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# DIRT FOR ROADIES (AND EVERYONE ELSE)

**W**hen **Bob Roll** was a pro road racer, he covered thousands of miles in the Tour de France and European classics like Paris Roubaix, racing elbow-to-elbow in 150-man pelotons at 35 mph on roads so rough you'd cringe just driving a car over them. His worst injury? Irritating road rash.

In the early '90s, Roll traded his road bike for a mountain bike. In his first race, he almost died. The event was the now-defunct Cactus Cup; Roll crashed on a tricky piece of desert singletrack, in the process gouging a hole in his arm, which released a geyser of blood from an artery. A doctor in the medical tent patched him up, but it was a less than auspicious start to mountain biking for one of America's most experienced road racers.

Roll survived many more years of off-road racing without grievous injury. Now retired from competition, he serves as on-air commentator to the Outdoor Life Network, lending his unique perspective and outrageous sense of humor to the network's cycling coverage. On the following pages, he lends us his four cardinal rules for a successful (read: hospital-free) transition from pavement to the wild, woolly world of mountain biking. Even if you don't have a road riding background, these tips will help you get hooked on the knobby hobby.

## Rule 1: Find Your Inner Child

Kids taught me plenty. It's their capacity for learning, their lack of self-consciousness, their delight in wild abandon that makes them so relaxed and natural on their bikes. So I changed my attitude and became a kid again, reveling in the process of learning. This attitude adjustment is the first step to loving dirt.

## **Rule 2: Pay Attention to Traction**

On the road, traction isn't a big issue. You either have it or you don't. But on dirt, not only can your tires skid, the ground itself may move under your wheels. Maintaining traction (and staying confident when you lose it) is the most difficult adjustment in making the transition from road to singletrack.

First, relax. Terror leads to a death grip on the handlebar. Picture a firm, friendly handshake—you don't want to be a dead fish, but you're not out to crush the other person's hand, either. Even more important is the cushioning effect of your limbs. Modern bikes provide 3 to 6 inches of suspension—but arms and legs are good for several feet of cushion. A roadie can afford to be as stiff as a Supreme Court justice, but a mountain biker has to loosen up. Think Bob Marley, not John Philip Sousa.

To improve climbing traction on steep, loose surfaces, scoot forward on your saddle to keep enough weight on the front wheel so it doesn't wander off your chosen line. If you put too much weight forward, the rear wheel will spin, so bend at the waist to distribute your weight evenly. Push your heels down with each pedal stroke and concentrate on a smooth spin because jerky pedaling can cause the rear wheel to break loose. Wrap your thumbs under the bar and pull back in time with your downstroke to weight the rear tire.

For better descending traction, keep the pedals horizontal. Rise slightly off the saddle and move your weight to the rear so that you don't go over the bar if you get knocked offline or bash your front wheel into a rock. On steep descents, move behind the saddle. If you're going in a straight line, use both front and rear brakes. But as soon as you change direction, ease off the front stopper or the wheel may wash out unexpectedly.

## **Rule 3: Learn to Balance**

On a road bike, your point of balance is dependent on two positions: sitting or standing. But on technical terrain, you're all over a mountain bike, scrunching forward on steep climbs, standing briefly

to absorb shocks from rough trails, letting your butt hang off the back of the saddle on rubbly downhill chutes.

To improve balance, relax your arms and legs. (There's that word again. Got it?) If you're stiff-armed on a road climb, your steering won't be affected much—but if you try it on a singletrack ascent, your front wheel will weave all over. On descents, center your torso between the handlebar and seat, with your belly button as your center of gravity. Let the bike move under you while your arms and legs absorb and deflect hits from the trail.

#### **Rule 4: Keep Your Eye on the Good Line**

Off-road, “poor vision” doesn't mean you need glasses. Instead, it refers to the common habit of fixing your sight on what you fear (that big rock in the middle of the trail, for instance). Before you know it, your motor skills follow your line of sight and you smash into the very hazard you wanted to avoid.

Register the location of obstacles and dangers peripherally. Continually scan the trail both directly ahead of your front tire and 15 to 30 feet farther along. Good vision allows you to read the trail and anticipate problems, thus avoiding near-death experiences.



