

Ohio Bicycling Street Smarts

Riding Confidently,
Legally, and Safely



Ohio Bicycling Street Smarts A guide to bicycle safety in Ohio

The Ohio Department of Transportation
1980 West Broad Street, Columbus Ohio, 43223

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Ohio Revised Codes Bicycle Laws

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OHIO REVISED CODE --- BICYCLE LAWS

A significant number of Ohio's traffic laws apply to bicyclists as well as to motorists. In addition, there are some laws that are directed towards bicyclists alone. The state's traffic laws applicable to bicyclists are listed below and are paraphrased. For the official version refer to the Ohio Revised Code, Titles 29 and 45, available online at: <http://codes.ohio.gov/orc> **Green text displays law affected by the Better Bicycling in Ohio Act of September, 2006.**

Chapter 2921, OFFENSES AGAINST JUSTICE AND PUBLIC ADMINISTRATION

2921.33.1 **Following Police Orders** - All persons are obligated to follow the lawful orders of a police officer.

Chapter 4511, TRAFFIC LAWS – OPERATION OF MOTOR VEHICLES

4511.01 DEFINITIONS

Vehicle: Every device used for the purpose of transportation on a highway. Exceptions are motorized wheelchairs, devices powered by overhead electric trolley wires, or which moves exclusively on stationary rails or tracks, and devices *other than bicycles* moved by human power.

Bicycle: Every device (other than a tricycle designed solely for use as a play vehicle by a child) propelled solely by human power and having either two tandem wheels, or one wheel in the front and two wheels in the rear, any of which measures more than 14 inches in diameter.

Driver/Operator: Every person who is in actual physical control of a vehicle.

Street/Highway: The entire width between the boundary lines of every way open to the public as a thoroughfare for purposes of vehicular travel.

Roadway: The improved portion of a highway designed or ordinarily used for vehicular travel, except for the berm or shoulder.

Right of Way: The right of a vehicle or pedestrian to proceed uninterruptedly in the direction in which it is moving in preference to another vehicle or pedestrian approaching from a different direction.

Freeway: A divided multilane highway with underpasses or overpasses at all crossroads. These look like interstates on the Official Ohio Transportation Map, but may be state or U.S. highways. Examples include SR 11, SR 315, portions of U.S. 33 and U.S. 35, the Ohio Turnpike, and I-75.

Expressway: A divided major highway with more than half of all crossroads having an underpass or overpass. Examples include SR 32 (the Appalachian Highway), and portions of U.S. 23, U.S. 30, U.S. 33 and U.S. 35.

4511.051 **Prohibitions on Use of Freeways** - No person shall operate a bicycle within the boundary lines of a freeway except where there exists a facility that is separate from the roadway and shoulders designed and appropriately marked for bicycle use.

4511.07 **Local Traffic Regulations** - Local authorities may regulate the operation of bicycles **as long as such regulation is not inconsistent with the uniform rules of the road prescribed in Ohio law, e.g., local authorities may not prohibit the use of bicycles on any public street or highway.** Local authorities may require registration and licensing, but licensing rules cannot be applied to non-residents. (See also 4511.711.)

4511.12 **Obeying Traffic Control Devices** - Drivers of bicycles are obligated to obey all traffic control devices, including: flagpersons, signs, pavement markings, and signal lights.

4511.13 **Signal Lights** - The red, green and yellow signal lights apply to all vehicles including bicycles.

4511.15 **Flashing Traffic Signals** -At flashing red stop signals, the driver of a vehicle shall stop before the crosswalk or intersection, move forward for a clear view of approaching traffic, and proceed the same as for a stop sign (See 4511.43). At flashing yellow caution signals, the driver of a vehicle may proceed through the intersection only with caution.

4511.19 **Driving Under the Influence of Alcohol or Drugs** - Operation of a vehicle while under the influence of drugs or alcohol is prohibited.

4511.20 **Reckless Operation** - It is unlawful to intentionally operate a vehicle in a manner which endangers the safety of persons or property.

4511.21 **Speed Limits** - No person shall operate a vehicle at a speed greater or less than is reasonable or proper, having due regard to the traffic, surface, and width of the street or highway and any other conditions, and no person shall drive any vehicle in and upon any street or highway at a greater speed than will permit him to bring it to a stop within a safe enough time to avoid collision.

