

CLIMBING

Every climb contains one fundamental element: effort. But there are other ingredients that can make or break a successful ascent. Here are six essentials that Andy Applegate, climbing specialist and coach with Carmichael Training Systems, swears by. They'll help you reach the top faster, easier and with less pain.

PACE YOURSELF. If you go above threshold too soon, you'll blow up and slow down before you reach the top. Keep your breathing deep and comfortable and your heart rate below threshold at the start of the climb. As you fall into a rhythm, gradually increase your effort until you're climbing at threshold. The final 200 meters is the perfect place to take it to the max and attack. If you start smart, you'll have the energy to finish strong.

SIT—MOST OF THE TIME. Unless you're a 120-pound Spanish climbing specialist, your rear end should be planted on your saddle for most of the climb. You use about 5 percent more energy when you stand during a climb than when you sit. Shift your weight back slightly for maximum leverage on the pedals. Stand only when your body needs a break from the seated position or when you have to jump and accelerate to attack or chase. When you stand, keep your butt back so the nose of your saddle brushes the backs of your thighs and your weight is over the crank. Shifting your weight too far forward will cause you to overweight the front tire and lose traction in the back.

LOOSEN YOUR UPPER BODY. Your entire upper body should be relaxed so you don't waste energy. A good marker for a loose torso is slightly flared elbows. "Your elbows should be outside your knuckles," says Applegate. "This allows you to remain relaxed. If your elbows are in, your lats are stretched tight, which can restrict breathing."

USE THE RIGHT GEARING. Don't be afraid to use your easiest gear. "Riders want to use their big gears, but the goal is to gear down and keep the cadence in a comfortable range," says Applegate. Try to keep your cadence above 70 rpm.

INCREASE YOUR POWER-TO-WEIGHT RATIO. The number of watts you can crank out per kilogram (2.2 pounds) of body weight is the key to climbing success. The Alberto Contadors in the crowd are known to produce an amazing 6 to 7 watts per kg. "If you can hit 5, that's awesome," says Applegate. Through high-intensity training, you can raise your wattage by 5 to 7 percent over the course of a season. One surefire strategy: Climb for 10 to 30 minutes at or near lactate threshold heart rate (about an 8 on a 1 to 10 scale of perceived exertion) twice a week. If you want to improve your ratio, work at lowering the weight part of the equation. (For more tips on increasing power and losing weight, see Chapters 19 and 26).

BREATHE DEEPLY. "Riders often use just the top half of their lungs, taking shallow, jagged breaths as they climb," says Applegate. This limits how quickly and efficiently you can get fresh oxygen to your working muscles. "Practice breathing deep into your belly, filling your lungs entirely," he says. As a bonus, deep breaths help keep you calm under the stress of the climb.

Shifting Situations

A LONG, GRADUAL ROAD CLIMB

The Shift: This is usually the easiest shifting situation, after flat terrain. At the base of the climb, you should be in your comfort-zone gear—it varies from rider to rider, but for most of us it's in the 90-revolutions-per-minute range. When your cadence starts to slip, ease the pressure off the pedals slightly and shift into an easier gear. Remember, shifting in the front means a big resistance change; rear shifts are for fine-tuning your cadence. If you need to stand, shift up a cog or two in the rear; the slightly harder gear will allow a smooth transition. Shift between these sitting and standing gears as you make your way up the climb.