HAL KOERNER’S FIELD GUIDE TO ULTRARUNNING

TRAINING FOR AN ULTRAMARATHON
FROM 50K TO 100 MILES AND BEYOND

HAL KOERNER WITH ADAM W. CHASE
FOREWORD BY SCOTT JUREK
CONTENTS

Writer’s Note ........................................................................................................... xiii
Foreword by Scott Jurek ................................................................................... xv
Preface .................................................................................................................. xix

1. GETTING STARTED ........................................................................... 1
   Why Run an Ultra? .................................................................................... 2
   Who Can Do an Ultra? ............................................................................. 3
   You Know You Are an Ultrarunner If... ............................................. 4
   Tackling the Distance—50K, 50 Miles to ........................................... 5
      100K, and 100 Miles
   50K—Steps to Increase the 26.2-Mile Threshold ............................ 5
   50 Miles to 100K—Time on Feet Becomes Crucial ............................ 6
   100 Miles—Putting It All Together .................................................... 8
   Choosing Your First Race ................................................................. 10
   Setting a Goal ......................................................................................... 11

2. TRAINING ..................................................................................... 13
   Pace ......................................................................................................... 14
   Trail Technique ...................................................................................... 18
   What if I don’t live near trails? ............................................................. 18
   Ascending ................................................................................................ 19
   Power Hiking .......................................................................................... 21
   Trekking Poles in Ascents ................................................................. 21
Training for Ascending ................................................... 22
*Technique Tips for the Ascent* ........................................... 23
Descending ....................................................................... 24
Training for Descending ................................................... 25
*Technique Tips for the Descent* ........................................ 26
Intensity Training ............................................................. 27
Hill Training/Strength Work ............................................. 27
Speed Work ...................................................................... 28
Tempo Runs ................................................................. 29
Easy Runs ....................................................................... 30
Long Runs ....................................................................... 31
How long is long? ............................................................ 32
Mileage—Quantity Versus Quality ..................................... 33
Preparatory Races ............................................................ 34
Recovery/Rest Days ........................................................ 35
Am I overtraining? ........................................................... 36
Taper .............................................................................. 37
Weight Training/Core Work ............................................. 38
*Crosstraining—yes or no?* ............................................. 39
Road and Trail—Mixing It Up .......................................... 40
Stretching ....................................................................... 42
Do I Need a Coach? ......................................................... 43

3. NUTRITION AND HYDRATION .................................... 45
One Guy’s Fueling Strategy ................................................ 46
How Many Calories Do I Need to Run an Ultra? ............. 48
What Nutrition Do I Need? ............................................... 49
Gels .............................................................................. 50
CONTENTS

Gel Alternatives .............................................................. 52
Fat-Based ........................................................................ 52
Fruit-Based ..................................................................... 52
Baby Food ....................................................................... 52
Energy Chews ................................................................. 53
Sports Bars .................................................................... 53
Salt .................................................................................. 54
Sodium Content ................................................................. 56
A Word About Whole Foods ............................................. 56
Nutrition-Dense and Portable Whole Food Options ........... 57
Caffeine ........................................................................... 58
Hydration ........................................................................ 59
Water Versus Sports Drinks ............................................. 61
Recovery Drinks ................................................................. 62
Recovery Drink Ideas ........................................................ 62
Beer .................................................................................. 63

