

## LEAP LARGE HILLS IN A SINGLE BOUND

By Dario Fredrick

*[Velo News, Vol. 34/No. 9, May 23, 2005]*

Most cyclists watch footage of the world's greatest climbers battling it out in Europe's mightiest ranges with a mixture of awed enthusiasm and outright trepidation. Sure, the top climbers look like inhuman, elevation-inhaling Hoovers, but they have to be as the big races are generally decided in the mountains. The rest of us don't generally float up the steeps quite so easily, so we tend to view climbing as a necessary evil or, worse, a crushing obstacle to our all-around goals. But don't despair: It's possible to improve your climbing. By understanding the principles that govern climbing speed, you can optimize your climbing performance.

### BATTLE THE BULGE

When going uphill, gravity is the biggest force to overcome. Naturally, if you carry less weight, you'll be able to expend the same amount of energy and go even faster. Increasing your power to weight ratio is probably the first, and potentially largest, area to tap into in order to improve climbing performance. However, cutting body mass should not come at the expense of power output or health. If your goal is to lose weight, make sure you create only a small caloric deficit in your diet and pay specific attention to post-training nutrition.

### ASSUME THE POSITION

Many cyclists think of aerodynamics only in the context of flats or time trialing. But your position on the bike can affect drag, and hence speed, even when riding as slowly as 8-10 mph. Try climbing in a less upright position, but don't sacrifice power or efficiency.

Climbing out of the saddle is sometimes necessary, when accelerating or even just to stretch out the legs or lower back, for instance. However, it is the least aerodynamic position and requires more power to maintain the same speed. Also, the higher peak downward force you exert when you are out of the saddle often decreases pedaling efficiency. Try to minimize the time standing on the pedals when you climb.

Because most cyclists climb in a different position than they ride on flat terrain, it is important to train in that particular position. When climbing, the hip angles commonly change as the pelvis is usually rotated backward and sometimes situated further back on the saddle. Training in this climbing-specific position, with varying cadences and intensity levels, will help to target climbing muscles.

Finally, whether you are standing up or seated, relaxing your arms, shoulders, jaw and neck can also save energy and make climbing more fluid and effective.

### TAKE A SPIN

Climbing typically requires lower gears and a lower cadence than flat terrain. For a given power output, a lower cadence means higher pedaling force (torque). The higher the torque, the faster your muscles fatigue. So if you tend to grind on the climbs, increasing your cadence to a range of 70-90 rpm while maintaining power can help reduce the rate of fatigue and improve your reaction to changing speeds.

It takes time to adapt to a change in pedaling style, so increase your cadence gradually. Allow yourself the option of riding lower gears when possible, whether it's the little ring on the mountain bike or a lower cog set range on the road. Many top athletes train successfully on the road using a 39x27.

### PACE YOURSELF

Many cyclists think that climbing equals a "hard" effort. But hammering up every hill is not the best training approach. Instead, spend time climbing at varying intensity levels ranging from moderate endurance to race pace, including accelerations. This will help to develop a high aerobic endurance capacity, which will improve your ability to sustain top-end climbing efforts. It will also make your climbing workouts more enjoyable and effective.

Pacing is important, too. Riders often hit the base of a climb so hard that they are beat by the middle or end, and they crawl to the top. On training rides, shoot for a constant effort over the entire climb. Perhaps even start out easier and gradually build the pace as you go. With race-level intensity in training, a little goes a long way.

During a race, avoid surging with initial accelerations. After an initial charge, the group will often settle into an easier pace. If you can avoid powerful surges except for at critical times, such as when making splits, attacking or covering attacks, you will have more energy for the rest of the race. Conserving energy is especially important on climbs, where there are limited opportunities to recover.

#### HEAD GAME

“Climb-a-phobia” is a common condition among cyclists. Fear of climbing or getting dropped on climbs often dictates our approach to training on climbs or selecting races. Remember, the mind is a tool: You can use it to hold yourself back, or you can decide to be more of a climber. Rather than avoiding hilly terrain, embrace the experience and try to be positive on hills. Because power-to-weight ratios vary significantly — as do the size and weight of egos — it’s often easiest to stay upbeat about climbing by training in the hills alone.

Some of the most successful athletes also use visualization techniques to their advantage. Before and during your rides, visualize yourself climbing in a fluid, supple manner, with ease and agility. Remember that footage from the Alps, and then picture yourself there, matching Basso, Heras, and Mayo at every pedal stroke.

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