TRAILHEAD

“When it comes to trail running, Lisa knows her stuff!”

—SCOTT JUREK, 7-time Western States winner and author of Eat and Run

THE DIRT ON ALL THINGS TRAIL RUNNING

LISA JHUNG

ILLUSTRATIONS BY CHARLIE LAYTON
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Welcome to the trail.

If you’ve ever been outside, you know that simply standing on a natural surface can make a person happier. Running on a trail—dirt, grass, sand, and such—enhances the happiness and adds the benefits of becoming healthier, stronger, fitter . . . more joyful, even. It grounds you.

Luckily for us, trails are everywhere.

A “trail” is not defined by how steep it is, how far it climbs up a mountain, how treacherous the footing, or how many miles it
spans. Trails can be completely flat, rolling, or downright moun-
tainous. They can be in the wilderness, farmland, your neighbor-
hood, or a city park.

And a “trail runner” has a broad definition, too. Speeding
through the hills like a mountain goat makes you a trail runner.
So does hopping on a smooth dirt path and moving your feet in
some motion faster than a walking or hiking pace for a couple of
miles. From newbies with still-pink toenails to wily veterans who
depend on pedicures for normalcy, from dedicated road runners
with a longing for nature and a more forgiving surface to ultrarun-
ners accustomed to hallucinations and gastrointestinal distress,
you are all trail runners, and this book is for you.

By providing a no-nonsense (okay, a little nonsense) visual ref-
erence to everything there is to know about trail running—what
to do when encountering a bear, or (sometimes) worse, a charging mountain biker or cantankerous hiker; what to wear to embrace the elements; how to relieve yourself on the trail without embarrassing yourself or those around you; or how to get faster or go farther—this book will help you thrive.

What is a trail?

trail \trāl\ n. (pl. –s) 1. An unpaved path that goes somewhere.

<table>
<thead>
<tr>
<th>A TRAIL</th>
<th>NOT A TRAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dirt path</td>
<td>Concrete path</td>
</tr>
<tr>
<td>Rocky path</td>
<td>Asphalt road</td>
</tr>
<tr>
<td>Mossy path</td>
<td>Sidewalk</td>
</tr>
<tr>
<td>Rooty path</td>
<td>Freeway</td>
</tr>
<tr>
<td>Dirt road</td>
<td>Treadmill</td>
</tr>
<tr>
<td>Gravel path</td>
<td>Track</td>
</tr>
<tr>
<td>Gravel road</td>
<td>Bouncy house</td>
</tr>
<tr>
<td>Rail trail converted to dirt path</td>
<td>Target store (no matter how many aisles you cover)</td>
</tr>
<tr>
<td>Sandy beach</td>
<td></td>
</tr>
<tr>
<td>Grassy field</td>
<td></td>
</tr>
</tbody>
</table>

The “unpaved path” refers to any surface not covered in concrete, asphalt, bricks, or tiles. The “goes somewhere” component eliminates a treadmill, grassy sports field, or rubber track. While those venues confer some of the same physical and mental benefits as running on a trail, the “goes somewhere” bit of the definition is what gives you a sense of adventure.
ADVENTURE: A SLIDING SCALE

There is a sense of adventure, there is an actual adventure, and then there is an epic adventure. Trail running can sometimes be all three.

**Sense of adventure.** A feeling of excitement when you set out on your run, all but guaranteed on even the mellower of trails. *I’m so ready to do this!*

**Actual adventure.** A trail run offering a sense of exploration, discovery, and even a bit of apprehension. *This is exciting! Can I do this?*

**Epic adventure.** A trail run rich with excitement, challenge, endurance, and possibly crazy weather conditions. Epic adventures vary, but they all end with the same thought: *That was awesome! I did this!*
Adventures are out there for the taking. But not every run (or any run) has to be epic to be great. Some days you may want to just get outside and take it mellow and easy on a familiar nearby path. Regardless of where your runs fall on the sliding scale of adventure, if you want to keep your off-road running fun and safe, this book will help you plan runs wisely.

How to use this book

The 12 chapters in this book fall into six categories, each examining trail running from a different angle. Feel free to read every page twice, quote it to your running mates, and get a great kick out of the illustrations. Heck, buy a copy for each of your friends. However, there is no need to read Trailhead in order, from beginning to end. Flip through each chapter as needed. Strict order is as important in this book as it is in trail running, which is to say not very.

# WHY. Wherein we discuss what trail running does for your body and your mind.

# HOW. These chapters answer questions about where to go and what you need to trail run. They also discuss how to handle weather, what to wear, and how to fuel up.