## 2

# **DE-TECHING THE TECH**

**T**echnologically speaking, mountain biking used to be a pretty simple affair. Early mountain bikes were cobbled together out of parts hijacked from road, touring, and beach cruiser models. Throughout the '80s, manufacturers slowly turned up the tech quotient, but for the most part, the goal was to create simple, durable machines that wouldn't leave their masters stranded deep in the backcountry.

Then came the '90s, and with them, the advent of suspension (actually, the first mass-produced suspension fork, Rock Shox's RS-1, was introduced in '89, but that's close enough). Hard-charging downhill riders embraced suspension, along with the greater control, speed, and comfort it provided. Pundits scoffed, claiming that the increased complexity, weight, and cost were hardly worth the benefits. Wondering who won that argument? Walk into any bike shop in North America (heck, in the world), and you'll have your answer. Today, almost every true mountain bike on the market is equipped with front suspension, and increasingly, bikes equipped with front and rear suspension are taking over. And motorcycle-like disc brakes, many operated via hydraulic fluid, are quickly gaining popularity for their increased stopping power, particularly in inclement weather.

The progress has been remarkable. While it's true that early suspension designs were plagued by reliability problems and excessive weight, modern shocks (both front and rear) are models of reliability and customization, allowing riders to "tune" their suspension to suit their size, riding style, and terrain of choice. Still, the generic term "mountain bike" is just that: generic. To fully appreciate and understand the state of mountain bike technology, it's critical to examine all its genres.

## **Cross-Country Hardtail**

Think of this as the classic mountain bike. Of course, "classic" also rings of "outdated," and for most riders, that's exactly what the cross-country hardtail is. "Hardtail" refers to the fact that these bikes lack rear suspension, though they're almost ubiquitously equipped with front-suspension forks offering between 3 and 4 inches of travel.

*Sweet:* Light (20–25 pounds); relatively inexpensive; faster than full-suspension bikes over smooth terrain

*Beat:* Slower, less comfortable, and less control over rough terrain compared to full-suspension designs

*Buy one if:* You're a shave-your-legs serious cross-country racer or don't actually ride off-road all that much

## Cross-Country Full-Suspension

Recent advances in shock technology have made these bikes—which feature 3 to 4 inches of travel front and rear—pedal with near hardtail efficiency on climbs and smooth terrain, while still taking the bite out of bumpy trails. A cross-country full-suspension bike will be faster than a hardtail over all but the tamest of trails, while offering greater control and comfort and decreasing fatigue on long rides. Spend enough coin, and you can get a cross-country full-suspension bike that weighs less than 25 pounds.

*Sweet:* Relatively light; greater control and comfort than a hardtail

*Beat:* Pricier and slightly heavier than a hardtail; doesn't offer enough suspension travel for fast riding over rough terrain

*Buy one if:* You cherish speed above all else

## All-Mountain Full-Suspension

This category, which is brimming with 26- to 32-pound bikes boasting 4 to 6 inches of front and rear travel and equipped with disc brakes, represents the middle ground of modern mountain biking. In other words, if you're looking for a bike to simply ride up hills and down, short rides and long, this is your bike. It's a jack-of-all-trades sort of steed, for jack-of-all-trades sorts of riders. Not surprisingly, then, all-mountain full-suspension bikes now comprise the bulk of the market, making it a fairly straightforward procedure to find a model that fits your personality and budget.

*Sweet:* Does pretty much everything well; still fairly light and efficient while climbing and over smooth terrain

*Beat:* Jack-of-all-trades, sure, but master of none; inexpensive models can be heavy

*Buy one if:* You get sweaty palms just looking at a topo map

## All-Mountain and Jumping Hardtail

Featuring thick-tubed frames built to take ungodly levels of abuse, these bikes are designed for riders who demand the durability and

precision that only a hardtail can deliver. These are true specialty bikes, suitable for the rare breed of rider who thinks nothing of catching a dozen feet of air and has a body young and supple enough to take the punishment upon landing.

*Sweet:* Pretty much unbreakable; relatively cheap

*Beat:* Overbuilt hardtail frames are a kick in the ass—literally—over rough terrain

*Buy one if:* You've already had a few mountain bikes—and broken them all

## Freeride

To discuss freeride bikes, it's critical to first decide what freeriding is. Some people consider freeriding to be any riding that occurs in an unstructured environment; others associate it with ambulance-baiting stunts and descents down steep mountain faces. Indeed, it's the latter definition that's captured the attention of the mainstream media, and it's that definition manufacturers use when designing and building these portly steeds, which feature as much as 9 inches of suspension travel, disc brakes with massive 8-inch rotors, and knobby tires so wide they wouldn't look out of place on a motorized dirt bike.

