

## BASIC SKILLS

Learning a few basic skills will help you be safer and more confident as you get out on the greenways and streets.

### Mount the bike.

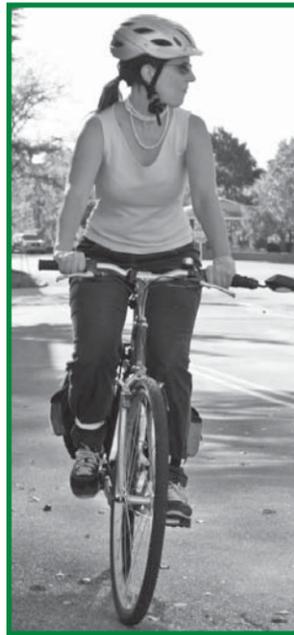
With one hand on the handlebar and one on the saddle, lean the bike toward you so that you can pick up your leg and step over the top tube. Or you can hold the handlebar with both hands and swing your leg over the saddle and back wheel.

### Power pedal.

You've probably seen folks with a foot on one pedal and the other foot pushing along on the pavement trying to get the bike rolling. This is awkward and can even be dangerous on the road. Here's the right way:

Pull one pedal (whichever feels more natural for you) up so that it's about two-thirds from the top of the pedal rotation (the 2 o'clock position).

Put your foot on that pedal and stand on it. This will naturally push you up and onto the saddle, and your other foot can easily find its pedal. Now you're fully in control of the bike and can accelerate and shift as needed.



### Ride in a straight line.

Practice this skill in an empty parking lot. You can use the parking space lines to keep track of how straight you ride. Also practice your hand signals while riding in a straight line. This is basic, but very important, especially leading up to the next one.

### Turn your head without swerving.

This is an absolutely critical skill, and many people haven't learned it! It doesn't matter if you're on a quiet residential street, a busy urban roadway, or on a sidewalk; the ability to scan over your shoulder without making the bike

swerve is a necessity. Unless you work at it, you'll naturally turn your bike to the left when you look over your left shoulder to check for traffic. You need to be able to look back without swerving.

Practice this skill in an empty parking lot. Your arms should be slightly bent at the elbows. This is a very good practice in general; it reduces stress on your hands, wrists, and shoulders, and keeps you from wobbling. Drop your shoulders a bit and focus on just turning your neck and head. If you have mobility issues with your neck, or you want to get an especially good view of what's going on behind you, take your left hand off the bar and place it on your thigh. Remember, it's your left hand which inadvertently pulls on the bar; the right doesn't push it. Practice these until you can do them with minimal swerving.

### Balance and control the bike at slow speeds.

Learning to balance and turn at slow speeds will give you control of your vehicle in a congested environment. Being able to slow down and look behind you will make it easier to merge, or at least get around obstacles, safely.

## SHIFTING GEARS

The purpose of gears is to make the bike easier to pedal up hills and enable you to pedal down them. The idea is to maintain a constant pace on the pedals and change your gears according to varying conditions. Pedaling in a gear that is too fast (easy) can tire you more quickly, but pedaling in a gear that is too high (difficult) can strain your knees and lower back.

The left-hand shifter changes the ring next to the pedals. The smallest ring is 1, the middle ring is 2, and the biggest ring is 3. When you downshift with your left shifter, you're moving to a smaller ring.

The right-hand shifter changes the ring on the rear wheel. On the rear wheel it's the opposite, the smallest ring is 6, and the biggest ring is 1.

If you don't want to worry about ring sizes, you can just look at the numbers on the shifter. Downshift with either shifter, moving it from a higher number to a smaller number. You get a bigger change when you shift with the left-hand shifter than when you shift with the right-hand shifter. Use your low numbered gears on the left with your low numbered gears on the right; and use your high numbered ones with the high ones. Thus, if you're in gear number one on the left, you should use it with gear numbers one through four on the right. Likewise, if you're in number three on the left, you should use it with gear numbers five and above on the right.

