ARNIE BAKER CYCLING

Climbing & Descending

Hills present a special challenge. When you ride on the level, you can ease up and rest, and still go forward. But hills are different. You have to keep putting out a pretty good level of energy just to avoid falling over!

There's something else to consider. Descending. For some, descending, especially with corners or crosswinds, is very scary. Fortunately descending skills and techniques can be learned. These can make going down hills safe and a blast.

CYCLE HANDOUT

Climbing

Train on the Hills

It's obvious, of course. But riding the hills makes you better on the hills. It's astonishing how many riders are disappointed at their slow progress on hills—and when I ask them whether they train on hills, they say: "No."

Steady hill riding, interval hill riding, big-gear hill riding, and hill sprints. Incorporate them into your program and you'll certainly climb better.

Climbing logs—made possible with an altimeter—help many riders record and plan their hill climbing work.

If you don't have easy access to hills for training, a stationary trainer with the front elevated about 6 inches will train climbing muscles.

Train Your Mind

If you look at each hill as an opportunity to improve your climbing, you will. If you see each hill as an obstacle to where you are going, it will be.

Sometimes keeping focused on the top of the hill helps draw you up to the top. At other times mentally dividing the hill into more manageable segments works better. Be flexible in your approach, and use both techniques to help you.

Get the Right Gears, Shift Early

Balance the work of your muscles and aerobic system.

New riders frequently use their muscles until they can't push any more. When their legs bog down, they shift to an easier gear—if they have one. But by then it may be too late. The muscles may be exhausted and unable to continue, even in a "bail-out" or super-easy gear.

It's a much better strategy to shift early to easier gears. Save your legs. If you find that you are going well, you can always shift to a harder gear later.

This is the strategy used by many top professional racers. On a hard, steady climb, the top pros shift to harder gears, not easier ones half way up the climb.

Many riders don't have "easy" enough gears to allow them to climb comfortably. There is no shame in having easy gears. The first few races I entered I had a 26-cog on my rear wheel. My competition had 21s. They did make comments about my "easy gears." But when I won every one of my first few races, they didn't laugh at me anymore—they asked where they could buy a similar set-up.

Think of it another way. If a top pro rider can climb twice as fast as you can, and uses a 21-cog, maybe you should have a 42-cog!

There is no shame and there is a lot of sense in having a triple chainring set-up. With a triple you have more gear options. Some professional riders use triples in the hills. Many bikes are sold with triples. Or you can convert your double-ringed bike.

Be Conservative, Go Easy

If hills intimidate you, or are your weak link, take it easy. Go 5-10% easier than you think you need to. Conserve. You can always pick it up later.

If you are a great hill climber, the opposite strategy may hold. You obtain an overall better time by working a little harder on the hills.

Continued

Get the Proper Body Position

Sure, bent over in the drops is the efficient way to fly along on level ground. But hills are different. There is much less aerodynamic resistance.

You get the most power sitting up as high as you can. Open up the hips.

Place your hands on the tops of the handlebars—that is where they generally belong.

Most riders do better by pushing back on the saddle and pushing forward with the legs, rather than down.

The sitting-up high, hands on the tops position is generally the most comfortable and economical climbing position.

Some other positions can be used effectively as training exercises. The six most common climbing positions are discussed more fully in a separate handout.

Sit or Stand?

Everyone has his or her individual preference.

Most of us do better sitting on long climbs.

Everyone needs a change in position from time to time, and standing helps work different muscle groups and gives a partial rest to some leg and back muscles.

Standing can also allow you to maintain or give a little more power, without shifting, on short, steeper pitches.

A minority of riders, especially light riders, climbs better standing.

Establish a Breathing Rhythm

Get a rhythm. Concentrate on each stroke. Coordinate your breathing with your legs. At moderate intensity, perhaps take a breath every two revolutions of your legs. At harder intensities perhaps take a breath every one and one-half revolutions of your legs. You'll go faster!

Relax

Don't get tied up in knots on the climb. Relax you arms, relax your shoulders. Relax your back. Use your legs.

Working Really Hard?

At hard intensity fit riders can push down on their pedals with forces greater than body weight, and lift themselves off of their saddles.