*Sweet:* In the right situation (namely, pointed downhill over nasty jumps and drops), freeride bikes come alive and allow their pilot to do things he'd never even dreamed of

*Beat:* In any other situation, they're heavy (35–40 pounds) and downright slow

*Buy one if:* You live near a ski resort that offers lift-served mountain biking

## Downhill

Frankly, downhill bikes aren't a lot different from their freeride cousins. That's because downhill racing is essentially the same thing as freeriding, only with a stopwatch put to it.

*Sweet:* Purposely built to take the abuse of throwing oneself down a mountain at warp speed

*Beat:* Not good for much else, except maybe an expensive boat anchor

*Buy one if:* Throwing yourself down mountains at warp speed sounds like a fine way to spend your Sundays



# 3

## THE HOUR OF POWER

**A**lbert Einstein declared that time is a continuum and that hours and days and weeks are mortal constructs that have little validity. What did that joker know? He discovered relativity, so he had tenure. That's practically a license to ride whenever you want.

This is for those of you who aren't Einstein, who live regular, stressed-out lives where going for a ride is often the first thing that gets crossed off your to-do list.

Suppose you have just 60 minutes to be a mountain biker. These "hours of power" require tricks you can use in that limited time frame to keep your off-road monkey happy.

First, the principles of a power hour.

**It may not be epic.** This is about squeezing a lot out of a little. That goes against the whole idea of the major off-road adventure. Save that for the weekend and use these midweek hours to keep up your interest.

**It may not be biking.** Don't feel bad if you just can't do it. The world sucks sometimes. Just because you can't find even an hour is no reason to feel guilty. Sometimes, it's impossible to ride. That's okay. Your bike will still be there when you're ready to ride. And the time off will only make you hungrier for dirt. "If I miss a few days of riding and find myself feeling irritable and depressed over it, I use that

experience to motivate me to get out the door,” says Dirk Anderson, an avid rider with a demanding job as an attorney that often has him working 60-hour weeks. “And you know what? That first ride back is always one of the sweetest of the season.”

**It has to be fun.** Never treat biking—for an hour or for any length of time—as just another chore. Down that road lies burnout.

## An Evangelical Message

What’s that, you say, my friend? “I don’t even have an hour. During the week, I work like a dog, and on weekends I have to walk him.” Life is difficult, brother. This is a busy world. Part of it is how you look at mountain biking. Despite what was said earlier about not feeling guilty, there is a commitment involved in being a mountain biker. The people who don’t burn out, who find the time, are the ones who see the sport as something more than a necessary activity required to stay fit. They view off-roading as a spiritual pursuit; they see the bike as a tool that gets them closer to nature, helps them appreciate solitude, and challenges their physical and mental limits. If you cannot accept the bike in your life, if the two-wheeled chariot is more and more removed from your soul, if the thing you once loved seems to have vanished into a world of obligation, then it’s time to rethink your priorities. Love is not a luxury. It is a right.

There’s no doubt about it: Mountain biking is hard to do in an hour. You have to change clothes, get to the dirt, ride it, and get back. So the weekday solutions suggested here don’t necessarily involve a lot of dirt or a lot of high-speed action. They’re just simple ways to get in some pedaling.

Sometimes you just can’t do a ride in an hour. So included here are some ideas to help you stay physically ready and psyched to ride. Be warned: Some of them may sound silly.

## Work-ing It In

When it comes to riding at work, you have two options: your daily commute and your lunch hour. Now, bike commuting isn’t for every-

body. It's better to look at it as just one of the options you have for adding some fitness to your workday. Here are some hints.

**Get a slow bike.** The Dutch ride around on clunky three-speeds for a reason: The low cadence keeps them from working up a sweat. If you don't have showers at work, this is a great thing. Bonus: You can buy a cheap three-speed for next to nothing at a garage sale. Of course, don't try to outrun city buses on one of these rigs. You WILL lose.

**Wipe down.** If there are no showers available where you work, you can use a washcloth doused with rubbing alcohol. The alcohol cools you enough to stop perspiration and kills odor-causing germs.

