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HOME / SKILLS ▾ / BACKPACKING FITNESS

How to Train for Steep Hikes

Push through big climbs and banish quad burn by increasing your lactate threshold.

Corey Crane · Jul 26, 2018

When your muscles [scream to a halt on steeps](#), don't blame your willpower—blame your lactate threshold. Lactic acid accumulates during anaerobic exercise (when you're moving faster than your blood can oxygenate your muscles). Your lactate threshold is the intensity at which the blood concentration of lactic acid builds up faster than your body can flush it. The higher your threshold, the longer you can work hard. Do these exercises weekly (rest for 48 hours between each) with routine-specific warm-ups to prevent injury, starting six weeks before a [big trip](#).

Anaerobic Threshold Training

WHAT: Work hard at your lactate threshold in anaerobic conditions.

WHY: Improve your body's ability to handle lactic acid buildup.

Reps: 1 Sets: 1 Rest: None

WARM UP: Hold onto a fence post or tree and do front-to-back and side-to-side leg swings (10 each direction, each leg). Keep your torso upright and core engaged, and hinge at the hip rather than at your lower back.

1. Calculate your predicted maximum heart rate (MHR; see right).
2. Start hiking or running (or use a cardio machine) until you reach 80 to 85 percent of your MHR (use a heart rate monitor or take your pulse for 10 seconds and multiply by 6).
3. Continue at this intensity for 20 minutes. Moderate your pace to stay in the target range (aim for a 5k to 10k race pace).

Make it Harder

Use a heart rate monitor to train right at 85 percent of your maximum heart rate, and add an additional minute each time you do the workout (up to 40 minutes).

Hiking-Specific Interval Training

WHAT: Give maximum effort followed by a low-intensity recovery period.

WHY: Temporarily exceed your lactate threshold to train your body's response.

Reps: 10 Sets: 1 Rest: Active recovery

WARM UP: At the trailhead, do side, backward, and angled lunges (10 each, each leg). Keep your spine neutral and upright, and bend to a 90-degree angle in the ankle, knee, and hip (don't let your knee extend beyond your toes).

1. Locate a 35- to 45-degree section of trail (find one with 200 to 300 feet of elevation gain if possible; use the longest stadium bleachers or staircase you can find if not).
2. With a 5-pound pack, hike as fast as possible uphill for 2 minutes (at least 90 percent of MHR).
3. Slowly walk back to the starting point (about 10 minutes) and repeat.

Make it Harder

Add 5 pounds each week until you reach 40 pounds. You can also increase the reps by one or two each week (until you get to 12 to 15 total).

Fartlek Training

WHAT: Alternate between aerobic and anaerobic training.

WHY: Improve your ability to produce energy with limited oxygen, which delays the production and accumulation of lactic acid.

Reps: 4 laps Sets: 1 Rest: Active recovery

WARM UP: Do high knees, butt kicks, and side shuffles until you break a light sweat.

1. On a 400-meter track, sprint the straightaways (at least 90 percent of MHR) and jog or walk the curves. Repeat.
2. To cool down, walk a lap (about 5 minutes) and do a static stretching routine (try this one: backpacker.com/stretch).

Make it Harder

Add one additional lap each week until you get up to 8 laps. Or, break out the stopwatch and work on increasing your speed on the sprint intervals.

Calculate Your Max Heart Rate

Do the math to determine your optimal training zone.

1. Maximum heart rate in beats per minute = $220 - \text{your age}$.
2. Multiply your MHR by .8 and .85 to determine 80 to 85 percent of your MHR. At the beginning of your training, this will be the intensity at which you start accumulating lactic acid—your lactate threshold.
3. Train at the bottom of this range starting out, and near the top to push your lactic acid threshold even further.

Example:

If you're 40 years old:

MHR = $220 - 40 = 180$ beats per minute

Training zone = $.8 \times 180$ to $.85 \times 180 = 144$ to 153 beats per minute

You're Doing It Wrong

Don't Take it Easy

Interval and fartlek workouts need to be done all-out—if you're not breathing hard, sweating profusely, or thinking about throwing up, you're probably not pushing into the anaerobic zone or reaching the intensity required to actually trigger lactate threshold adaptation. Feeling relatively comfortable means your muscles are getting enough oxygen to generate energy aerobically. Pay attention to your heart rate; it won't lie.

About The Expert

For two decades, Corey Crane has worked in the NFL and NCAA as a strength and conditioning coach. In his spare time, he works on knocking off big sections of the [Appalachian](#) and [Continental Divide Trails](#). His trail name is Motel.



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