Here's pretty much all you need to know about shifting gears: **Shift down** if you're going uphill and it's too difficult. **Shift up** if your legs are spinning the pedals way too fast (easy). That's it, in a nutshell.

Lighten the pressure on the pedals when you shift. Keep them turning, but don't shift while pushing hard on them.

Learn to anticipate your shifts. Shift to an easier gear before you go up a hill, or just as you are starting up the hill, not when you are already straining to get up it. Downshift to an easier (lower) gear when coming to a stop, so that when you start up again you'll be in the right gear.

### HANDY TIPS FOR SHIFTING GEARS

You must be pedaling when you change gears (unless your bike has internal derailleurs). The chain has to be moving in order for the derailleurs to "de-rail" the chain from sprocket to sprocket. That's also why it's best not to click the shifters when you're sitting still.

Helpful websites: • [coachlevi.com/cycling/complete-beginner-guide-to-bicycle-gears-shifting/](http://coachlevi.com/cycling/complete-beginner-guide-to-bicycle-gears-shifting/) • [bicycleuniverse.info/eqp/gears.html](http://bicycleuniverse.info/eqp/gears.html)

## SIDEWALKS & GREENWAYS



Bicycling on sidewalks is not recommended except for children. Motorists are not looking for or expecting bicyclists on a sidewalk, which creates dangerous situations every time you cross a driveway or intersection.

Many people assume riding on sidewalks is safer than on the road, but studies show that to be false.

When biking on sidewalks, remember that pedestrians have the right of way, and you must give an audible warning and pass with care (slow down!). Ride slowly on sidewalks and watch carefully as you approach driveways or intersections.

Greenways, or shared-use paths, are popular and can provide great alternatives to busy roads for commutes, such as the Third Creek Greenway. Some greenways are built along creeks and others are adjacent to roadways.

There are safety issues on greenways as well. Bicyclists will be sharing the greenway with other cyclists (going both directions), joggers, people walking their dogs, small children, and rollerbladers. Collisions between these different users can occur and can be serious. Bicyclists should stay to the right and pass on the left. Be respectful of others and give audible warnings before passing. Slow down to pass. Watch out for young children and pets, because they can be unpredictable. Greenways are not intended for speed.



This information is brought to you by the Knoxville Regional Bicycle Program, which strives to integrate bicycling into the transportation system. The program works with citizens and governments within Knox, Blount, Anderson, Roane, Sevier and Loudon counties to implement the *2009 Regional Bicycle Plan*. The program is housed within the Knoxville Regional Transportation Planning Organization (TPO) and staffed by a Bicycle Coordinator. In addition to managing the Bicycle Program, the coordinator assists the Bicycle Advisory Committee, oversees the *Bicycle Plan* implementation, and reviews road plans to ensure compliance with the accommodation policy.

**Knoxville Regional Bicycle Program**

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## KNOXVILLE REGIONAL BICYCLE PROGRAM

### BICYCLING 101

## On the Road



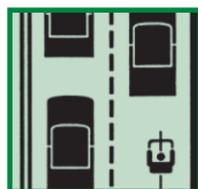
## TRAFFIC SKILLS 101

One of the largest hurdles faced by bicyclists is learning how to operate in traffic. When starting out, it is beneficial to ride on greenways or streets with low traffic volumes. As you become more experienced, you can branch out to streets with more traffic.

- Ride with traffic and obey the same laws as motorists.
- Use the rightmost lane that goes in the direction you are heading.
- Obey all traffic control devices (stop signs, traffic signals, lane markings).