**One-way it.** Commute home only. Drive your bike in on a Wednesday and then ride it home. On Thursday, either ride back to work, thumb a ride, or crawl.

**Go to the gym.** Besides using the gym for nonbike workouts—locally owned ones that cater to bodybuilders are usually the friendliest, and they often have a couple of underutilized stairclimbers—you might be able to convince the manager to let you pay a few bucks just to shower. Some of these gyms have a day rate.

**Do something else.** If you have 1 hour and a place to shower, it might be better to go running or inline skating. The storage problem for your bike is solved. Hopefully, none of your biking buddies will see you. If they do, pretend you lost a bet.

**Telecommute 1 day a week.** If your company has a work-at-home option, see if you can get in on it. And then abuse it by taking a long, off-road lunch.

## Just Do One Thing

Many mountain bikers have the idea that every ride has to be awesome, epic, perfect. Don't fall victim to this way of thinking. If all you have is an hour, try to pick just one of those attributes. Here are some ideas for subject-specific jaunts.

**Make it a skill session.** Concentrate only on learning something you want to do. It may not be possible to get tons of dirt in 60 minutes, but you might be able to ride circles around a parking lot and

learn to pop wheelies. Find a ramp and learn to jump. If that sounds dumb to you, think back to when you were a kid. You probably did the same thing for hours.

**Make it a fun session.** Take a sightseeing trip. Cruise around the park, watching skaters fall down. Don't even worry about riding for the full hour. Just take half that time to go someplace nice for a quick lunch, like to the hot dog stand over by the guy with the tie cart.

**Make it a road ride.** If sweat and storage aren't issues, you can get a fantastic workout in an hour by doing intervals. This means riding as hard as you can for a short burst (usually a minute or two), then easing back for the same amount of time. Repeat 5 to 10 times. It hurts, but it really is a great way to get fitter and faster. Including the warmup and cooldown, you can do it in 30 to 40 minutes. There'll be time remaining to erase it all with an Extra-Value Meal. Just don't do it every day (the intervals, or the Extra-Value Meal).

## Those Times When You Can't Ride

You can't bike all the time.

Sometimes you just have to say, "I'm not gonna ride. I'm gonna . . . hmmm. . . do something else that has to do with my bike!" That should endear you to your loved ones. Here are some hour-long projects to get you started on the road to divorce court.

**Tackle a 1-hour tune-up.** There's a lot you can do in 60 minutes to make your bike run better. Start by cleaning it. You can even pull the chain and give the drivetrain a real scrub. Then, adjust your gears. Time left? True your wheels. Still have time left? Get a job at the local bike shop. They need quick guys like you.

**Try a tune-up alternative.** Put your bike in the car. Drive to the bike shop. Drop it off. Go get a massage. Come home. That counts as an hour, and if you repeat the whole thing when you pick the bike up, that's two "bike sessions" in 1 week!

**Do a brake job.** This is an hour-long project that really will make the time that you do ride better. Start by replacing your brake pads. It's easy to do; most pads come with instructions. That should take you

30 minutes or so. Spend the rest of the time getting the old baked-on pad residue off your rims. Use a piece of fine steel wool. You'll be amazed at the difference. Don't use steel wool if you have ceramic-coated rims, however.

**Install new tires.** Fresh rubber is another great way to improve your bike's performance. It'll make you feel all grippy and warm the next time you get on the dirt.

**Tune your fork.** If your suspension fork is more than a year old, chances are it could use fresh oil or an elastomer change. Just look for overhaul instructions in the fork manual that came with your bike. If you've lost it, check at your local bike shop for a replacement copy.

**Watch videos.** This isn't really working on your bike—it's working on your biking. You can buy an amazing array of cycling videos that range from classic road events to tips on mountain biking skills.

**Go for a hike.** It's not all about bikes, you know. Hang your steed, strap on your boots, and hit the trails. Hiking anywhere is cool, but it's extra cool to hike the trails you ride. It will give you an entirely new perspective and might even help you figure out how to ride a section that's been giving you fits.



## 4

# A MATTER OF BALANCE

**I**t's a simple relationship: If you lose your balance, you fall. But balance is more than just the thing that keeps you upright and intact. Balance is, as corporate-synergy specialists say, proactive. It has lots of benefits. You'll become a better mountain biker if you focus on the cool stuff that balance can do for you rather than learning just enough to avoid its detriments. This is the place to start if you want to improve your off-road riding.

