

MB Coaching Hills/Climbing Tips

Climbing is a power-to-weight activity. If hills intimidate you, or are your weak link, take it easy. Go 5-10% easier than you think you can as you get into the climb. Conserve energy, you can always pick it up later.

STAY SEATED AS MUCH AS POSSIBLE

Although you develop more power while standing (you are taking advantage of all your upper body weight pushing down on the pedals), you also use 10 to 12% more energy as your pelvis isn't in contact with the saddle which means more work for your core and back muscles as you pull up on the unweighted pedal. The net effect is more energy used (less efficient) to climb standing versus to climb seated.

On short climbs, the length of a football field or less, it makes little difference. But on longer climbs, stay in the saddle and spin at 80 - 85 RPM. This is particularly so if you are heavier as standing puts just that much more weight on your leg muscles, while sitting uses the seat to help take the extra upper body weight off your legs. Staying in the saddle will:

1. burn less energy - heart rate is approximately 8% lower for any set speed
2. use your bigger gluteal (butt) and hip muscles to your advantage

And if you are going to stand, let the bike rock side to side under you - an arc of maybe 6 inches side to side. And don't lean too far forward. Stay back so that your weight is directly over the crank and **keep the upper body still.**

BODY POSITION

Being bent over in the drops is the most efficient **position on level ground**, but hills are different as there is much less aerodynamic resistance. **You actually get the most power sitting up as high as you can.**

1. **HAND POSITION** Comfort overrides these comments, but for seated climbing, most riders prefer to keep their hands on top of the bars, perhaps 2 or 3 inches from the center stem. A wide grip on the top of the handlebar reduces breathing restriction. And remember to drop your elbows and relax your upper body.

For out of the saddle climbing or aggressive climbs (where you are accelerating or attacking on the saddle) put your thumbs on the hoods and rest one or two fingers on the levers or wrapped around underneath. And when you get to that descent, most riders will go to the drops (keeping your wrists straight) for the aerodynamic advantages although others prefer the hoods for the feeling of control. But not the top of the bars as your hands will be too far from the brakes.

2. **UPPER BODY STILL AND CHEST OPEN** - Keep your upper body quiet - the bike should rock under you (try pulling up on the handlebar opposite of the leg on a down stroke). Too much movement wastes energy. And your shoulders should be back and "open". If not, you are constricting your chest and cannot breathe efficiently.
3. **SIT BACK ON THE SADDLE** - When you slide back on your seat, you gain a leverage advantage on the pedals. The only time you would want to slide forward is for a short sprint on a small rise.

WHEN YOU MUST STAND - pedaling while standing

If you must stand, remember it's hard to pull up because you aren't in contact with the saddle -- there's nothing to brace your hips to pull against -- and you will have to power into BOTH the down and up strokes (12 to 5 o'clock on the down stroke and 7 to 10 o'clock on the upstroke). You should use your body weight to help you push down. Let the bike move fluidly under you, don't force it. The bike should rock rhythmically side to side in an arc of about 6 inches (judged by the movement of the handlebar stem).

This gives each leg a direct push against its pedal and makes the best use of your weight. This will help to maintain a smooth stroke and your momentum.

Don't lean too far forward. If the nose of your saddle is brushing the back of your thighs, you are just right. Farther forward and you will press the front tire into the bitumen and lose power. Stay back a bit and find the front-to-back sweet spot. This helps center your weight over the crank to drive the pedals as described. And remember to **shift up a gear or two just before you stand** to take advantage of the extra power you gain from standing (but which you can't maintain for any length of time).

Remember that if you are in a group, you need to consciously protect those behind you when you stand to climb. How you stand on a hill is very important - do it wrong and the person behind might suddenly be on the bitumen. The issue is the brief deceleration that can occur as you change from sitting to standing incorrectly, which, relative to other riders has the effect of sending your bike backwards and can cause the following rider's front wheel to hit your rear wheel.

On short, rolling hills, the trick is to click to the next higher gear (smaller cog), then stand and pedal over the top with a slightly slower cadence. This keeps quads from loading up with lactate because it helps you pedal with body weight. In fact, it can actually feel like you're stretching and refreshing your legs.

The correct way to stand:

1. **It is good etiquette to announce "Standing!"** a couple of pedal strokes before you do so.
2. Stand smoothly as one foot begins its downward power stroke - don't lunge, keep your effort constant.
3. As you come off the saddle, push your hands forward a bit. This helps to ensure that the bike won't lose ground.
4. When returning to the saddle, continue pedaling evenly and again push your hands forward to counteract any tendency to decelerate. This will gain several inches and put the seat right under you.

You can practice your technique during a training ride – ask the MB Coaching coach to ride behind and let you know when you are doing it correct. That's when the gap between their front wheel and your rear wheel doesn't narrow each time you stand or sit. So, practice makes perfect.

FIND YOUR SPEED AND RHYTHM

Climbing should always be done in your comfort zone. Ride the hill at your own pace - know your limits and listen to your body. If you become anaerobic, you won't recover, so let faster riders go. You don't want to over exert and go anaerobic. If you're nearing your red line on that hill, slow slightly, breathe deeply and continue at a speed within your ability.

Use the right gears and shift early to balance the work of your muscles and aerobic system.

KEEP THAT CADENCE UP

The correct cadence when climbing:

1. Strength training – 50rpm – 70rpm – anything below 50rpm puts strain on your knees and should be avoided.
2. Normal climbing – 75rpm – 85rpm

Gear down before the hill. The goal is to avoid producing large quantities of lactic acid and then pedaling through the pain. You want a sustainable rhythm. Try to keep your cadence above 70 -- any slower puts excess stress on your knees.

Try to find the cadence that would let you "climb all day". You are pushing too hard if you:

- can't keep a smooth pedal stroke
- are panting or breathing irregularly

Ride your own pace. The energy you save may help you catch someone who started too fast near the summit.

BREATHING

If you start to breathe irregularly, take a deep breath and hold it for a few pedal strokes. Try synchronizing your breathing with your pedal stroke - start by taking a breath every time one foot (your right one for example) reaches the bottom of a stroke. Then try 1 1/2, and finally every two strokes. You will actually deliver more oxygen to your system with a controlled rate than an irregular panting or gasping one.