4. GEAR ........................................................................ 65

Shoes .............................................................................. 66
Do I need a trail-specific shoe? ........................................... 67
Are my shoes worn out? .................................................... 69
Clothing ........................................................................... 69
Performance ...................................................................... 72
A Short Word About Socks ............................................... 72
Gaiters ............................................................................ 73
Compression ..................................................................... 74
Hydration: Packs Versus Water Bottles ......................... 76
Treking Poles ................................................................... 79
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashlight/Headlamp</td>
<td>80</td>
</tr>
<tr>
<td>Choosing a Headlamp</td>
<td>81</td>
</tr>
<tr>
<td>Watch</td>
<td>82</td>
</tr>
<tr>
<td>GPS</td>
<td>83</td>
</tr>
<tr>
<td>GPS: A Caveat</td>
<td>84</td>
</tr>
<tr>
<td>Music</td>
<td>85</td>
</tr>
<tr>
<td>Hal’s Playlist</td>
<td>86</td>
</tr>
<tr>
<td>Preventing and Caring for Small Injuries</td>
<td>88</td>
</tr>
<tr>
<td>Blisters</td>
<td>88</td>
</tr>
<tr>
<td>Blisters—Preventive Measures</td>
<td>89</td>
</tr>
<tr>
<td>Toenails</td>
<td>90</td>
</tr>
<tr>
<td>Hal’s Manity Kit</td>
<td>91</td>
</tr>
<tr>
<td>Chafing</td>
<td>92</td>
</tr>
<tr>
<td>Should I shave?</td>
<td>93</td>
</tr>
<tr>
<td>Rolled Ankle</td>
<td>94</td>
</tr>
<tr>
<td>Kinesiology Tape</td>
<td>95</td>
</tr>
<tr>
<td>Cuts and Bruising</td>
<td>96</td>
</tr>
<tr>
<td>Tummy Troubles</td>
<td>96</td>
</tr>
<tr>
<td>Pain Relievers</td>
<td>97</td>
</tr>
<tr>
<td>Vomiting</td>
<td>98</td>
</tr>
<tr>
<td>Why do I feel sick, and how do I deal with it during a race?</td>
<td>100</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>101</td>
</tr>
<tr>
<td>Kidney Failure</td>
<td>102</td>
</tr>
<tr>
<td>Hyponatremia</td>
<td>103</td>
</tr>
</tbody>
</table>
6. DEALING WITH YOUR ENVIRONMENT

Technical Versus Nontechnical Trail
Running in Mud
Running on Ice
Running in Snow
Water Crossing
Running at Altitude
Tips for Better Breathing at Altitude
Altitude Sickness
Lightning
Cold/Heat Management
Cold
Hypothermia
Heat
Heatstroke
When You Have to Go—A Few Tips
Going to the Bathroom
Animals
Safety Tips in the Wild
Snakes on the Trail
Running with Dogs
Watch Out for Stingers
Going Off Trail
Trash on the Trail
Getting Lost
Drinking from Natural Water Sources ............................................. 133
Drinking Unfiltered Water—A Few Tips ........................................ 135
Night Running .............................................................................. 136
Tips for Running at Night ................................................................. 137

7. RACE DAY .............................................................................. 141

Traveling to Your Race ................................................................. 142
Warming Up Before the Race ......................................................... 143
Preparing Your Crew and Pacers ................................................. 144
Check the Rules ............................................................................. 145
Crew .............................................................................................. 145
Pacers .............................................................................................. 146
What makes a good pacer? ............................................................ 147
Muling ............................................................................................. 150
Should I go it alone? ...................................................................... 151
Drop Bags ........................................................................................ 152
Fueling and Hydrating During a Race ............................................ 153
Dining chez Aid Station ................................................................. 154
Fluid—What, How, and When to Drink ......................................... 155
Monitoring Weight Loss During a Race ......................................... 157
Pace on Race Day ........................................................................... 159
Top 10 Must Do’s on Race Day ....................................................... 160
Top 10 Do Nots on Race Day .......................................................... 162
Cutoff Times ................................................................................... 165
Mental Focus on Race Day—Tips and Strategies ......................... 167
Talking on the Run ......................................................................... 169
Racing with Friends ...................................................................... 170
Nasal Strips ..................................................................................... 171
CONTENTS

Passing on Singletrack ................................................... 172
DNF: When Is Enough Enough? ................................. 173
Tips for How and When to Make the Call ..................... 176
Cooling Down After the Race ......................................... 177

8. TRAINING PLANS ..................................................... 179

Intensity Workouts ....................................................... 180
Tempo Runs ................................................................. 181
Fartleks ................................................................... 181
Hill Repeats ................................................................. 181
Training Races ............................................................... 181
The Plans—50K, 50 Miles to 100K, and 100 Miles ...... 182
Training Plans and Setbacks .......................................... 186

Afterword. What’s Next? ............................................ 189

Index ............................................................................. 193
About the Author ........................................................... 201
PART OF WHAT MAKES THE SPORT OF ULTRARUNNING SO alluring is its unique cast of colorful characters and the welcoming sense of community. If it weren’t for an eclectic group of influencers and encouraging friends, I don’t think I ever would have made that big leap to my first ultramarathon.

Hal Koerner is most definitely one of those characters, and one I’m proud to call a longtime friend. I can’t recall whether it was a mountainous 50K in Virginia or a rocky 50-mile in Arizona where I first met Hal. He was a lanky Colorado kid who had his hat pulled down so low you could barely see his chin, but underneath that brim there was always this enormous grin that stayed put, no matter how hard we were hammering up a climb. It was almost unsettling! The other thing about Hal? His undeniable cool. When it came to race mornings, he would barely make it to the start line before the gun went off. However, no matter how late he was, he’d
remain utterly unflustered, taking his time to guzzle some coffee and finding his water bottle and gels in the nick of time before springing off to the start with a smile. The thing about Hal is, he never seems to sweat the small stuff—well, except when it comes to picking his race outfit. His race kit was always styled to a T that even the best fashionistas couldn’t top!

