

A full-body profile photograph of a very muscular man standing on a dirt surface. He is wearing a black tank top, black shorts with white lettering, and white and black athletic shoes. The background is a plain, light-colored sky. The image is overlaid with several horizontal text bands.

RACING WEIGHT

HOW TO GET LEAN FOR PEAK PERFORMANCE

5-STEP PLAN FOR ENDURANCE ATHLETES

MATT FITZGERALD

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CONTENTS

Acknowledgments	vii
Introduction	1
1 Body Weight, Body Fat, and Endurance Performance	9
2 How to Determine Your Optimal Performance Weight	21
3 Tracking Your Progress	39
4 Seasonal Considerations	53
5 Sport-Specific Racing Weight Considerations	69
6 Guidelines for Beginners.....	83
7 Improving Your Diet Quality	93
8 Balancing Your Energy Sources	111
9 Nutrient Timing	131
10 Managing Your Appetite.....	147
11 Training for Racing Weight	165
12 What the Pros Eat.....	185
13 Endurance Fuel	203
14 The Role of Supplements.....	235
Appendix: Recommended Strength Exercises for Endurance Athletes	249
References	271
Index.....	279
About the Author.....	288

INTRODUCTION

How would your performance change if you were at your optimal body weight? Imagine what it would feel like to set out on a run weighing 10 pounds less than you do right now. How much would it affect your efficiency, your endurance, or more simply, your self-image? When was the last time you saw a marked improvement in your fitness? Do a few extra pounds stand between you and a faster race? Chances are it was your quest for optimal body weight that led you to pick up *Racing Weight*.

When I was almost done writing this book I received an e-mail, in my capacity as content director of Competitor Running, from Darwin Fogt, a Los Angeles-based physical therapist, who invited me to stop by his facility at my convenience and try out his Alter-G antigravity treadmill. I had been dying to step onto one of these machines since I first heard about them a couple of years earlier, so I readily accepted his offer.

The Alter-G allows the user to walk or run at the equivalent of as little as 20 percent of his or her body weight by increasing the air pressure within an airtight tent that seals around the user's waist and thereby lifts

the runner. Many elite runners, including two-time Olympian Dathan Ritzenhein, use it to train through injuries that prevent them from running on their full body weight. Others, such as NCAA champion Galen Rupp, use it to increase their running volume without increasing their risk of injury.

My epiphany came when Fogt zipped me into his Alter-G, increased the belt speed to my normal jogging pace, and then reduced my effective body weight to 90 percent. Instantly I felt as if I had become 10 percent fitter. Scooting along at a 7:00/mile pace was utterly effortless. It was not a feeling of gross artificial assistance, like running on the moon. Rather, it felt like normal running, only so much better.

While I was motivated to write this book by a belief that body-weight management is critical to performance in endurance sports, I don't think I fully appreciated it until I effectively lost 15.5 pounds instantaneously on the Alter-G. It was a stunning lesson. I left Fogt's facility feeling twice the sense of urgency about spreading the messages of this book as I had felt when I started writing it.

Another motivation for writing this book was my awareness that many endurance athletes struggle to manage their body weight effectively and frequently go about it all wrong. Some of the most extreme examples are to be found in the elite ranks, where money and glory are at stake. In the 2005 documentary film *What It Takes*, three-time Hawaii Ironman® world champion triathlete Peter Reid confessed to going to bed so hungry that he suffered from headaches during periods when he was trying to lose weight. In 2008, world champion cyclist Marta Bastianelli of Italy was banned from competition after one of her blood samples tested positive for an illegal diet drug. Bastianelli admitted that she took the drug after receiving pressure to lose weight from her coaches.


As these examples indicate, professional endurance athletes know that controlling their body weight and body fat is critical to achieving maximum performance, but reaching optimal race weight never requires an athlete to go to bed hungry or take illegal diet drugs.

It's not just the pros who worry about getting leaner and are confused about the best way to do so. Recently I assisted exercise scientists from Montana State University in conducting a survey of endurance athletes concerning their attitudes about their body weight and their weight-management practices. More than three thousand cyclists, runners, triathletes, and other endurance athletes responded. Most were serious competitive athletes who trained at least one hour a day, five days

a week. The results of the survey, which were presented at a meeting of the Society for Behavioral Medicine in Montreal, Canada and published in the *Annals of Behavioral Medicine* (Ciccolo et al. 2009), were quite interesting.