4511.22 **Slow Speed** - No driver may operate a vehicle at such a slow speed so as to impede the normal flow of traffic except when necessary for safe operation or to comply with law. **The capabilities of the vehicle and its operator must be considered when deciding if an infraction has been committed.**

4511.25 **Lanes of Travel upon Roadways** - A vehicle is to be driven on the right side of the roadway except when: 1) passing another vehicle going in the same direction, 2) making a left turn, 3) when an obstruction exists, 4) when driving on a roadway divided into three or more marked lanes for traffic, or 5) when driving on a roadway for one-way traffic. **Slow moving vehicles must remain far enough right to allow others to pass if passing is safe and reasonable. Bicyclists may ride out of the curb lane when preparing for a left turn; when continuing straight when a right-turn-only lane is present; when the curb lane is blocked; and when overtaking and passing another vehicle traveling in the same direction. Operators of slow moving vehicles are not required to compromise their safety in order to allow a faster vehicle to pass. See also 4511.55 below.**

4511.26 **Traveling In Opposite Direction** - Operators of vehicles proceeding in opposite directions shall pass each other to the right, and on roadways wide enough for one single lane of traffic in each direction, each operator shall give the other one-half of the roadway.

4511.27 **Passing Other Vehicles** - A driver must audibly signal before passing any other vehicle and then he or she may proceed to pass on the left. The vehicle being passed must give way after being signaled and must not increase speed.

4511.28 **Overtaking and Passing on the Right** - A driver may overtake and pass on the right of another vehicle when the vehicle being passed is making a left turn; when a clear roadway offers enough space for the vehicle to pass safely without driving off the roadway.

4511.29 **Driving Left of Center in Passing** - No vehicle shall drive to the left of the center of the roadway unless the left side of the roadway is clearly visible and is free of oncoming traffic.

4511.31 **Hazardous Zones** - **Allows for the crossing of a double yellow line in instances when drivers are approaching a slower vehicle (bicycles, horse-drawn buggies, farm vehicles, etc.) proceeding at less than half of the posted speed, as long as the faster vehicle is capable of passing without exceeding the speed limit and as long as there is sufficient clear space in which to do so.**

4511.32 **One-Way Traffic and Rotary Islands** - When traveling on a one-way street a vehicle must proceed only in the direction indicated by the one-way sign. A vehicle driving around a rotary traffic island must drive only to the right of the island.

4511.33 **Rules for Driving in Marked Lanes** - Whenever any roadway has been divided into two or more clearly marked lanes for traffic, a vehicle shall be driven within a single marked lane or line of traffic and shall not move from such lane until such movement can be made with safety.

4511.34 **Divided Roadways** - When a highway is divided into two roadways, vehicles must remain on the right side of the roadway with the exception of an emergency stop or in compliance with the order of a police officer.

4511.36 **Turning at an Intersection** - Right turn; make right turns as close as practicable to the right-hand curb or edge of the roadway. Left turn; driver must be as close to the right of the center line as is practicable before turning left. After passing through the intersection the vehicle shall commence travel in the lane closest to the right of the center line. When traveling on a one-way street a left turn must always be made in the extreme left hand lane available.

4511.39 Turning and Stop Signals - A driver must indicate his or her intention to turn, or move left or right, by signaling continuously at least one hundred feet prior to a turn. **Bicycle riders must make a turn signal at least one time, but it need not be continuous. The bicyclist is not required to signal if the bicycle is in a designated turn lane, and a signal shall not be given when the operator's hands are needed for the safe operation of the bicycle.** A signal is required when bringing a vehicle to a stop or suddenly decreasing speed.

4511.40 Hand and Arm Signals – When using hand and arm signals always do so from the left side (except where noted) of the vehicle and in the following manner:

- Left turn – left hand and arm extended horizontally.
- Right turn – left hand and arm extended outward (with forearm extended upward), or by extending the right hand and arm horizontally and to the right side of the bicycle (effective September 9, 1996).
- Stop or decrease speed – left hand and arm extended downward.

4511.41 Right Of Way at Intersections - When two vehicles coming from different directions approach an intersection at approximately the same time, the driver on the left shall yield the right of way to the vehicle on the right.

4511.42 Right Of Way When Turning Left - The driver of a vehicle attempting to turn left shall yield the right of way to a vehicle approaching from the opposite direction.

4511.43 Right Of Way at Stop Signs and Yield Signs - Once a driver has come to a full stop at a stop sign then he or she can resume travel after yielding to traffic. A yield sign indicates that a vehicle must slow down, or if, necessary for safety, come to a stop before entering the flow of traffic.

4511.431 Stopping Prior to Driving Onto or Across Sidewalk - The driver of any vehicle entering the roadway from an alley, building or private road or drive, shall come to a complete stop and proceed only after the driver has a clear view of oncoming traffic.

