Improving Climbing

When seriously training, there is no way to avoid hills. In fact, climbing hills is a necessary part of all cyclists' development, whether you're a sprinter, time trialist, or climber. The *sustained* power provided by training on hills may only be reproduced by *sustained* efforts on a stationary trainer. Many choose to train on hills over stationary trainers.

The following tips on position, pacing, and gearing will make training on hills more manageable and enjoyable.

Positioning

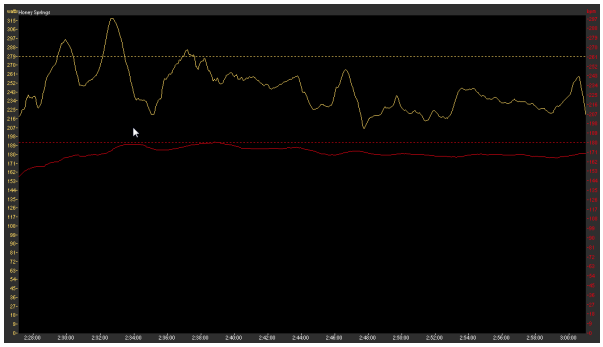
Follow these tips to position yourself properly on your bike for climbing:

- Slide back in the saddle to provide more power from your hamstrings
- Rest your hands lightly on the tops of your handlebars to release tension in your upper body
- Sit up as straight as possible to open your hips allowing for more powerful downward pedal strokes

Pacing

Pacing is an important facet of climbing. Many cyclists start too hard or too fast, and pay the price later by having to "gut it out" to the top of a climb. This may not be necessary.

The following graphs are from my personal data files on a 7-mile climb:

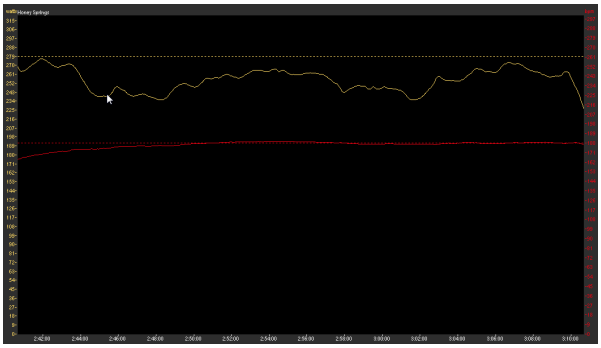


Bad pacing: yellow solid line shows power; yellow dashed line across the top shows 30-min threshold power. Red solid line shows heart rate; red dashed line shows anaerobic threshold heart rate. The total time of the climb was 33:52.

As you can see, I started out too close to my 30-min threshold power—pushing it hard early by crossing the threshold 2-times. I paid the price by a steady drop in power throughout, marked by a severe drop of power in the end.

My heart rate tells a similar tale, whereby it goes over my anaerobic threshold early and never recovers. In fact, it slowly decreases to almost 10 beats below anaerobic threshold, in tandem with my loss of power.

I can assure you, my perceived exertion felt like a full-on effort throughout, even though my power had dropped off, along with my ability to push my heart rate.



Good pacing: In this instance, I stay below, but close to my threshold, for both my power and my heart rate. I am able to build back up close to my threshold power toward the middle of the climb, as well as in the end. My heart rate remains constant at my threshold for the entire climb, thereby maximizing my effort. The total time of this climb was 30:01.

The differences in climb time marks more than a 12% improvement—plus you can see, there is even more room for improvement. These climbs were done within one week of each other, with similar preparation, similar fitness, and similar rest. The difference: pacing.

Follow these tips to ensure good pacing on a climb:

- Start off the climb conservatively in a gear that feels easy
- Pick a gear that ensures you are able to spin your pedals at greater than 70 rpm throughout the entire climb
- Maintain a steady speed, especially on flatter sections where you can slightly recover
- Stand occasionally, but do not pick up the pace, to alleviate saddle pressure and activate other climbing muscles in your legs

Gearing

Gearing on your bicycle is perhaps the most important aspect to improve climbing:

- Choose a compact crank (50/34T) and a 12/27 minimum rear cassette
- Another option is a triple chain ring on the front (52/39/30T)
- Use your gears early on a hill—never "save" an easier gear for later, because your legs may be worn out by the time you use that saved gear

Conclusion

Use these 3 tips to properly train on hills. Build up your hill training over a few months, in order to avoid injury to lower leg tendons, as well as knees.

If possible, a *weekly* training target should be a double, or even triple, the elevation gain of your big one-day race or event. Keep in mind, usually 30,000 feet total climbing for the week is the most many can handle with proper recovery the following week.

Train on hills with similar gradients as your target event, and be sure you have the proper gearing to climb it at minimum 70 rpm at the end of your race or event.