EXPERIENCEPLUS!
BICYCLE TOURS SINCE 1972

Bicycle Handling and Safety Quick Guide

This "Quick Guide" can be used as a reference for safe bicycle use and handling. Remember, repetition helps build confidence and proficiency. So, practice and develop good habits before your next bike tour. In this Guide, you will find:

The Right Bike for You

What Type of Bike Should You Choose for your Tour?

We recommend selecting the same type of bike that you normally ride and on which you are most comfortable. Our hybrids feature a lower range of gears, similar to a mountain bike, which makes "spinning" on the climbs easier when compared to our road bikes. Our fleet includes 1x11 and compact double gearing systems. Refer to our bikes page for all details on available bikes, gearing and components. Another difference between the two bike types is that the road bike offers you more riding positions since you have a dropped bar that allows you to get down out of the wind. This is useful when you face a headwind or are cycling downhill.

Both bike types allow you to sit upright at about the same level since the handlebar stems on both are adjustable.

Getting a Good Bike Fit

We know how important bike fit is when you are spending day after day on it! We'll select a properly sized bicycle for you based on the measurements you provide. If you have had problems getting a good bike fit in the past, we are happy to talk with you and may have you provide us additional measurements.

You are welcome to bring your own pedals or saddle on tour if you would like. During the bike fitting, your tour leaders will adjust the handlebars and seat so you are comfortable.

Getting a good fit on your bike means:

1) The saddle is properly raised so you get enough leg extension for maximum efficiency. When your seat is too low you don't get good extension which can put undue stress on your knees. This is often a problem, especially with inexperienced riders or for those cyclists coming back to the bike after many years.
2) The saddle is correctly positioned front to back with the correct tilt. If you find your hands getting numb, for example, tilting the seat slightly can change that. Alternatively, sliding the seat forward a little will allow you to sit more upright, taking pressure off your hands, wrists and shoulders.
3) Selecting the correct saddle for your anatomy. Seat comfort varies with everyone's individual anatomy. If you have had problems with uncomfortable seats in the past and finally found one you like, bring it along! We'll mount it on your bike. Otherwise, we have a variety of saddles for you to choose from and we carry spares in the van in case you need to switch out.

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Efficient Pedaling and Cadence

We often see people on the bike path at home pushing as hard as they can on the pedals. There is a common misunderstanding that the more you push, the better the workout. In fact, pushing a hard gear is very hard on your knees and it is difficult to keep up day after day over a long ride. You are better off if you spin the pedals in an easier gear while keeping a pedaling cadence of 80-85 revolutions per minute. This gives you a good aerobic workout while developing efficient cycling skills.

So on the flat, the rule of thumb is to keep a cadence of 80 rpms or even higher. As you climb, shift to a lower gear as the climb begins and continue shifting to try to keep your rhythm at 80 rpms or slightly lower.

The "mantra" that racers use for this technique is "spin to win," since they know that the rider who spins will last longer than the rider who pushes a bigger gear.

Pedaling a bike seems simple, but doing it efficiently takes practice. It also involves proper saddle height so you get just the right leg extension. Stand on one foot and let your other leg "dangle" naturally. The slight bend in that leg shows you where your proper extension is when pedaling on your bike.

Proper Extension and Efficient Pedaling means: [1]

How to get the most energy from each crank revolution.

1) The front third of your foot is positioned on the pedal with the ball of your foot right above the axle of the pedal.
2) You aren't reaching for the bottom of the pedal stroke. Have a friend follow you on your bike and to tell you if you are rotating your pelvis as you pedal. Your pelvis should stay level as just your legs go up and down.
3) Your upper body should also remain still. If you find you are pulling on the handlebars as you pedal and are wobbling back and forth try to focus on pedaling from the waist down without moving your upper body at all.
4) Divide your pedal stroke into four segments of a clock: 1-5 is the down stroke when you push the hardest; 5-6 you begin to lighten up (imagine that you are scraping mud off of the bottom of your shoe, your heel should rise); 6-11 the foot on the upstroke becomes light as a feather; 11-2 you prepare for the next down stroke, your heel begins to level as you prepare for the next downward stroke.

Bicycle fitness trainer Joe Friel suggests that the best place to practice pedaling skills is on an indoor trainer as there are no distractions such as traffic, stop lights, or other riders to break your concentration. Effective indoor drills are one-legged pedaling with the other resting on a chair and 30-second, gradual spin-ups to maximum cadence.