4511.44 Right Of Way on a Public Highway - The operator of a vehicle about to enter a highway must yield the right of way to all approaching traffic on the roadway.

4511.441 Pedestrian Right Of Way - The driver of a vehicle must yield the right of way to any pedestrian on a sidewalk.

4511.45 Public Safety Vehicles – The driver of a vehicle shall yield the right of way to any safety vehicle when warned with lights and sirens. The driver shall yield by pulling his vehicle to the extreme right side of the street, shall stop and remain stopped until the safety vehicle has passed.

4511.451 Funeral Procession - The driver of any vehicle shall yield the right of way to a funeral procession.

4511.52 Bicycles - Sections 4511.01 through 4511.78, Section 4511.99 and Section 4513.01 through 4513.37 of the revised code apply whenever a bicycle is operated on a highway or bike path. **A bicycle operator who violates any section of the motor vehicle traffic or equipment law applicable to bicycles may be issued a ticket by a law enforcement officer. No points can be assessed against the bicycle operator's driver's license except in instances of operating under the influence.**

Where it is determined that a violation by a motor vehicle operator endangered the lives of bicycle riders at the time of a violation, either the bicycle operator or motor vehicle operator may be required to successfully complete a bicycling skills course approved by the court in addition to, or in lieu of, any penalty for the violation.

4511.53 Rules for Bicycles - A person operating a bicycle shall ride either standing upon the pedals or seated upon the permanent and regular seat and shall carry no more persons than the number for which it is designed and equipped. No person operating a bicycle shall carry any item which would prevent them from having at least one hand on the handle bars.

4511.54 Prohibition Against Attaching Bicycles To Vehicles - No person riding upon a bicycle shall attach the bicycle or himself to any other vehicle upon the roadway. No operator shall knowingly permit a bicyclist to attach a bicycle or himself to their moving vehicle.

4511.55 Riding Bicycles - Every person operating a bicycle on a roadway shall ride as near to the right side of the roadway as practicable, but may ride to the left of hazards, e.g., when fixed or moving objects are in the way; when there are surface hazards; when it is unsafe or otherwise impractical to do so - such as when the lane is too narrow for the bicycle and an overtaking vehicle to travel safely side by side; or when a slow moving vehicle is permitted to leave the curb lane, as described in 4511.25 above. Persons riding bicycles must obey all traffic rules applicable to vehicles, and exercise due care when passing a standing vehicle or one proceeding in the same direction. Persons riding bicycles on a roadway shall not ride more than two abreast in a single lane, except on paths or parts of roadways set aside for that purpose.

4511.56 Signal Devices on Bicycles - A bicycle may be equipped with a bell, horn, or some device, other than a siren or whistle, audible within at least 100 feet distance. Every bicycle must be equipped with an adequate brake when used on a street or highway.

Every bicycle when in use one-half hour before sunrise or one-half hour before sunset, and in inclement weather, shall be equipped with the following:

- Front lamp with a white light, steady or flashing, visible from at least 500 feet. The lamp may be mounted on either the bicycle or the helmet.
- Rear red reflector visible from all distances from 100 feet to 600 feet to the rear when directly in front of lawful lower beams of headlamps on a motor vehicle.
- Rear red light, steady or flashing, visible from at least 500 feet, in addition to the rear red reflector, unless the light can be seen as well as the reflector.
- Colorless front reflector mounted at the front.
- Tire sidewalls may be retro-reflective or colorless, or amber reflectors may be mounted on the front wheel spokes and colorless or red reflectors mounted on rear wheel spokes. Reflectors must be visible from 600 feet of a motorist's headlamps.

4511.66 Parking on Highways - On any highway outside a business or residence district a person shall not stop, park or leave standing any vehicle on the paved or main traveled part of the highway if it is possible to take the vehicle off the highway.

4511.67 Police Removal of Vehicle - Whenever a police officer finds a vehicle unattended and obstructing traffic he may have it removed to the nearest garage or safe place.

4511.68 Parking - No parking of a vehicle is permitted in the following areas unless unavoidable or authorized by a police officer.

- On a sidewalk (except for a bicycle).
 - In front of a public or private driveway.
 - Within an intersection.
 - On a crosswalk.
 - Within 20 feet of a crosswalk at an intersection.
 - Within 30 feet of a traffic control device.
 - Within 50 feet of a railroad crossing.
 - Between a safety zone and the bordering curb.
 - Within 20 feet of a driveway entrance to any fire station or directly across the street from the entrance.
 - Alongside or opposite any street excavation or obstruction when such parking would block traffic.
 - Alongside any vehicle stopped or parked at the edge or curb of a street.
 - On any bridge or within a tunnel.
 - At any place where signs prohibit stopping.
 - Within one foot of another parked vehicle.
 - On the roadway portion of a freeway, expressway, or any major road.