Seventy-four percent of respondents labeled themselves as “concerned” or “very concerned” about their body weight. Fifty-four percent said that they were dissatisfied with their body weight. These figures are almost identical to those that come from surveys of the general population, despite the fact that the general population is quite a bit heavier than most of the people who took the Montana State survey, nearly all of whom fit the medical definition of healthy weight.

A RUNNER WEIGHING 160 POUNDS HAS TO MUSTER ABOUT 6.5 PERCENT MORE ENERGY TO RUN THE SAME PACE AS A RUNNER WEIGHING 150 POUNDS.



While striking on one level, these findings did not surprise me. That’s because, as a sports nutritionist and endurance sports expert, I am accustomed to communicating with and helping endurance athletes who are concerned about and dissatisfied with their body weight. As a runner and triathlete myself, I share their concern and, at times, their dissatisfaction.

The nature of the endurance athlete’s concern and dissatisfaction is somewhat different from the nonathlete’s, however. The nonathlete is typically motivated to shed excess body fat by the desire to look better, and perhaps also by the desire to improve his or her health. Endurance athletes care about looking good and being healthy too, but they are equally concerned about their sports performance, and they know that excess body fat is the enemy of performance in every endurance sport. For example, a runner weighing 160 pounds has to muster about 6.5 percent more energy to run the same pace as a runner weighing 150 pounds—a difference I felt powerfully on Darwin Fogt’s antigravity treadmill while running at 90 percent of my actual 157-pound body weight.

Whereas two-thirds of American adults in the general population are overweight, most of the athletes who took the Montana State survey had body-mass indices that fell within the healthy range. Yet nearly three-quarters of these endurance athletes reported being

heavier than the weight they consider optimal for peak performance in their sport—hence their dissatisfaction. Do these men and women suffer from a distorted body image? By and large, no. They simply have different standards for their bodies, and they struggle to attain them just as nonathletes struggle to meet their own, more relaxed standards. You probably know exactly what I'm talking about.

Why do so many endurance athletes struggle to reach and maintain their optimal performance weight? For largely the same reasons that nonathletes struggle to avoid becoming obese. Our modern lifestyle is different from that of our early ancestors in two important ways that promote excessive weight gain: We have easy access to cheap, high-calorie foods, and we are much less active than our forebears were.

Our early ancestors lived on wild plants, nuts, seeds, and the occasional piece of fish or meat—mostly low-calorie foods and usually just enough of them to supply the energy required to get more food. Today we still have the option to eat like hunter-gatherers, and many nutrition authorities urge people to do so, but it's not a realistic solution for most of us. We have come to prefer the taste of high-calorie foods such as cheeseburgers (which, of course, did not exist until less than a century ago) to low-calorie foods such as vegetables, and we feel compelled to eat what's put in front of us even though the portions have never been larger, nor has food or the promotion of food ever been so ubiquitous.

What's more, early humans had to work much harder and burn a lot of calories for every meal, foraging through woods and fields or stalking game for hours, whereas today we just sidle up to a fast-food drive-thru window or press "Start" on the microwave oven. Endurance athletes have one major advantage over couch potatoes—we are hardly sedentary. But even most endurance athletes spend more time sitting around than our hunter-gatherer ancestors did, and we are no less plagued by the overabundance of cheap, high-calorie processed foods than our sedentary counterparts.

So if the weight concerns of endurance athletes and nonathletes share a common cause, is their solution also the same? The answer to this question is "yes and no." Certainly, a balanced, natural diet is the most effective means to manage weight for endurance athletes and nonathletes alike. However, the weight management goals of endurance athletes are somewhat different from those of nonathletes, and some of the challenges that endurance athletes face on the path toward optimal performance weight (rather than toward the basic "healthy body weight" that most nonathletes pursue) are also different. Endurance athletes, then, generally require their own special

approach to weight management. For example, low-carbohydrate diets are an effective weight-loss strategy for nonathletes, but for endurance athletes they are a recipe for disaster because they starve the muscles of the primary fuel they need for endurance performance.