For 15 years, Hal and I have shared miles on the trail, both racing and training. And despite those many years passing by, not much has changed. Hal is still that same easygoing guy whose smile can set anyone at ease, but yet who can flip the competitive switch and throw down when it matters.

He brings that same laid-back yet competitive style to this guide. Whether you are a newbie ultramathoner or a seasoned veteran, Hal’s down-to-earth advice will give you the confidence to get to the finish line or set a personal best. He dispenses hard-earned wisdom on everything from running a downhill properly to wild-animal encounters on the trail. Included are special sections on shaving and, yes, a “Manity Kit”—I’ll let Mr. Koerner do the honors of explaining himself on those two points!

The practical, sage instruction in this guide is what helped Hal take the podium in many an ultra, including two straight Western States 100 wins. Hal is hard-core and as “ultra” as it gets, there is no doubt. And yet, while he can rattle off ultra stats like the most studious of ultra geeks, it is his down-home approach and cool head that have served him best in the sport’s most grueling and competitive events.

What I enjoy most about Hal is his inviting, fun-loving style, always so welcome on the trail. He brings this trait to his book in spades, all the while serving his guidance straight up like his
favorite whiskey. But he gives more than just good advice. Great
guidance and best-laid plans can help anyone better understand and
participate in our sport, and yet, the truth is, ultramarathoning is
too capricious and individual for any rule to be set in stone. It has
been said, “Running an ultra is 90 percent mental, and the other 10
percent—that’s mental too!” Often it is a strong mind that wins out
over strong legs. Hal knows that. He provides you with crucial
on-the-ground knowledge in this book, but more important, he’ll
give you confidence, which may turn out to be your best asset
during the inevitable moments of truth in any ultramarathon.

As comprehensively covered as the topics are, I have to admit
to being a little disappointed he hasn’t included a section on pre-
paring for and recovering from extensive post-race festivities. At
these, Hal is the master, as I am sure anyone would agree who has
tried to toe the line with him after a race!

I, like Hal, sincerely believe that anyone can run an ultramar-
thon, and if you follow his advice you won’t just complete an ultra,
you’ll have a lot of fun along the way. Because that’s Hal: completely
committed to the task at hand, but completely committed, too, to
enjoying the journey. I sincerely hope you take that lesson to heart
and enjoy your own journey. And in those low moments when it
seems impossible, those times that make you wonder if you have
any more to give—dig deeper. That’s what ultras are all about.

Keep digging deep!
Ultra, by one definition, means “extreme.” And so it is perhaps not surprising that when people first hear the term applied to a running race, they imagine that event must be 100 grueling miles or more. While it is true that some ultras are 100 miles, and certainly some are also quite grueling, the fact is, an ultramarathon is simply any distance beyond the marathon distance, or 26.2 miles. On the flip side, sometimes runners joke about having done an ultra because they ran to the start line of a marathon from their car or hotel, adding a mile, or ran to the bathroom.
when the marathon was over, adding 0.2 miles to their race. So for the jokesters out there, let’s be clear that by “ultra,” I am referring to the actual race distance. The most common ultramarathon distances are 50K, 50 miles, 100K, 100 miles, and multiday runs.

WHY RUN AN ULTRA?

Everyone has his or her own reasons, which are as wildly varied and unique as the people who run ultras. For me, part of the appeal has been that ultrarunning takes me places—both within and without—that I didn’t know existed. I have had the privilege of running in some of the most beautiful places on earth, from the southeastern Idaho wilderness and the stunning San Juan Mountains of Colorado to the pristine Alaskan interior, the majestic mountains of Europe, and beyond. Ultras have been my excuse to explore places I’ve never seen and may never have seen if it weren’t for running.

Mentally, ultras have the power to transport me to yet a different kind of unique place, one where I feel totally in the present and everything else sort of fades away. That can be hard to do in our daily lives. I always look forward to that feeling and cherish it when it comes.