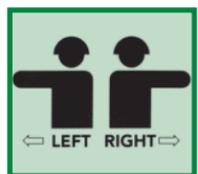
### Where to ride on the road

If you're riding a bicycle on a road at less than the normal speed of traffic, you're required to ride "as close as practicable to the curb or edge of roadway" except when:



- overtaking or passing another bicycle or vehicle
- preparing to execute a left turn
- avoiding hazardous conditions
- the lane is not wide enough to safely share with another vehicle

In all of those cases, a bicyclist may 'take the lane' (ride in the center of the lane) to avoid being squeezed against the curb or parked cars by passing motor vehicle traffic. Maintain a straight line of travel and avoid weaving in and out of the parking lane. This helps make you more predictable and visible. (See our *Ride Smart* brochure for more help on this topic.)



### Signaling turns

Hand signals indicating a turn are required of bicyclists for at least 100 feet before a turn or stop except when both hands are necessary to control or operate the bicycle. When

approaching a turn you'll often need both hands for braking and controlling your bike. However, if you have an available hand, then communicating your intentions with others – motorists, pedestrians and other bicyclists – by using signals is a great way to foster harmony on the road.

Signal a left turn by pointing your left arm straight out, and a right turn by pointing your right arm straight out. Simple!

You can signal that you are slowing or stopping by pointing your left arm down and moving it, but many motorists won't know that signal. (It is handy if you are riding in a group of bicyclists.)

### Left Turns

Merging across traffic on a busy street to make a left turn can be a very difficult maneuver even for an experienced cyclist.

## Your location on the road can keep you safe

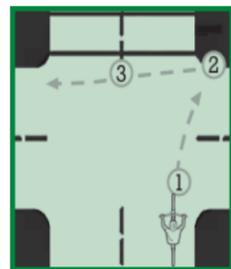
Not having enough room on the road to feel safe is one reason that bicyclists may be uneasy riding on city streets. As a vehicle on the road, bicyclists have the right to take enough space in the road to be safe – which means riding a safe distance from the curb. The farther from the curb you ride, the better motorists can see you – whether they're in your lane, oncoming, or on cross streets. Taking enough space for your own safety means riding in the middle of the travel lane – 'taking the lane'.

On most roads, if you ride too far to the right, motorists may be tempted to try to 'squeeze' past you – either passing you too closely or even pushing you off the road. Taking the lane keeps cars from turning right immediately in front of you, and gives you more room to avoid car doors and debris.

If a driver is being unsafe, it's better to let them get out of your way. Slowing down or pulling over to let impatient drivers pass will make you safer, less anxious, and show courtesy. It's actually the law that if five or more cars are behind you, you should pull over when it's safe to do so and let them pass (unless you are going the same speed as other traffic). There's nothing wrong with letting the cars pass and then taking the lane again.

If you come to a dangerous area, such as a bend in the road, ride in the middle of the lane to be more visible. It's safest to take the lane when you're moving at the speed of traffic; there isn't enough space for cars to pass you safely; or you're avoiding potholes or parked cars. Remember to always check behind before taking the lane.

Here's how you can make that turn without the stress:



1. Ride through intersection in the rightmost lane that goes straight
2. On the far side of the intersection, move right (use the sidewalk, if there is one)
3. Turn your bike to be headed to your destination

### Passing

Passing is generally done on the left, just as if you were in a motor vehicle. Passing on the right is only allowed if there is room for "two lines of moving vehicles." We recommend NOT passing on the right, though it is tempting. Motorists can turn suddenly in front of you or pull out in front of you because they see a line of stopped traffic, not you.

When overtaking a slower motorist or a line of stopped vehicles on the right in a bike lane, shoulder, or wide travel lane, use extreme caution. Make sure you stay out of the driver's 'blind spot', especially at locations where a driver could turn right across your path, like intersections and driveways.

- Stay a little bit ahead of the vehicle, so the driver can see you in front of them
- Stay far enough back so that if the vehicle suddenly turns right or stops you'll be able to stop your bike safely



parallel cuts in one lane, you should position your bike over the center pavement cut. If there are just two cuts in a box shape, use the one on the right, in the right-hand third of the lane.