There are hundreds of books that tell nonathletes how to lose weight to look better and be healthier. Yet although endurance athletes are just as concerned about their weight as nonathletes, there has not been a single book showing endurance athletes how to get leaner and lighter to improve their performance (*and* to look better and be healthier). *Racing Weight* addresses the unique body-weight and body-composition management needs of athletes like you who compete in endurance sports ranging from mountain biking to triathlon. In the following pages, you will find all of the information you need to set appropriate body-weight and body-composition goals and to achieve them safely and easily through scientifically grounded dietary and training practices.

The *Racing Weight* solution is based on the idea that the human body is highly adaptable and readily accommodates to the demands that are made on it, whether it is a demand to store excess body fat or a demand to shed it. Stimuli such as diet, workouts, watching TV, and other lifestyle habits are like messages to the body, telling it to “Fatten up in case food becomes scarce later” or “Get leaner so you can pedal up and over mountains more easily.” Achieving your optimal performance weight is a matter of lining up your training, nutrition, and other lifestyle habits in a way that sends your body a consistent message: “Keep the muscle, lose the fat, and take your performance to the next level.” This book shows you how to send this message to your body.

PART I (“Finding Your Racing Weight”) covers the importance of being light and lean if you want to perform better and gives you some unique new tools to determine your own optimal performance weight and to track your progress toward it. In this section you will also find chapters that address seasonal considerations (which cover topics such as managing your weight during the off-season versus the competitive season) as well as sport-specific nutritional challenges and tips for beginning endurance athletes.

PART II (“Five Steps to Your Racing Weight”) presents a five-step plan to get leaner and lighter in a way that maximizes performance and all-around health. Each step in the plan is based on the latest

RACING WEIGHT

advances in the science of weight management, especially as they relate to endurance athletes, and on the practices that are proven to work best in the real world. Here's a quick synopsis of the Racing Weight plan for body weight optimization:

STEP 1: IMPROVE YOUR DIET QUALITY. Step 1 in my Racing Weight plan is to improve your diet quality, or the amount of nutrition you get from each calorie in your diet. Increasing the nutrition-per-calorie ratio of your diet will enable you to get all the nutrients you need for maximum performance from fewer total calories, thus enabling you to become leaner. An effective way to improve your diet quality is to grade or score the quality of your current diet and continue to score your diet quality as you make efforts to improve it. Nutrition scientists have come up with various ways of measuring diet quality. Most of these approaches are a bit too complex to be useful to the average endurance athlete, so I created a simplified diet-quality scoring system that you will find very easy to work with and that will help you nourish your body for health and endurance performance. In Chapter 7, I will give you all of the information you need to track and improve your Diet Quality Score.

STEP 2: BALANCE YOUR ENERGY SOURCES. There are three main sources of energy for the human body: carbohydrate, fat, and protein. The body uses each of these three “macronutrients” in different ways. There are also different types of these same macronutrients—carbohydrates, fats, and proteins—that affect the body in slightly different ways. Consuming the right balance of macronutrients and the right balance of carbohydrate, fat, and protein types will help you achieve your optimal performance weight. In Chapter 8, I will show you how to properly balance your energy sources to get leaner.

STEP 3: TIME YOUR NUTRITION. *When* you eat affects your body as much as *what* you eat. The timing of your food intake has a big impact on what's known as energy partitioning, or what becomes of the calories you consume. There are three main destinations of food calories in your body: muscle, fat cells, and energy. If you want to become leaner, you need to shift the balance of energy partitioning so that more calories are incorporated into your muscles, fewer calories are stored in your fat tissues, and more calories are used to supply your body's immediate and short-

term energy needs. This shift will lead to more metabolism-boosting lean tissue and less health-jeopardizing fat tissue.

Interestingly, you can often achieve this objective with little or no reduction in the total number of calories that enter your body. We're really talking about redirecting calories once they've entered your body, not about decreasing the number of calories that enter your body in the first place. The practice of nutrient timing, or consuming the right nutrients at the right times throughout the day, will enable you to partition your energy more effectively and achieve your racing weight. In Chapter 9, I will show you how to practice nutrient timing the way many top endurance athletes do.

STEP 4: MANAGE YOUR APPETITE. Appetite is important. It is your body's built-in mechanism for food intake regulation, and its job is to drive you to eat enough to meet your body's energy and micronutrient needs, and no more. The appetite mechanism works very well under normal circumstances, having survived millions of years of evolutionary testing to the benefit of our health. But our modern lifestyle does not constitute "normal circumstances" in relation to the environment in which most of our evolution took place. Consequently, we can't rely entirely on our appetite to ensure that we don't overeat.