The great riders possess a sense of balance so sharp that they almost meld with their bikes like centaurs. Instead of merely riding atop a machine, a balanced rider relates to his bike like it's another limb. He knows how to move his body to get through turns quicker, to keep the wheels on the ground for more stability (or lift them when necessary), to shoot across lines until he finds the best one, to pause momentarily during slow-speed sections so he can plan his attack.

In time, you'll learn most of this stuff, but it'll be easier if you already have an understanding of how your weight placement affects your bike's handling.

Here are four things you can start playing with right now.

**Learn to do a trackstand.** This is the act of balancing your bike at a standstill. It's simpler than it seems; in three or four practice sessions you should be able to pull off a 20- to 30-second trackstand. (The name, by the way, comes from a technique used on velodromes by track racers.) The secret is to really practice it. Most riders fool



Practice trackstands to develop great balance.

around with it only during downtime—before or after a ride. But if you dedicate 30 minutes at a time to this skill, you’ll become a master.

Here how’s to do it: Ride to a slight incline. Position your crankarms horizontally, then turn your front wheel slightly as you come to a stop. Apply just enough pedal pressure to keep yourself from rolling backward, but not so much that you roll forward. (If you do, straighten the front wheel slightly and let yourself roll back.) You can use the front brake if you want—people learn it both with and without the brake. It’s not that tough. Once you have it, practice without the incline.

**Ride with your eyes closed.** But not on a trail. Go to a wide, long, unpopulated grassy field. Begin pedaling across it, then close your eyes for three pedal strokes. Work up to 10 or more if you can. The sensation is disconcerting, and riding blind is probably not a skill you’ll ever use. But without your vision, you pay more attention to how the bike moves over terrain, and each sideways sway or forward dip becomes magnified. You get closer to being able to feel what the bike feels. You don’t need to spend much time practicing this unless you enjoy the experience.

**Ride on narrow spaces.** Try a two-by-four laid flat, or a curb. Thin things are everywhere—ride them whenever you get the chance. Because you need to keep the bike rolling on such a narrow plane, you’re forced to do all of your balancing with your body. You’ll learn lots of little tricks of movement—the subtle counterbalances and opposing weights—that are impossible to explain but develop naturally. If you do these things wrong, your bike will fall off the curb, giving you instant feedback.

**Dance with your bike.** Move your body around to see how much you can make the bike match or oppose your movements. When you swing your body way far to the right, what does the bike do? How can you make it swing right with you? How can you make it tip to the left while you go right? Can you lift the rear wheel even if most of your weight is centered over it?

You can do this kind of monkeying around while you’re waiting for your friends to show at the trailhead. The idea is to get your body and

bike into awkward relationships and then figure out how to bring them under control again.

Finally, here's a benefit most riders don't realize: Besides greatly improving your slow-speed riding, this practice will pay off someday when you get all twisted up at high speed and realize that the situation actually feels familiar.



## 5

# LOOSEN UP

One thing you hear a lot is that mountain bikers should “ride like water.” The idea is a good one—flow naturally along the path of least resistance. Of course, water doesn't flow well uphill, so the image breaks down if you think about it too much. Even so, it's a good analogy, because it can help you visualize a mistake so many beginners make—riding like frozen water.

Tense mountain bikers ride like ice cubes. They bounce down a trail instead of flowing over it. Every shock from the ground is transmitted from the bike through their stiff limbs. Their steering is unpredictable. They fatigue quickly. They lack stability and control. They are uncomfortable.

If you can learn to keep your upper body calm and steady while the bike bobs and swerves beneath you, you'll start to flow, and your stiffness will melt away. This is a huge leap in your mountain biking ability, but it's a pretty easy thing to accomplish.

The key is riding in the “ready” position, also called the attack position, a stance that conserves much of your energy while letting the bike move under you. It keeps you poised to make any moves or shifts in balance that are necessary to handle the terrain. It's the neutral position you should return to after any juking, climbing, descending, or whatever—like returning to the baseline in tennis. Here's how.



Staying off the saddle is a key component of the “ready” position.