Another appeal for me is the tremendous satisfaction of doing something that pushes me to my very limits. Generally speaking, life is pretty well managed for many of us, often even dictated to us. We get up in the morning, drive the same road to work, and do our jobs, and things are overall pretty safe, planned, and secure. We know what life looks like; it’s predictable. Similarly, we have devices to do many things for us now. But ultras are far, far less predictable, and they are all you: your faculties, your body, your strength, you on the line. There is no faking it. Thus, finishing an ultra brings an enormous feeling of accomplishment.
Then there is the joy of sharing the miles and the journey with like-minded people. Indeed, it was the community I found in ultrarunning that drew me to the sport in the first place. It is one of the few sports where you can toe the line right beside the best and often have the opportunity to chat with the top competitors. The ultra community is growing, yes, but it still has the soul of a small town and is not impersonal, something that other aspects of life can often be. Many ultra races are sprung from the grass roots and have a laid-back feel that is unique in the sport of running. At the end of a race, for example, you may well sit down in the grass and hear someone playing a guitar as you eat fresh-cooked hamburgers or veggie burgers. Runners and supporters will often stick around for hours after the race, even well into the night. The welcoming atmosphere of the ultra extends far beyond the race itself.

Finally, unlike running down a four-lane road in a marathon, with little space and lots of people, in an ultra race you may not see many other people for miles, and those you do see, you get to know pretty well. The trail and the hardships and triumphs of an ultra have a way of fostering relationships. The trail brings you close. In fact, that is how I have made and maintained most of my relationships to this day, even though those friends have also been my direct competition. When you have 20 hours to run with someone, you end up sharing a lot.

**WHO CAN DO AN ULTRA?**

You can. Ultras are open for all. You have to train to achieve at least a base level of fitness, and you have to have the desire, but don’t let the distance intimidate you. It doesn’t take as much as you may
think to go from running a few miles to running many. With passion, drive, and smart training, almost anyone can do an ultra. It helps if you have a network of support from folks around you, but the motivation and determination all have to come from you.

Are some people dealt a better hand for executing ultras? Sure. They may have gifts from birth that provide a jump start, physically or mentally. However, that doesn’t exclude others. At the highest level of any sport or effort, there are some who are freakishly suited to it, but that certainly should not prohibit anyone else from trying and succeeding.

YOU KNOW YOU ARE AN ULTRARUNNER IF...

- You always have at least one missing toenail.
- Your backpack is full of water.
- You use ChapStick anywhere other than on your lips.
- You have a sit-down pizza party at an aid station.
- You immediately look for a bush when the line to the public restroom is long.
- Your run demands both a headlamp and sunglasses.
- You purchase skin lube in the economy size.
- You sign up for a marathon just to get in part of your long run.
- You use more than one pair of shoes for a race.
- You worry about explaining your powders and salt tabs to TSA agents.
- Everything in your pantry is organized in ziplock bags.
GETTING STARTED

TACKLING THE DISTANCE—
50K, 50 MILES TO 100K, AND 100 MILES

As just mentioned, ultra distances are anything over 26.2 miles, and you have several popular distances to choose from. Most people tackling an ultra distance have a marathon or two under their belt, and I would certainly advise it. Is it possible to go from couch to ultra? Well, let’s just say I’ve seen it done but would not recommend it.

The good news is that the base mileage you need when you prepare for a marathon is nearly the amount you’d need for one of the lesser ultra distances. Preparing for an ultra is not so much about miles; it is more mental, deciding which distance you’ll tackle and committing to it.

A common path to an ultra looks like this: You do a marathon and then begin to plan out a period of time, say a year, in which you will take logical stepping-stones up in distance, from 50K to 50 miles to 100K and ultimately to 100 miles.

Whichever distance you choose to prepare for, you will need to commit to at least 5 days a week of consistent training for a minimum of 14 weeks. Add in a reasonable 2-week taper, and thus a 16-week training plan can begin any ultra training. Even the shortest ultra is long and taxing, so if you want to finish it and finish it well, you have to put the work in.

50K—Steps to Increase the 26.2-Mile Threshold

This distance, which is only 5 miles longer than the marathon distance, demands a similar base mileage. You can successfully prepare for a marathon doing 50 to 90 miles a week. The same is true for a 50K race. So, if you have done a marathon, you will find that training
for a 50K demands something similar to what you are used to. However, as you will see in the training plan, the long run may be longer than what you are used to. Thus, perhaps you will be dealing with a less-familiar feeling of being very run-down or of pushing yourself when you have nothing left.

Not only are 50Ks great building blocks for those ultimately shooting for a 100K or 100-mile ultra, but they also serve as “speed training” for seasoned ultrarunners who want to work on faster turnover and run hard throughout the entire distance. And, because the distance is normally covered entirely during the daylight hours, some ultrarunners seek out highly technical, hilly, or otherwise challenging 50K courses.

