

How To Climb Like A Champ

By [Fred Matheny](#)

Vertical terrain is responsible for the biggest thrills — and the most intense pain — in cycling. In races, the crunch almost always comes when the pavement tilts up. Recreational tours such as Colorado's Ride the Rockies feature several thousand feet of climbing each day. And, of course, climbs are followed by swooping, twisting descents where the grin-per-mile quotient is literally sky high. For all these reasons, it pays to get good on hills.

While the following [training tips](#), [climbing strategies](#) and [skills](#) are written from a racing/competitive point of view, they'll help recreational road and off-road riders who would simply like to climb better, too.



Because climbing is a fight against gravity, your ultimate ability is determined by your power-to-weight ratio. Lean, small-boned riders need proportionally less power to climb well compared to big people. That's why great climbers are nearly always diminutive. The few exceptions, such as Lance Armstrong and Miguel Indurain, generate so much power that their greater size doesn't matter.

The good news is that you can improve your climbing regardless of your genetic makeup. In this article, I show you how to use climbing days to your best advantage.

Example: At 6-foot-4 and 190 pounds, my partner at RoadBikeRider.com, Ed Pavelka, is not built for climbing. But he lived for years in Vermont and Pennsylvania, where he had to climb at least a couple thousand vertical feet on **every** ride. Over time, this improved his fitness and technique, which made him feel it wouldn't be too futile to try some hilly events. He surprised himself by finishing 9th overall in the Assault on Mt. Mitchell, which ends with a 25-mile climb. Later, he placed 2nd of 55 masters in the Mt. Washington Hill Climb, which gains 4,700 feet in 7 miles, including grades of 18 to 22 percent. If you think you're too big to become a better climber, work at it and you might surprise yourself, too.

Hills For Intervals

Because you should often be training on hills to improve your vertical ability, it pays to scout out the best climbs within a reasonable distance of home. I hear what you're saying: "I live in Pancake, Indiana, and the biggest hill in four counties is a two-foot rise over a culvert." Don't worry. Wind can substitute for real hills. So can highway overpasses. You could even use your indoor trainer with your bike's front wheel raised 4 inches to simulate a grade.

Assuming there are some hills in your area, categorize them for specific kinds of training. Ideally, you'll have these 3 types:

- **Sprinter's hills.** These are short and fairly steep. Highway overpasses work fine. So do abrupt climbs out of stream-cut valleys. You may find these hills in city and state parks. I know of some good ones in Cleveland's park system.
- **Hills for repeats.** The best hill for intervals takes 2 to 4 minutes to climb, has a steady grade of 6 to 8% and no traffic lights or stop signs. A road with several consecutive hills like this, separated by about 5 minutes of riding time, is ideal. It makes training more interesting. But one lone hill is fine, too. Simply climb it hard, turn around at the top and recover as you ride back down and on the approach.

- **Long climbs.** These can vary from a hill that takes 5 to 8 minutes to climb to real mountains. Classic examples are the canyon climbs and mountain passes of western states, and the steep grades of the Appalachian Mountains and New England.

True Confession: I live in a western Colorado town with arguably the most varied climbing in the country within a 20-mile radius. A dozen steep, kilometer-long climbs reach the tops of mesas. Longer ascents include 6 tough miles on the entrance road to Black Canyon National Park and the fearsome 3-mile, 16% East Portal climb. If I want to do a century, I can climb 13-mile-long Red Mountain Pass to the south or the 30-mile, 5,500-vertical-foot grind up Grand Mesa.

Guess what? All of this great climbing terrain hasn't made me into a great climber. I do okay, but smaller or more talented riders can outclimb me even if they're restricted to a training diet of predominantly flat rides. You may not live in ideal terrain, but you can still close in on your potential.

Stand or Sit?

Is it better to be in the saddle or out when climbing? It's one of the questions asked most frequently by riders seeking stronger climbing.

On short sprinter's hills, you should stand because you need to generate power. Standing produces more short-term oomph. You can use body weight to push down the pedals. There's a downside, though. Standing uses more energy because your legs do double duty. They support your weight while also propelling the bike forward (and up). This is why heart rates are about 5 bpm higher for a given speed while standing.

When you're sitting, the saddle supports your weight, letting all of your leg strength be used to overcome gravity. Generally, bigger and heavier riders prefer to sit more while smaller riders like to stand more. It's essential to find which method works better for you — or whether you're more efficient when alternating sitting and standing, as many riders are. If a mix is best, you need to determine the percentage of each that leads to fast, efficient climbing. Here's how:

- **Ride 4 times up a hill that takes at least 3 minutes.** Use different methods. Do one repeat entirely in the saddle. Do another standing all the way. Do a third sitting for one portion and standing for the rest. Do the fourth by alternating stretches of sitting and standing.
- **Keep your heart rate or perceived exertion the same on each repeat.** Effort should be steady and hard, but not all out. Time yourself on each ascent and then compare times.
- **Don't do all 4 climbs the same day.** You'll be tired before the end and your times won't mean much. Instead, spread the climbs over several days or a week.