In recent years, scientists have learned a great deal about how the appetite mechanism works. Understanding how your appetite works will put you in a better position to manage it effectively so that you consume only the number of calories you need to maximize your performance—and no more. In Chapter 10, I will explain what science has taught us about how the human appetite works and give you some simple practices to manage your appetite in a way that helps you achieve your optimal performance weight.

STEP 5: TRAIN RIGHT. Training errors are common in every endurance sport, even at the highest levels of competition. Many of these training errors not only limit performance but also prevent athletes from becoming as lean as they could be. Training methods continue to evolve at the elite level of each endurance sport. In Chapter 11 I will identify the most rewarding changes you can make to your training to raise your level of performance and achieve or maintain your racing weight.

PART III of this book (“The Racing Weight Menu”) provides resources that will help you put the Racing Weight plan into practice. Chapter 12 presents sample food journals from elite athletes in several different endurance sports. These examples are not to be copied exactly, as there are important differences between the caloric needs of world-class endurance athletes and those of most amateurs, but they do provide some practical ideas and inspiration.

In Chapter 13, you will find 21 delicious and easy-to-prepare breakfast, lunch, and dinner recipes that will fuel your body for endurance performance and help you achieve your racing weight, plus a few deliciously wholesome dessert recipes. These recipes were created by professional triathlete and dietitian Pip Taylor.

Finally, Chapter 14 discusses the limited role of supplements in achieving your racing weight. Most nutritional supplements are useless. This generalization includes the supplements that endurance athletes most commonly use to shed excess body fat, but a select few supplements can be helpful for some athletes when used appropriately. In the concluding chapter of this book, I will tell you about these supplements, all of which should be considered strictly optional.

All of the guidance presented in this book, in addition to being scientifically grounded and tested in real-world practice, reflects the practices that I rely on in my own training. I struggle as much as any endurance athlete to optimize my body weight for performance, and the Racing Weight plan works for me. So come on, let’s do this together.

Potato Gnocchi with Tomato, Bacon, Thyme, and Mozzarella

Potato gnocchi can be bought prepared and par-cooked. It then only takes a matter of a few minutes to heat and serve, making it another staple to keep in the cupboard for a fuss-free, last-minute meal.

Serves two.

INGREDIENTS

1 small onion, finely chopped
 2 slices Canadian or back bacon, roughly chopped
 2 tsp. fresh thyme leaves
 14-oz. can crushed tomatoes
 8 baby bocconcini balls, torn in half (or 2½-oz. fresh mozzarella balls, roughly chopped)
 1 lb. potato gnocchi
 Salt and pepper to taste

DIRECTIONS

1. Bring a large pot of salted water to boil. Meanwhile, heat a large non-stick frying pan over medium heat. Add onion and bacon and fry gently until onion is soft and translucent and bacon is cooked. Add thyme leaves and tomato and cook a further two minutes.
2. Reduce heat to very low while you add the gnocchi to the boiling water. Cook according to packet instructions; this should only take a minute or two. The gnocchi are ready when they float to the surface.
3. Drain, then add gnocchi to the pan with the tomato sauce and the mozzarella and seasoning to taste (you should not need much salt, since the bacon is salty). Turn off heat and toss well.
4. Serve immediately with extra cracked black pepper.

Nutritional facts per serving (daily value):

Calories.....	386	Protein.....	19 g (39%)
Total Fat.....	11 g (17%)	Saturated Fat.....	5 g (26%)
Cholesterol.....	39 mg (13%)	Carbohydrate....	55 g (18%)
Fiber.....	3 g (13%)	Sugars.....	8 g
Calcium.....	216 mg (22%)	Iron.....	2 mg (13%)

RECOMMENDED STRENGTH EXERCISES FOR ENDURANCE ATHLETES

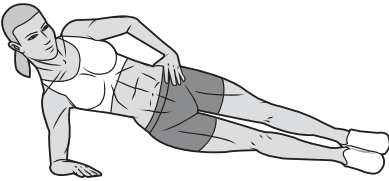
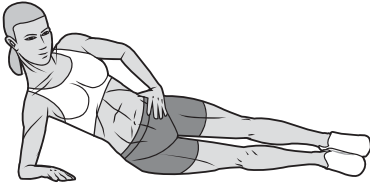
The following are 30 strength exercises for endurance athletes: five each for all endurance athletes, cross-country skiers, cyclists, rowers, runners, swimmers, and triathletes. Note that the five strength exercises for triathletes include two from the list for swimmers, two from the list for runners, and one from the list for cyclists.