50 Miles to 100K (62 Miles)—
Time on Feet Becomes Crucial

These races are gateways to the 100-mile ultra, but the 50-miler and 100K are robust runs in and of themselves, and there is no faking the passion and desire for these distances. They will ask for all that you’ve got, and then some.

The 50-miler creates a real separation from the 50K in terms of both mileage and ultra distinction. You are doubling the marathon distance and, perhaps more significantly, often taking a mental leap into the unknown. This is the distance of most of my favorite races. Where the 100K and 100-miler may loop, double back, or make a patchwork quilt to gather miles, the 50-miler is often a single loop or a point-to-point route, and many runners who are new to ultrarunning find the distance manageable. The runner is rewarded with a challenge that is as stimulating mentally as it is physically. That sometimes makes all the difference between competing and a DNF.
While the 50-mile race is common in the United States, the 100K is less so (although participation is increasing now that qualification standards for some of the more popular 100-milers dictate that runners complete a 100K with a qualifying time in order to be eligible to register). However, the 100K is the international standard for the world championship and is a common distance across Europe and in Asia. If you are a runner who loves a destination race, this might be your distance, but be prepared to run some road miles for the effort.

Oddly enough, my very first ultra was a 100K in Washington State. Better-known races Night of Flanders in Belgium and Trailwalker in Hong Kong were my first experiences with this distance internationally. However, my breakthrough race in 2001 was the Catalina 100K, and I have been trying to duplicate that performance year after year at the Miwok 100K, an American standard.

I’ve found that the 100K rides in the slipstream of the 100-miler. At the equivalent of 62 miles, it pushes you much closer to the 100-mile mark and comes with its own set of difficulties and realities. As you move up from the 50K distance, those 31 additional miles offer a chance for you to experiment with what you are capable of and where your boundaries are. Ironically, although your body will experience more stress than in the 50K and some probable low points, the extra mileage has the benefit of allowing it enough time to actually come back around again and recharge. This can be a very cool feeling, like coming full circle.

In many ways, the 100K is like a tease for the 100-mile distance. And it is more closely related to a 100-mile race than to a 50-miler. Even with a consistent pace, and if things are going well, your 100K race will be 2 to 3 hours longer than your 50-miler, making it a totally different experience. Twelve miles may not sound like
much, but at that point in the race, it is long. As far as time, it is another marathon for some runners!

Where a 50-mile race may request it more politely, the 100K will absolutely demand that you learn the ins and outs of your body, and about nutrition for that distance and time, all things being relative (the course, altitude, and weather).

Finally, the 100K race is fantastic training for a 100-miler. But, remember, it takes about 4 to 8 weeks to recover from the effort, so if you are using it as training for a 100-mile race, be sure to factor the recovery time into your calendar.

In terms of base mileage, you will need to bump the weekly total up by adding about 10 miles to both top and bottom, or 60 to 100 miles per week. As you will see in the training plans, I don’t advise going crazy with lots of mileage. It’s overkill, you run the risk of injury if you bump things up too quickly, and it’s hard to recover from high-mileage weeks. I’ve run a great 100K on 90-mile training weeks. The key is to stay healthy, strong, and consistent. Your long runs need to be run well and after full recovery from the previous long effort.

100 Miles—Putting It All Together

Preparing for a 100-mile race means targeting a weekly base of 80 to 110 miles, with a long run of 50 miles. In my own training, my longest training run might be only 30 to 40 miles, however, because I race a lot of 50-mile and longer races in between my 100-milers. And I’d encourage you, too, to put a 50-mile race into your own 100-mile training plan. Besides providing the miles, a race environment offers you experience working through nerves, testing your nutrition, pushing yourself harder than you would otherwise, and encountering and getting through the kinks that
present themselves along the way. You will want to place this race strategically within your training. The training plan in this book will indicate where a 50-mile race might fit in nicely.

If you can’t find a race that works for you, then you will need to do a 50-miler on your own, not to mention 25-, 30-, and 35-mile runs. Keep in mind that you may need to travel to do really effective distance runs. If you’re going to do all the training and work but not even come close to replicating the race itself, then you aren’t doing yourself a lot of favors. If, for example, your race has a huge climb, it would be highly beneficial to have done one during a long training run. Likewise, if you envision racing in the heat of the summer in a hot climate or in the wintry wilds of Alaska, then you should be adding those conditions into your training by some means. I would go so far as to say that the requirements of the course should be on your mind daily.