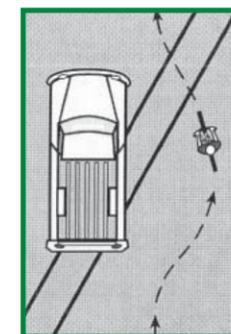
### Getting the Green

Some traffic signals are triggered by electrically charged wires buried in the pavement. When a vehicle stops over the wires, the metal disrupts the current, which sends a signal to the traffic signal control box. While a car is easily detected by the sensors, a bicycle – with less metal – must be in the right spot to be detected.

You can recognize these sensors by looking for narrow cut lines in the pavement, usually in a rectangle shape. You should be able to activate the signal by positioning your bike on the pavement cut. If there are three

Also keep in mind that some traffic signals have very long cycle lengths and it may take a while to get served on a side street. Cycle lengths may be as long as one hundred and twenty seconds, and although two minutes may not sound like a long time, it may seem like an eternity when waiting for a green.

If you find a signal that is not working for bikes, please call 311 in the City of Knoxville or contact the Bicycle Program. A new state law allows bicyclists to proceed through a red light that has an inoperable detection device, when it is safe to do so. First, you must make sure the device is truly not working; then make sure you can cross the road without impeding traffic.



### Hazards

Railroad tracks, wet leaves, metal utility covers, thermoplastic road markings and gravel are just a few things that can pose problems for cyclists. When riding over any of these surfaces, especially when wet, avoid braking and turning. For any rough surface, shift some of the weight off of your seat and onto your hands (handlebars) and feet (pedals).

Cross tracks at as close to a right angle as possible. Tracks are slippery, especially when wet, so don't alter your course or speed as you cross. If you can't get a good crossing angle, or if the surface looks too rough, it's okay to walk your bike across.

Don't ride through puddles because you don't know what's at the bottom. It could be a pothole that would cause you to crash. Remember that your brakes don't work as well when they are wet, so slow down when it's raining or the streets are still wet.

## WHAT TO DO AFTER A CRASH

Crashes can be scary and disorienting. Whether you are a bicyclist or pedestrian, here are some important actions to take if you have been in an accident.

### 1. SEEK MEDICAL ATTENTION

- Never refuse paramedics' help. *You might not realize how injured you are.*

### 2. CALL THE POLICE AND FILE A REPORT

- Ask the police to come to the scene of the crash. You are entitled to a police report and investigation. *The officer will give you a copy of the report.*

### 3. GET ALL THE INFORMATION

- Drivers license information
- Insurance card information
- License plate (especially in a hit-and-run crash)
- Witness name and contact information *If you are unable to talk to anyone when the crash occurs, revisit the scene at the same time of the day and ask businesses owners or neighbors if they remember anything.*
- Document injuries and damage with photographs. *Try to take photos before moving the damaged bicycle, but only if it is safe to do so.*
- Keep all medical documents and receipts. *(even if they are for small amounts, like insurance co-pay for doctor visits, aspirin, gauze, etc.)*
- An insurance company may call you to ask for a recorded statement about your crash. You do not have to give a statement. *It is strongly advised that you seek legal advice prior to speaking with an insurance company.*

### 4. LEGAL ACTION

#### Do I need a lawyer?

- If you are injured, contact a lawyer right away. *Learn how they charge before you work with them.*
- If you feel you do not need a lawyer, you may consider handling the insurance claim yourself.

#### Criminal Prosecution

- Crashes can result in a number of charges, including reckless driving, DWIs, assault, assault with a deadly weapon, battery, leaving the scene of a crash and failing to provide aid.
- A lawyer can advise you on contacting the state attorney's office regarding charges.

#### Suing an offender (Civil Suits)

- Civil suits usually result in money awarded, while criminal prosecution may result in prison time.
- Seek an attorney to sue a person.

Information from <http://www.activetrans.org/crashsupport/faq>

*Please Note: None of this is intended as legal advice. Neither the Knoxville Regional Transportation Planning Organization or its employees, is responsible for any loss incurred as the result of this information.*