4511.71 Driving Upon a Closed Highway - It is illegal to drive on a roadway closed due to construction when appropriate signs are posted.

4511.711 Driving On a Sidewalk - Bicycles are the only vehicles allowed on sidewalks: local authorities may prohibit but not require bicycle riding on sidewalks. (See also 4511.07 and 4511.431.)

4511.712 **Obstructing Intersection, Crosswalk, Grade Crossing** - At no time shall a vehicle obstruct an intersection, crosswalk or grade crossing.

4511.713 **Prohibition of Motor Vehicles on Bicycle Paths** - No person shall operate a motor vehicle, snowmobile, or all-purpose vehicle upon any path set aside for the exclusive use of bicycles, when an appropriate sign giving notice of such use is posted on the path. This law does not affect any rule of the Director of Natural Resources governing operation of said vehicles or bicycles on lands under his jurisdiction.

4511.72 **Following an Emergency Vehicle or a Public Safety Vehicle Prohibited** - The driver of any vehicle shall not follow any emergency vehicle or public safety vehicle traveling in response to an alarm closer than five hundred feet.

4511.75 **Stopping For a School Bus** - The driver of a vehicle must stop at least 10 feet from the front or rear of a school bus when children are boarding or exiting the bus as indicated by flashing lights on the bus or other signals.

1. Off to a Good Start

Let's look first at how you get onto your bicycle. If you climb onto it the right way, you get quicker, safer starts and a more efficient riding position. We'll also take a look at how to get off smoothly so you're positioned to start again quickly.

STARTING AND STOPPING

When you get onto your bicycle, first stand over the frame in front of the saddle. Hold the brake levers so the bike won't roll. A steady bike lets you get into position to mount.

Now, using either foot, gently turn the crank backwards until the pedal is at 2 o'clock position – forward and high. If the crank won't turn easily, carefully adjust the gear levers until the chain runs straight.

Once your foot is on the pedal in the 2 o'clock position, you're ready to get moving. Let go of the brakes and push down on the pedal. The first pedal stroke starts the bicycle moving and lifts you up to the saddle. When the opposite pedal comes up to top position, put your foot on it for the second pedal stroke.

When you're coming to a stop, stand on one pedal, and slide forward off the saddle. Lean the bicycle a little to the side and place your free foot on the ground. When stopped, raise one foot and its pedal into the 2 o'clock starting position.

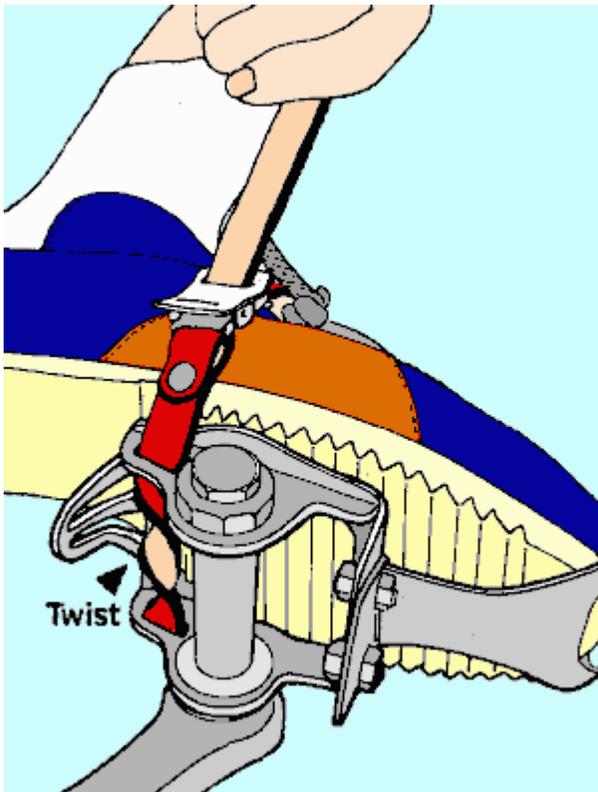
No matter what type of pedals you use (see below), ***put only one foot on the ground when you stop.*** The other foot waits on its pedal in the 2 o'clock position, ready for a quick start.

As you slow to a stop, shift down to a low, starting gear. On a derailleur-equipped bicycle, the gears shift only while you're still turning the pedals – planning ahead pays off.