# SAFETY. These chapters spell out what to do if you encounter animals on your run. And they talk about basic first aid.

# ETIQUETTE. This chapter discusses good behaviors for multiuse trails, including who has the right of way. It also teaches about the socially and environmentally acceptable
ways to relieve yourself during a run. And ways to preserve our beloved trails.

# COMPANY: This chapter weighs the pros and cons of running by yourself; with friends; with dogs, horses, or burros (for real).

# HOW, PART II: These chapters delve into training for trail running, including strengthening exercises, workouts, and tips on technique to make you stronger and faster. They also offer some guidance on trail racing.
Running on trails does a body good. Thanks to varied terrain and softer natural surfaces underfoot, running on trails can both improve your overall fitness and be more forgiving to your body than road running.

**Nice bod**

A fit physique may not be your main reason to head out for a run on trails, but it’s not a bad side effect. Running on variable surfaces, such as trails riddled with rocks or roots—or even on smooth, twisty singletrack—forces your body to use stabilizing muscles (hello, core) and strengthen connective tissues (ligaments and tendons) that don’t normally get recruited on road runs. And running hilly terrain on trails builds leg strength—working quads, calves, and gluteal muscles more than running on flats.
The Trail Runner’s Leg

- Impressive Glutes
- This way to strengthened hip joint
- Healthy hamstring
- Robust gastrocnemius
- Defined tibialis
- Hearty lower leg tendons and ligaments
- Ripped quadriceps
- Tenacious adductors
- Wicked-strong foot muscles
- Relieved knee joint
- Defined ankle joint
Plus, research shows that trail running can burn up to 10 percent more calories than running on a road or track for the same time or distance.

**Better balance**

The varied terrain of trails engages small, intrinsic muscles situated deep within our bodies for balance, improving coordination by teaching us *proprioception*.

*proprioception* 
\[\text{prə-ˈprē-ə-shən}\] 1. Awareness of the position of one's body, helpful to runners and all other living creatures.

Running trails has multiple benefits. Science says so!

- Studies show that walking on uneven terrain requires more energy than walking on smooth ground, engaging more muscle activity and metabolic expenditure. *If this applies to walking, just think how it applies to running.*

- Running trails—unstable ground, uphill/downhill, altitude—often strengthens balancing muscles, such as core muscles and small stabilizing muscles, normally not engaged in road running.

- Trail surfaces are softer than pavement and thus create lower overall impact and reduced pain while running.
• Running trails improves bone density that may help combat osteoporosis.

CHARLIE MERRILL, licensed physical therapist and competitive trail runner

“Mechanically, trail running challenges athletes in all three planes of motion: sagittal (front/back), frontal (side/side), and transverse (rotational). This means there’s a high degree of muscle control and strength, plus coordination and proprioception, required to trail run.”

Soft landing

Trails compress, or dampen, to varying degrees with every step. That means that each time your foot hits the ground on trail, the impact is less harsh than on pavement or concrete. This minimizes wear and tear on your body—the same kind of wear and tear caused by the repetitive motion of running on a hard surface, which can lead to a multitude of overuse injuries.

And the softer the surface, the more energy your body expends to rebound during your stride—a good thing. Running on very soft surfaces (such as deep sand) increases muscular strength and overall stamina.
“In the same way you go to the gym to get strong, running on changing terrain makes muscles, tendons and ligaments stronger. Compliant surfaces are great for muscles and joints because they store and return your energy. Running in the sand, which has a lot of dampening, works foot and calf muscles and burns a lot of energy. And running on uneven terrain makes your heart rate and overall energy cost go up.”

DANIEL FERRIS, PHD, professor, School of Kinesiology, University of Michigan

Easy does it

Doing too much too soon can shock your body and cause injuries. With any training program, easing into things is important. With trail running, gradually building up to more technical terrain will give your muscles, joints, ligaments, and tendons time to adjust and prepare them to become stronger than ever.
### Why: Your Body

