A. Use the worksheet in Appendix B to create your own Pilates prescription.

### Pilates for Cyclists

**Goal:**

- Boost core strength
- Uniformly balance muscles
- Improve flexibility

**Formula:**

- Strengthen the abdominal and back muscles
- Strengthen non-cycling muscles (antagonists)
- Stretch cycling muscles (agonists)



## Routine A



1. The Hundred, page 130



5. Crisscross, page 183



9. Shoulder Bridge with Kicks, page 152



2. Roll Up, page 132



6. Corkscrew, page 144



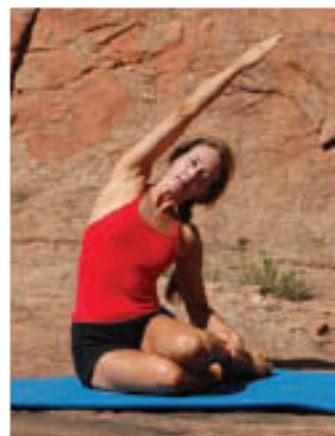
10. Swimming or Skydiver, page 159 or 189



3. Tree, page 193



7. Neck Roll, page 216



11. Mermaid, page 215



4. One-Leg Stretch, page 139



8. Scissors, page 150



12. Push-Ups, page 168



As an outdoor athlete, pursuing your passion and performing your best, it is critical to stay injury free. Pilates can help you do this by improving muscle balance, flexibility, core strength, alignment, and overall movement skills.

Crown of the head floats up as if a string were pulling it.

Chin is slightly heavy.  
Back of neck is lengthened.

The chest is open and collarbones reach outward.

Ribs are soft and recede.

Natural lumbar curve of spine is honored.

Arms hang easily by sides with palms facing in.

Knees are soft and not locked.

Feet are hip-width apart with kneecaps and toes pointed forward.

## pilates *for the* outdoor athlete

"No matter what you do in the outdoors—whether it's paddling, pedaling, or back-packing—Lauri Stricker's *Pilates for the Outdoor Athlete* will help prepare your body for the task. A must for anyone looking to gain that extra edge in outdoor sports."

—Eugene Buchanan,  
publisher and editor-in-chief of  
*Paddler* and *Kayak* magazines

"Beautifully crafted and illustrated, *Pilates for the Outdoor Athlete* sets a new standard for source books on athletic cross-training. Lauri's knowledge and deep respect for authentic Pilates and its relevance for the outdoor athlete are evident on every page. She has made it easy for you to reach your best performances and to excel at your sport."

—Richard Rossiter,  
director of Pilates of Boulder

"*Pilates for the Outdoor Athlete* is an extremely well-organized book. Athletes will find a wealth of information applicable to many athletic passions and discover they can achieve even greater success through the Pilates Method!"

—Diane Legner,  
Pilates instructor,  
Masters champion Nordic skier,  
physical therapist, marathoner

**Pilates** has become a popular path to strength and flexibility, boasting more than 10 million American practitioners. Combining her love of Pilates and outdoor sports, seasoned instructor Lauri Ann Stricker has penned a user-friendly guide to boost performance, prevent injury, and increase longevity. By following her simple 15-minutes-a-day program, athletes of all abilities will be able to paddle, bike, hike, climb, ski, and run at the top of their game.

**Lauri Ann Stricker** is a certified, classically trained Pilates instructor recognized by the Pilates Method Alliance (PMA). After years as a marketing professional, she left her career, studied Pilates with several master teachers, and founded Evergreen Pilates and Blue Sky Pilates. Her mission is to maintain the integrity and excellence of Joseph Pilates' Method and to facilitate greater health and well-being in her clients, many of whom are outdoor athletes.



FULCRUM PUBLISHING  
WWW.FULCRUMBOOKS.COM  
ISBN 13: 978-55591-591-9  
ISBN 10: 1-55591-591-4

