



*“Many people think there’s a secret to climbing. And there is: extremely high conditioning, low body fat and weight, and knowing how to pace yourself, especially on long climbs”* Greg Lemond, three-time Tour de France winner

It is true that a cyclist must have good conditioning to climb hills quickly and efficiently but there are also some tricks that certainly help too. First, you need to have your bike fit nailed down, so that you and your bike can work together. After you have that done, try some of these tips the next time you hit the steeps.

If you are still riding without either step in pedals or toe clips - get some! If all you have are platform pedals or rat-trap pedals you can’t take advantage of two thirds of each pedal revolution. If you do have step in pedals or toe clips - think circles. As you push down on the pedal imagine that you are scraping mud from the bottom of your shoe as the pedal reaches the bottom of the pedal stroke. Then pull up using your biceps femorus (hamstring muscles in the back of the thighs). Then as the pedal nears the top, imagine driving the knee forward into the handlebars. Pedaling circles instead of just pushing down (pedaling in squares) gives you the option of switching muscle groups as well. As the quadriceps group (muscle group in the front of the thighs) fatigues, switch emphasis to the hamstring groups. this switching back and forth allows the muscles enough recovery that it just might get you to the top of that dreaded hill that has left you walking in the past.

On short steep hills attack them in the highest gear of the range you are in (middle chainring usually) while maintaining your heartrate within your aerobic training zone. Let the momentum carry you up the first third of the hill, then progressively downshift through your rear cog-set, but leave a bailout gear just in case you have misjudged the hill. If you are going to have a miss-shift under load it will be on the front derailleur - so be sure that you are in the range that you know will get you to the top. If you do have to do a front shift let up a little of the pedal pressure momentarily and hope for the best. You will lose momentum quickly, so you may have to upshift one or two gears on the back quickly, after the front shift, and stand to get on top the gear. Once your speed has come back up close to where you were, sit down again and progressively shift down through the back cog-set.

What you want to do is keep the pedals spinning at 80 - 90 rpm. Some hills may require shifting to the granny ring (3 chainring crankset) but try to use the middle chainring as much as possible to help build strength and endurance. Try to avoid going straight down to the lowest gear that you have. On a longer group ride or tour this strategy can leave you literally hours behind, and it often doesn’t save that much energy. Although the gear feels easier it means you are on the grades much longer - so nothing is really gained.

Move around on your saddle to change the emphasis on the muscle groups. Mountain goats in the professional peloton often move back on their saddle to maximize leg extension. If you are on a long climb occasionally stand for brief periods to change muscle groups and stretch. Be sure to gear up one or two gears as you stand otherwise the bicycle will move back under you, and you can “drop kick” a rider behind you. This upshifting is a good practice anytime that you stand and is vital in group riding.

You should ensure that all your energy is going into pedaling the bike. Minimize upper body movement (bobbing or swaying) and maintain a light hold on the handlebars. The exception to this is when you stand to get on top of a gear, change muscle emphasis, or attack another rider. Then a gentle swaying of the bicycle is normal, but the body remains centered over the bike with as little bobbing as possible

Generally, do your climbing with your hands on or around the brake hoods or on the tops of the bars. Keep your chest open (arms apart) to maximize breathing capacity. If you stand to climb, usually you are best to grip the brake hoods - although the superb Italian climber Marco Pantani (Il Pirata - Italian for the Pirate, a name given to him by the Italian tifosi [fans]), often used to climb standing, with his hands on the handlebar drops. He preferred this climbing style so much that Bianchi built special climbing frames for him with extra high head tubes.

Climb as much as possible in the saddle. Although standing allows you to use body weight during the power stroke, it also means engaging the muscles in the lower leg. Generally, if the grade is less than 10% and the climb is longer than 1 kilometre stay in the saddle. If the climb is 10% or greater and the climb is less than a kilometre you may choose to stand – especially if you need to get on top of a gear.

As with any sport where defying gravity is involved - lighter is better. This was never more apparent than when the discredited American cyclist Lance Armstrong prepared his bikes for the great climbs of the Pyrenees and Alps. Once all of the latest technology was deployed, it then became a matter of stripping grams from the bike wherever possible. Frames were left unpainted, and the Shimano STI front brake/ shift lever was replaced by a decidedly low tech standard brake lever. Shifting of the front derailleur was left up to an ancient downtube shift lever. When you're going up - every gram counts!

Once you get on a climb find your own rhythm, don't try to match someone else's pace. This is not to say that you should go down to your 24 - 32 gear. Climb within your aerobic capacity as fast as possible.

When approaching a hairpin corner or switchback move out as far as is safely possible from the apex. The road will rise much steeper on the inside of the corner than the outside. Even though the outside path is longer it will be much easier because it allows you to maintain your rhythm.

If you are a competitive cyclist or aspire in that way, try to determine what kind of climber you are. Can you be explosive and blow away other riders with repeated accelerations that they can't match. Or are you a tempo climber where you can hold a pace that others may not be able to match for long. Some climbers can gradually lift the pace until other riders crack and are forced off the pace. Use your natural abilities to advantage in other words.

Depending on the tour itinerary try to avoid carrying any extra water or gear on the climb. For sure, don't get dehydrated, but if there is a rest stop or there is a support vehicle that is accompanying the tour, let them carry the load and recover it at the rest stop or on the descent or on the flats.

Finally, when you hit the top of small rollers (less than a kilometer) don't stop pedaling or let up. Gradually upshift and recover. If you stop pedaling or stop altogether any advantage that you gained from a good hill climbing strategy will be lost.

Good exercises for improving climbing ability are:

Squats, leg press, leg curls, sit-ups and/or leg raises to strengthen the hip flexors, all core exercises (abdominal crunches and back extensions or dead lifts), leg tension drills (high gear - low cadence) on the bike, including one legged pedaling.

Now get out there and fly like an angel!