**Your Body Has a Lot to Gain from Trail Running.**

| If you’re a road runner... | You have: Cardiovascular stamina, leg strength, good bone density  
|                           | You’ll gain: Core strength, intrinsic muscle strength, balance, agility |
| If you’re a hiker...      | You have: Some cardiovascular stamina, some core strength, leg strength  
|                           | You’ll gain: Increased cardiovascular stamina, increased core strength, increased leg strength, increased bone density from the impact of running, balance, agility |
| If you’re a rock climber... | You have: Core strength, some cardiovascular stamina, leg strength, upper body strength  
|                           | You’ll gain: Increased cardiovascular stamina, increased leg strength, increased bone density from the impact of running, balance, agility, faster access to climb sites |
| If you do yoga...         | You have: Isometric leg strength (from holding poses), balance, flexibility  
|                           | You’ll gain: Cardiovascular stamina, dynamic leg strength, improved bone density from the impact of running, counterstrengthening to your flexibility (shortening of muscles for power), agility, enjoyment of being outdoors |
| If you do Pilates...      | You have: Core strength, muscular strength  
|                           | You’ll gain: Cardiovascular stamina, increased muscular strength, increased bone density from the impact of running, a great way to apply your core strength, balance, agility, enjoyment of being outdoors |
### BE A BETTER YOU

<table>
<thead>
<tr>
<th>If you’re a road cyclist . . .</th>
<th>You have: Cardiovascular stamina, leg strength (singular plane/circular)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>You’ll gain:</strong> Core strength, dynamic leg strength, increased cardiovascular strength (your legs keep moving downhill), increased bone density from the impact of running, increased balance, increased agility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If you’re a mountain biker . . .</th>
<th>You have: Cardiovascular stamina, leg strength (singular plane/circular), some core strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>You’ll gain:</strong> Increased core strength, dynamic leg strength, increased cardiovascular strength (your legs keep moving downhill), increased bone density from the impact of running, increased balance, increased agility, another perspective of the trails you love (and access to some you can’t ride)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If you’re a surfer, skier, or snowboarder . . .</th>
<th>You have: Some cardiovascular stamina, leg strength—mostly isometric from holding one position for long periods of time, balance, core strength, hand-eye-foot coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>You’ll gain:</strong> Increased cardiovascular stamina, dynamic leg strength, increased bone density from the impact of running, increased core strength, improved balance and agility, faster access to waves and pow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If you’re a Nordic skier . . .</th>
<th>You have: Cardiovascular stamina, core strength, leg strength, upper-body strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>You’ll gain:</strong> A way to train everything when the snow melts, increased bone density from the impact of running</td>
</tr>
<tr>
<td>If you do CrossFit . . .</td>
<td>You have: Muscular strength (mostly on two legs, not one at a time), core strength, short-intensity cardiovascular strength, agility</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>You’ll gain: Cardiovascular stamina, increased muscular strength (on one leg at a time), increased bone density from the impact of running, enjoyment of being outdoors</td>
</tr>
<tr>
<td>If you play ball sports . . .</td>
<td>You have: Some cardiovascular strength, muscular strength, core strength</td>
</tr>
<tr>
<td></td>
<td>You’ll gain: Increased and sustained cardiovascular stamina, increased muscular strength, mental break from team competition</td>
</tr>
<tr>
<td>If you’re a swimmer . . .</td>
<td>You have: Cardiovascular stamina, core strength, upper-body strength</td>
</tr>
<tr>
<td></td>
<td>You’ll gain: Improved cardiovascular stamina, leg strength, increased core strength, increased bone density from the impact of running, balance, agility, a change of scenery from the bottom of the pool</td>
</tr>
<tr>
<td>If you’re on the couch . . .</td>
<td>You have: A need to get off the couch</td>
</tr>
<tr>
<td></td>
<td>You’ll gain: Everything except weight</td>
</tr>
</tbody>
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trail·head \\
\textit{trāl-hed}\\
\textit{n.} 1. the place where a trail begins.

**WELCOME TO THE TRAIL.** Trailhead is the must-have guide to all things trail running. Written by Runner’s World contributing editor and veteran trail runner Lisa Jhung, this smart, illustrated guide is your signpost to everything from how to find good trails to choosing the best shoes and clothing to staying safe when encountering wildlife and weather. In this handy resource, you’ll get the lowdown on:

- **Benefits.** Why trail running is so good for your body and mind
- **Essentials.** Finding great trails, choosing the best gear, preparing for weather, packing smart eats and drinks
- **Safety.** Dealing with trail running injuries, first aid, wild animals
- **Etiquette.** Preserving the trail, respecting right of way, answering nature’s call
- **Company.** Running alone, with friends, with animals
- **Racing.** Getting faster and stronger, preparing for races

From runners curious about heading off-road to those who are ready to venture deeper into the backcountry, Trailhead is where your path to trail running adventure begins!

*Lisa Jhung* is a trail runner, triathlete, adventure racer, and journalist. She’s a contributing editor for Runner’s World. Her work has appeared in many publications, including *Outside, Men’s Journal, Trail Runner,* and *Shape.*