It is wise to start with an adaptation phase if these exercises are new or you are not currently strength training. Spend 2 to 3 weeks practicing the movements with very light loads (in the case of non-body-weight exercises) to get the coordination down. Then you can move on to heavier loads.

EXERCISES FOR ALL ENDURANCE ATHLETES

1. Side Plank

Strengthens the lateral core stabilizers to improve the stability of the spine, pelvis, and hips during athletic activities

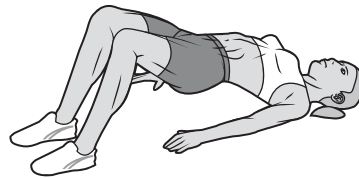


Lie on your side with your ankles together and your torso propped up by your upper arm. Lift your hips upward until your body forms a diagonal plank from ankles to neck. Hold this position for 20 to 30 seconds, making sure you don't allow your hips to sag toward the floor. (Watch yourself in a mirror to make sure you're not sagging.) Switch to the other side and repeat the exercise.

2. Supine Plank

Strengthens the gluteals and hamstrings

Lie face up on the floor with your knees bent 90 degrees and your feet flat on the floor. Contract your gluteals and lift your hips until your body forms a straight line from neck to knees. Hold this position for 5 seconds, keeping your buttocks squeezed together, then return to the start position. Complete 10 repetitions.



ABOUT THE AUTHOR



MATT FITZGERALD took up writing when he was nine years old. He became a runner two years later after running the last mile of the 1983 Boston Marathon with his father (who, of course, ran the whole thing). More than a quarter century later, Matt is still running, writing, and competing in triathlons. He has authored or coauthored more than 17 books and written for numerous national publications and websites, including *Outside* and *Runner's World*. Currently he serves as a senior editor for *Triathlete* magazine and senior producer for the

Competitor Running Web site (running.competitor.com). His special expertise is endurance sports nutrition. He wrote *Performance Nutrition for Runners*, has been a consultant to several sports nutrition companies, and is a certified sports nutritionist. Matt lives in San Diego with his wife, Nataki.



PIP TAYLOR is a professional triathlete from Australia and author of the recipes in Chapter 13. She inherited her athletic talent and love of sport from her parents, who are both competitive rowers. Pip started swimming before she could walk and also competed in track and field throughout her youth. She took up triathlon after graduating from high school and met with immediate success. Her first major win came in 2003 at a World Cup Triathlon in Manchester, England. She has since won several other international events, including Memphis in May, the Oceana and

Australia Long Course Championship, and Vineman Ironman 70.3. Pip has a passion for food that she expresses through cooking and as a sports nutritionist. She earned an undergraduate degree in human life science and a postgraduate qualification in sports nutrition through the International Olympic Committee. She writes a monthly nutrition column for *Triathlete* magazine.

A 5-step plan to optimal body composition and better performance

If you're like most endurance athletes, you're concerned about your weight. You know that every extra pound you carry costs time, wastes energy, stresses your joints, and affects your performance.

Racing Weight is the first book to explain how endurance athletes—runners, cyclists, triathletes, cross-country skiers, rowers, or swimmers—should lose weight. Using sound scientific principles gleaned from the latest sports research, Matt Fitzgerald lays out five easy steps to get lean for races and events. His guidelines will help you hit your target numbers for weight, body composition, and performance while maintaining your strength and conditioning.

Fitzgerald makes good nutrition simple with 21 great recipes from pro triathlete and dietitian Pip Taylor and a look at the diets of 14 elite professional athletes. He explains how to avoid the most common mistakes in training and how to embark on a strength training program that works.

The Racing Weight plan will help you close in on your performance goals while feeling—and looking—great.

Matt Fitzgerald is the author of 17 published and forthcoming books on running, triathlon, nutrition, and weight loss. A contributor to *Bicycling* and *Runner's World* and senior editor of *Triathlete* magazine, he is also a featured coach for Training Peaks and Active.com. He is a certified sports nutritionist (CISSN) licensed by the International Society of Sports Nutrition. He lives and trains in San Diego.



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