At high intensity levels, stabilize your body by pulling up on the handlebar. Pull with the same-side arm as the pushing leg.

Equipment

An extra pound on your body or bike frame is worth about 20 seconds for every hour of climbing. Rotating wheel weight is about double.

20 pounds overweight? That hour-long mountain climb will take you about 7 minutes longer.

Don't sacrifice equipment weight for reliability.

Descending

Be Safe and Be In Control

Don't scare yourself. Start with gentle descents and gentle corners. Learn proper techniques. Always feel comfortable and in control—let faster descenders go by you. With practice, you'll improve.

As you ride faster, rider further from the pavement's edge. Scan for pavement hazards in front of you at the same time as you look farther down the road.

Keep your hands in the drops, with a firm, yet relaxed grip. Don't concentrate on the road beneath you or stare at the corner you are approaching. Rather, look where you are going, look around the corner to where you will be.

If you need to brake suddenly, shift your weight rearward. Apply more front brake than rear.

Initially your hands and wrists may tire on long, winding descents. You may need to stop and rest after a mile or two. If you do not adapt with time, hand and wrist strengthening exercises may help.

When on a straight descent, gripping the top tube between your legs can help stabilize the bicycle and allow more relaxation of your upper body. When cornering, allowing your inside thigh to stabilize your bike's top tube against your body can be helpful.

Anticipate

While scanning for road hazards, trust the big picture. Look ahead. Look beyond the corner. Look where you will be going.

Anticipate at what speed you want to ride the corner. If you are concerned about maximizing your speed through corners, remember that exit speed is more important than entrance speed. If you will need to reduce speed, break before corners, not in corners. However, if you have misjudged the corner, breaking late is better than going off the road.

Balance Rules

Apply standard balance principles. Keep your eyes level with the horizon by pointing your chin where you are going.

Continued

Shift a little rearward on the bicycle.

Relax.

Technique

If traffic safety and rules of the road allow, ride from the outside of the lane or road to the inside apex of the corner, then to the outside of the lane or road on exiting the corner. This effectively straightens out the corner.

By raising or lowering your chest you can modulate your speed. A dropped chest results in greater speed, and a lower center of gravity.

Put your outside leg down. Straighten out your outside leg. Put weight on your outside leg.

Important advanced techniques for corners: Put weight on your inside hand. As the bike balances between your outside leg and inside hand, lean the bike more than your body, slightly unweight your rear end, and move slightly back on the saddle. More weight on the inside hand and greater bicycle lean allows you to turn more sharply; less weight on the inside hand and less bicycle lean allows you to increase the radius of your turn—even while in the corner itself.

As your skill allows, you'll often find that the fastest descents are achieved by sprinting out of corners and tucking into an aerodynamic crouch, not by steadily pedaling in a big gear.

Crosswinds

Slow down and get down. The less your body is acting like a sail, the less you'll be blown around. Lower your center of gravity. Ride with the hands in the drops and a low chest. Since this position improves aerodynamics, use your brakes to slow down, if necessary.

As traffic safety and rules of the road allow, allow some margin for the wind to blow you to the edge of the road.

Relaxed riding, with relaxed yet firm arms and grip, and mildly allowing the bike to "go with the flow" is usually safer than tensing up and trying to (over)correct for every gust of wind.

Extend your leg on the lee side. Weighting the lee leg, leaning the bicycle into the wind, with weight on the windward hand, allows relatively safe compensation for wind gusts.

Look ahead. Anticipate gusts when direction or protection from hills or other geographical features changes.

With crosswinds from the left, anticipate that passing or oncoming vehicles, especially trucks, will result in gusts.

Equipment

Wheels can make big differences in descending comfort and safety.

Deep-dish rims catch crosswinds and can make safe descending slower, occasionally impossible.

Lightly-spoked wheels may be less laterally stable during cornering.

Dual-tread and other tire compounds can improve cornering force and slip-out angle. Although narrow tires are often chosen because they are lighter and have better aerodynamic profiles, keep in mind that wider tires reduce rolling resistance and improve cornering.

Summary

With training and practice, you will climb and descend more comfortably, with greater skill and safety. FB