If you see more than about 10 seconds improvement in each 2 minutes, you know you're more adapted to that style of climbing. Continue experimenting. Find out how much or which part of a climb should be done seated as compared to standing. How steep does a section need to be before it's more efficient to change positions?

Tip! When climbing out of the saddle, the standard hand position is on the brake lever hoods. This puts you slightly upright to see better, breathe better and use body weight to come down on the pedals. But more and more pros are seen climbing on the drops, as if sprinting. One reason is that climbing speeds have increased, making a lower, more aerodynamic position an advantage. Another is that it puts more of the shoulders, arms and lower back into the pedal stroke for greater power. At first it might feel awkward to climb in the drops, but try it for a while

to see if it has advantages for you.

Training Techniques For Faster Climbing

Not all of your hill training should consist of hammering up the climb, recovering and doing it again. Variations not only boost your improvement but also add variety to training. Here are some excellent drills:

- **Power accelerations.** Here's a climbing drill you can do on flat roads. Shift to a high gear and roll slowly at about 5 mph. Staying in the saddle, accelerate as hard as you can for 10 seconds. Push down and pull up forcefully. Your ability to power a large gear on hills will improve dramatically. So will your uphill sprint.
- **Finish the hill.** Most attacks on climbs take place near the top when riders are easing from the effort. Use this drill to respond. During most of the climb, stay in the saddle and spin a slightly easier gear than normal. With about 200 yards remaining, shift to a bigger gear, stand and go hard. Don't slow abruptly at the summit. Instead, charge over the top for another 100 yards or until gravity takes over. This drill builds power and the positive psychology to finish climbs strongly.
- **Surges.** Good climbers don't ascend at a steady pace. Instead, they throw in surges of faster pedaling in an attempt to drop competitors. Here's how to develop the ability to hang on: Ride at a pace about 5 beats below your lactate threshold (the exertion level marked by muscle fatigue, pain and shallow rapid breathing). Surge for 10 to 20 seconds by increasing your cadence about 10 rpm. Ease back to your cruising speed for a minute, then throw in another surge. Repeat all the way up, then accelerate over the top.

Uphill Skills

Climbing is a matter of fitness, but technique counts, too. Practice the following tips till they become ingrained.

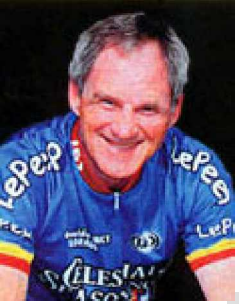
- **Move on the saddle.** As the grade wears on, push your hips to the rear and concentrate on smooth, round pedal strokes at a moderate rpm. Then scoot forward to the tip of the saddle and spin at a faster cadence. Next, slide to the middle and pedal normally. Moving and varying your stroke refreshes your legs by relieving muscle tension. You can feel the difference almost instantly. Many riders, however, lock into one location or continue moving to the rear, missing the benefits of spinning from the nose.
- **Shift to an easier gear just as the grade begins.** Most riders go too hard at the bottom of a climb and run out of steam. To counter this tendency, don't wait to shift till you begin to bog down. In fact, use a lower gear than you think you need for the first two-thirds of the climb. Keep your cadence up to keep your speed up. With about 100 yards to go, shift to a bigger gear, stand and roll briskly over the top.

Words of Wisdom: You'll do well to remember these quotes from Eddie Borysewicz and Chris Carmichael, two of America's best coaches:

“ Correct climbing is a matter of increasing your gear, not decreasing it. ”

“ Climb like a carpet unrolling. Get faster as the climb goes on. ”

- **Slide back for more power.** On steep climbs when your gear isn't quite low enough, move to the rear of the saddle. Grip the bar tops. Slow your cadence just enough to feel your legs pulling the pedals around the entire 360 degrees.



- **Monitor your breathing.** If you begin to gasp, you're going too hard. Slow your cadence slightly.

Tip! Try a breathing tip from Alexi Grewal, an Olympic road race champion. When you're working hard on a climb (or anytime), exhale forcefully and inhale passively. This prevents panting and improves air exchange. Breathe in rhythm with your pedal strokes and you'll feel smoother and in control.

- **Go to the front.** If you're riding with a group and aren't the fastest climber, work your way to the front before an ascent. Then climb at the pace you can handle. If riders start passing, let them. You'll still be in contact (or close) at the top. If you avoid blowing up, you won't have a problem rejoining on the descent.
- **Keep a good attitude.** Sure, hills are hard work. But they're part of riding a bike, and nothing spikes your fitness faster than time spent climbing. Hills are good for you!

This article is provided courtesy of RoadBikeRider.com and was written by its co-founder Fred Matheny (left). Fred was the Training and Fitness Editor of *Bicycling Magazine* for a decade, has written many books on cycling including **Fred Matheny's Complete Book Of Road Bike Training**; and is a world-record-holding roadie.

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