**Flex your elbows and knees.** Keep them flexed. That’s how you absorb shock.

**Keep your crankarms horizontal.** A pedal that is down can catch on objects protruding from the trail. But horizontal feet give you an even platform to stand on, which helps you float around the bike.

**Keep your butt above the saddle.** A good mountain biker rarely sits during intense parts of a trail. He floats his butt over the seat, grazing it as a guide to know where the bike is more than using it as support. Conversely, if most of your weight is on the seat, every kick of the rear wheel kicks you. If you’re floating, you can avoid the butt-bashing and also flick your body around to maintain balance.

**Balance your contact points.** You’re searching for an exquisite balance—not so much off the saddle that most of your weight is on your feet (which tires your legs and makes your ride jerky), but not so loose in the elbows that you feel disconnected from the handlebar and planted on the saddle. Whenever you feel stuck on one part of the bike, redistribute your weight.

**Monitor your hands, shoulders, and jaw.** If any of these are

clenched, you're probably riding stiffly instead of ready. Although it sounds counterintuitive, keeping a relatively loose grip on the handlebar will actually help you maintain control by letting the front end of the bike move slightly to follow the path of least resistance. Of course, don't go *too* loose: If one of your hands slips off the grip on a fast downhill, you're pretty much guaranteed some up-close-and-personal time with Ma Earth. Wearing gloves is one key to this technique, because sweaty palms are slippery palms.



## 6

# PERFECT YOUR PEDALING

**T**here are lots of big, obvious ways to become a better rider: Learn how to unweight the front wheel, learn how to lift the rear, or figure out that shifting thing. There are also a few small but important techniques. They aren't flashy, and chances are, none of your friends (except maybe the most skilled) will recognize that you have them. But these things will make a huge difference in how you ride.

One of the coolest techniques is learning to spin the pedals.

Mountain bikers tend to be mashers. They chop the pedals, pushing down with hard, heavy leg motions. This style looks impressive, but it robs power, because energy is being transmitted through less than half of the pedal stroke.

The idea is to deliver energy throughout as much of the pedal stroke as possible. You want to try—as impossible as it actually is—to pedal in smooth circles, with a seamless output of power. This raises your speed, increases traction (because the tire isn't jerking every time you stomp the pedals), uses less energy (which means you can ride longer), and even improves your balance and handling, because you're steadier on the bike. Not a bad list for a tiny skill. Here's how to make it happen.

**Go around, not up and down.** The next time you ride, pedal in a

circle, focusing on one leg. Try it for 10 minutes while using a gear that gives you moderate pedaling resistance. Push down; before the pedal reaches the bottom of the stroke, pull back as if you're trying to scrape mud off the bottom of your shoe. Pull up. Just before the pedal reaches the top, start pushing it forward.

It's not really an even application of power all the way around—laboratory tests have shown that's impossible—but you powered the pedal much more than usual. The motion will feel strange at first, especially when you pull up. And your leg will tire quickly. When it does, switch to the other. When that one is shot, forget about circles and enjoy the rest of the ride. Do this two or three times a week, and in a month, you'll be a smoothie. (If you use toeclips and straps, you might have to tighten them to enable pulling back on the pedal.)

**Spin faster, not harder.** When you want to get a quick burst of speed—powering up a little hill, closing a gap, sprinting for the tape—tell yourself to pedal faster rather than harder. This will help you spin the pedals quicker rather than mashing them. It increases your speed while keeping you smooth. Of course, there are times when you do want a heavy, hard power stroke—like when you want to loft the front wheel, for instance.

**Relax about cadence.** Some people like to make a big deal out of finding the optimum cadence (the number of revolutions one foot makes in a minute, also called pedal rpm). At least 90 rpm on the flats, no lower than 75 on hills, blah, blah, blah.

That's fine for roadies, but on a vertical trail, you may never see the top side of 50 rpm. Most mountain bikers seem to have a natural flat-ground cadence of around 80 rpm, and perhaps you would ride better at a slightly higher rate. But it's more important to be smooth no matter what your cadence is. Any smooth rpm is better than the same number of jerky rpm. Too, a slightly lower (but still smooth and efficient) cadence will keep you from bouncing around excessively over bumpy terrain.

**Adjust for fatigue.** When your lungs are tired, slow your cadence. When your legs are tired, shift to a lower gear so you can speed it up. It works.