For more resources on how to pedal see Loren Mooney's article in Bicycling Magazine, "The Perfect Pedal Stroke: How to get the most energy from each crank revolution."

Balance & Safety

Starting and Stopping

When you start and stop in traffic or with other cyclists around you don't want to wobble at all.

Experienced commuter cyclists who stop at stop lights a lot learn to do this instinctively. If you are new to riding or just returning to bicycling after a few years, we recommend that you practice starting and stopping before you take a tour. The briefest of instructions are below and the video by Martin Pion reproduced on Sheldon Brown's website gives you a great visual for how to start and stop.

Starting

1) Start by standing over your bike with your power foot in a 2 o'clock position;
2) All of your weight should be on your "grounded foot" (i.e., the one on the ground);
3) Push off and forward with your grounded foot as you shift all your weight to your pedal (your power foot in a power position);
4) Sit down and continue pedaling.

The forward momentum you achieve by pushing off like this gives you stability and balance. As you continue pedaling you achieve even better balance. Try and remember to shift to an easier gear prior to stopping which will make getting started much easier.

Stopping: Stopping safely is almost, though not quite, just the opposite of the above.

1) Apply the hand brakes equally or with slightly more pressure on the rear brake;
2) As you slow down, move your weight forward in preparation to transition your weight to put one foot down;
3) Lower one pedal to the down position as the bike slows to a stop and shift all of your weight to that down pedal;
4) Remove the other foot from the pedal as the bike stops and place it on the ground. In doing this, you shift your weight automatically to the ground from the bike. You'll find that you also automatically turn the handlebar and lean the bike slightly as you do this.

Getting on and off your bike as described above allows for the safest and best balance in traffic or in a group of cyclists.

Sheldon Brown's web site shows safe starting and strong technique by bicycle.

Handling Skills:

You probably learned to balance a bike as a child and how to do it never crosses your mind while riding now. But, there may be situations that arise during a ride that challenge your balancing skills. For example, a car unexpectedly turns right in front of you, or a dog runs onto the road. These situations require more balance skills than simply riding a straight, unobstructed line down the road.

You can never simulate such emergencies in training, but you can become more comfortable in balancing your bike in unusual positions. Hopefully, the skills you hone in practice will pay off when needed in such a predicament.

There are drills that can help you become more adept at balancing the bike. Always do them away from traffic and obstructions that may cause an accident. A seldom used parking lot is a good choice. Here are a few examples.

- Take a tall water bottle out of its cage and place it on the pavement while riding slowly. Then, turn around and come back to pick it up. To make these moves you will need to stop pedaling and keep your foot low on the side you lean to while ensuring that the front wheel stays straight with the frame.
- Set-up four or five water bottles about eight feet apart in a straight line. Practice riding a slalom course through the bottles by leaning the bike, not your body, to the inside of each turn. Take one or three pedal strokes between bottles so that the inside pedal is always up. It should feel like a rhythmic dance when done smoothly.

As you get better try riding faster.

Braking

To control speed, the rear brake (right hand) is used more often than the front. When used, the front brake is often "feathered," meaning that pressure is applied gradually and in small amounts to reduce speed as when preparing for a corner. But, in an emergency situation where an immediate stop is needed, both brakes are applied with the front brake given the most pull. In such a situation you should also slide back on the saddle to weight the rear wheel preventing it from skidding and losing control. This position also helps to prevent a "header" or "end-o," meaning "end-over-end".

When descending a hill you must be careful when using the front brake. Pulling it aggressively can easily result in a crash. Apply the rear brake primarily on a fast descent, feathering the front brake only if more slowing power is needed.

Signaling

Predictability is a big part of safe cycling. Since you are sharing the road with others users, including motorists, pedestrians and other cyclists, this is especially important on tour when you are sure to encounter other riders.

Use hand signals to indicate your intentions and use voice signals to let your fellow cyclists what you plan to do next.

Shown from rear.

The signals shown in the drawing are acceptable international turn signals.

Note that your control of the bicycle is more important than signalling.

Note the following explanations for signalling while you are out on the road:
Left Turn: If there is too much traffic and you are not comfortable making a left turn, STOP RIGHT and WALK LEFT to cross a busy road.

Right Turn: In the US, it is acceptable, to signal a right-hand turn by using your left arm and turning your arm up. However, in Europe and many other countries, this signal is not widely recognized. So, we encourage you to use the signal above for right-hand turns (right arm straight out).