Running at night should be something with which you become very familiar. This is a great time to grab your pacers and pull them into the fold because they will more than likely join you through the nocturnal stage of the race. Getting out the door for a night run when you are dead tired and searching for that second wind will be instrumental in hardening your mind as well as your body. And night running will become more of a routine than a novelty as the mileage increases.

Preparing for a 100-mile race also means practicing even more continual time on your feet, regardless of the miles. Being on your feet for 10 to 12 hours is something you should practice at least once. This will be invaluable to your recovery and endurance strength as well. The long runs in this training plan will give you that ever-so-valuable time on your feet.
CHOOSING YOUR FIRST RACE

When you are registering for a race, many factors will influence your decision to stay committed to the plan. The preceding section gave you a very broad idea of the time constraints and commitment necessary to pull off an ultra. Take that time element into account as you consider which ultra is best.

For your first ultra, consider finding an event close to home where you can account for most or all of the variables of the course and take advantage of the specificity of your training. Weather, climate, and altitude are all very hard to replicate. For a flatlander living in Iowa, training for the Wasatch Front 100-Mile Endurance Run may be a lot to bite off. By contrast, if you are a Colorado runner, running trails and scaling mountains, this type of training, while awesome, may not translate into the efficiency demanded by the Comrades Marathon, which is 56 miles of rolling pavement in South Africa.

Remember, the learning curve may be a bit steep on the first ultra race you run, so being able to cope and train in familiar surroundings will go a long way toward helping you finish the endeavor. Minimizing extraneous circumstances that have the tendency to trip up the beginning ultrarunner may be the best favor you do for yourself.

If, however, you are set on a race that is much farther afield, so be it. After all, the unknown is part of the adventure, right? But when it comes to training, just know that you will want to get creative and replicate your upcoming race conditions as best you can. The good news is that this creativity can be invigorating and stave off redundancy in your weeks of training. Living in Seattle and training for the Trailwalker 100K in Hong Kong, I incorporated all
the steps I could find into my weekly runs in order to syncopate my pace for the rigors of the course’s route. While my time was well spent on stairs, I neglected to train for the difference in weather and fell ill to the effects of running in 90-degree temperatures and 100 percent humidity. By mile 20 I was lying perpendicular across the trail like a zombie. As it turned out, perhaps practicing rolling down stairs would have served my training better.

**SETTING A GOAL**

Think about either target pace or target time. Look to a friend who has done the distance and whose running you are familiar with for an idea of how fast you can go or how long it might take you. Another idea is to review race results from previous years and choose a midrange finishing time to shoot for. Or, if you are attempting to use the race to qualify for something else, setting a target has already been done for you by the race organization.

While it is important to have a finishing time in mind when you train for a race, it is probably even more important to be flexible about that objective. You will need to adjust it on the fly, especially if the weather or course conditions are less than ideal for running your goal pace. Even if you start out on track to achieve your desired finish, circumstances change quickly during an ultra, and you can suddenly find yourself switching from “I’m going to finish well under my goal!” to “I’ll be lucky to even crawl over the finish line.” Ultras are lessons in life, and many of the most powerful teaching experiences are gained by dealing well with adversity.
Ultramarathons don’t leave much room for mistakes. Don’t learn the hard way; get a jump on training for an ultramarathon with *Hal Koerner’s Field Guide to Ultrarunning*, a comprehensive handbook to running 30 to 100 miles and beyond, written by one of the most experienced and recognized athletes in the sport.

Hal Koerner is among America’s best ultrarunners. In this smart, down-to-earth training manual, Koerner shares hard-earned wisdom, field-tested practices, and insider tips to help you prepare for your ultra. You’ll find guidance on exactly what you need to know to train for your race, including:

- best gear for ultrarunning
- fueling and hydration guidelines
- choosing an ultra
- trail running technique
- first-aid advice
- beating altitude, storms, and heat
- race-day game plans
- crew and pacer tips
- mental strategies to get you to the finish line

The guide offers **three detailed training plans** to prepare for 50K, 50-mile to 100K, and 100-mile ultramarathons.

**Start your ultra with confidence and finish it strong with Hal Koerner’s Field Guide to Ultrarunning!**

**HAL KOERNER** has raced ultramarathons across the globe and set fastest known time records on the Colorado Trail and the John Muir Trail. He was featured in the 2011 film *Unbreakable: The Western States 100* and in 2014 was called “The Happiest Runner on Earth” by *Outside* magazine.