Stop Sign: The stop sign is most useful when you are in a group riding or with just one other cyclist. Let them know you intend to stop with a voice signal, "stopping," as well.

Most important**:** When turning, be sure to keep both hands on the handlebar. This means you should signal BEFORE your turn, not during. If you have only one hand on the handlebar while turning and you hit a stone or your gears jump you can easily lose control and take a fall.

Lane Control & Riding in Traffic

While signaling makes you predictable for others around you, a large part of being predictable is consistent, predictable riding. Here are a few tips to help with that:

1) As you pedal down the road, even on empty rural roads, pick an imaginary straight line and ride that line. Stay 24-30 inches from the edge of the road so cars coming up behind you will see you and treat you as another vehicle.
2) In cities or suburbs where you are sharing the road with automobiles keep to the right, but not so far to the right as to run into opening car doors parked along the road (6 feet is a safe distance.
3) If there is car traffic and lanes are narrow, but speeds are not too fast, move to the left to take control of the lane so cars behind you aren't tempted to pass too close. When you can move to the right to allow cars to pass, do so, but don't worry about holding them up. Cars are used to bicycles on the road (in Europe).
4) Practice this at home: When the bike lane ends what do you do? You become a part of traffic and take control of the lane. The safest thing you can do in these situations is to let motorists and other cyclists around you know your intentions by your behavior (riding a straight line) and by signaling. The cars behind you will understand that you, too, are heading in their direction and they will respect your right to use the roadway.

The bottom line here is to be assertive, not aggressive, be predictable and let others know your intentions.

Cornering, Turning and Descending

Be aware of what can cause crashes while turning so you can avoid them:

1) Avoid applying the brakes in a turn. Instead, control your speed as you go into the turn by braking before the turn. Notice if there is debris, gravel, and water and adjust your speed accordingly. The goal is to lean your bike and complete the turn without braking.
2) Quit pedaling in the turn. Pedaling, especially on a sharp turn, can cause the down stroke to hit the pavement, causing a crash. This can happen both on the flat in a simple 90-degree turn or on a downhill where the road curves as it descends.
3) When descending your "inside" pedal should be up while your "outside" pedal is down. Shift your weight off the saddle so that as much weight as possible is on the down pedal. Another way to think about this is if you are coasting through a right hand curve in the road, stop pedaling and put your right pedal up with all your weight on the left pedal. When the turn shifts to a left hand turn, shift your weight to the right pedal, which should be down while the left pedal is up. See videos for descending on a bike.
4) Watch for debris on the road especially sand, gravel, and leaves or even water. These things can cause you to skid and crash.
5) Keep your eye on the road ahead, especially while descending, but also as you turn on the flat. Watch for potholes, debris, pedestrians, and unpredictable dogs!

Climbing

Shifting before a climb helps you to maintain a comfortable cadence. When starting a long, steady climb select a gear that allows you to maintain your cadence of 80 rpms and as you progress up the hill shift either to a higher or lower gear to try and maintain this throughout the climb. Inexperienced cyclists sometimes shift to their

easiest gear as soon as they see a hill which kills progress and waste energy. Unless the hill is very steep try shifting gradually, relax, breathe, and enjoy the view.

On very steep hills it is difficult for the drivetrain to shift under so much tension so shift prior to the hill. Since you will be going very slowly a miss shift on the hill can easily make you fall over.

Lightweight cyclists find that standing occasionally helps them to maintain their cadence and a change of positions can be a welcome change. But standing on the pedals takes extra energy. If you are faced with a long climb, slow your cadence, stay seated and use a low gear that you can maintain throughout.

Just as you do on the flat, try to pedal from the waist down, keeping your upper body still.

Aerodynamics

On a long ride, aerodynamic drag is the greatest challenge to the cyclist. Even without a headwind, at speeds greater than about 12 mph (20 kph) more than half of the total mechanical work done by the rider is spent overcoming air resistance.

Most of this air resistance is a result of the frontal area presented to the wind by the rider's body. The greater the frontal area, the greater the air resistance. So the lower you are on the bike the faster you'll go with less effort. Racing or "road" bicycles allow you to get low on the bike to avoid that wind. Our hybrid bicycles have "bar ends," at each end of the handlebar allowing the rider an alternate, lower position in case of windy conditions.