USING CLIPLESS PEDALS OR TOECLIPS

Clipless pedals, or toeclips and straps, are your "feet belts." Though not necessary, they increase pedaling efficiency and safety. But learning to use them requires practice. Be sure to master the release motion before using them on the road.

Thread toeclips and straps as shown in the illustration - from the outside to the inside of the pedal. Leave the end of the strap sticking out like a floppy dog ear - don't tuck it back into the buckle. Tighten the strap by pulling on the end, and loosen it by pushing the buckle outward with your thumb.



Thread a toe strap as shown, from outside to inside of the pedal. Leave the end hanging loose so you can pull it to tighten the strap.

AVOIDING COMMON MISTAKES

Do not try to sit down on the saddle with both feet on the ground before you start. If you can do this, your saddle is too low. Make sure your saddle height is adjusted properly (a good bike shop can help you). A saddle that's too low (or too high) can cause knee injuries and makes it harder to pedal.

Pushing the bike along with a foot, like a scooter, or leaping onto a bike from the side, like a horse, are not as steady or safe as the pedal-step method described earlier in this chapter.

SUMMARY

Practice the pedal-step method until you're comfortable with it. Raise the saddle if it is too low. Also, practice shifting your gears as you stop, so you'll have good acceleration when you start again. You'll be rewarded with smoother, safer and quicker starts.

2. Where to Ride on the Road

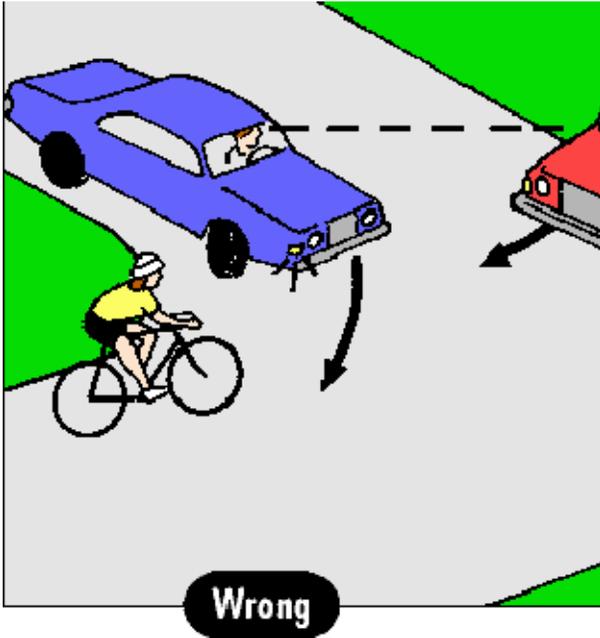
We've all seen bicyclists who wander from left side to right, who go from the sidewalk to the street and who weave in and out between parked cars. From moment to moment, nobody can tell what these bicyclists are about to do. Pedestrians jump back, and car brakes squeal as such bicyclists approach.

On the other hand, we've seen bicyclists who seem to blend into the traffic flow smoothly and effortlessly. You always know where they are headed and what to do around them, whether you're on a bicycle, in a car or on foot. They make bicycling look easy - but aren't they taking a risk? Isn't it safer to avoid the traffic as much as possible?

PART OF THE TRAFFIC PATTERN

With very few exceptions, *the safest way to ride is as part of the traffic*, going with the flow of the normal traffic pattern. Bicyclists who ride this way get where they're going faster and, according to scientific crash studies, have about five times fewer crashes than bicyclists who make up their own rules (J. Forester; Effective Cycling. Cambridge, MA, MIT Press, 1993).

Generally, the more you follow the normal traffic pattern, the safer and more predictable you become. The rules of the road set up a pattern for every situation, telling which driver has the right of way. Sometimes you have to wait for other drivers - for example, at a stop sign - but sometimes they have to wait for you. Bicyclists have the same rights - and responsibilities - as motorists.



If you ride in violation of the traffic laws, you greatly increase your risk of a crash. You also may give up all of your rights. If you get into a crash, the courts will almost always find that it was your fault!

Riding right begins with riding on the right. Some bicyclists think they're safer on the left, where they can see cars coming, but riding on the left is actually one of the biggest causes of car-bike crashes.

If you ride on the left, both you and the oncoming driver must come to a complete stop to avoid head-on collisions. When you ride on the right, drivers behind you only have to slow to your speed - and they have much longer to react. Also, drivers and pedestrians about to pull out from side streets and crosswalks will be looking toward you - in the direction traffic normally comes from.

In this way, the rules of the road protect you by making it clear what you're going to do next.

Intersection collisions are the most common type caused by wrong-way riding. The motorist in the side street is looking left, where the traffic normally comes from.

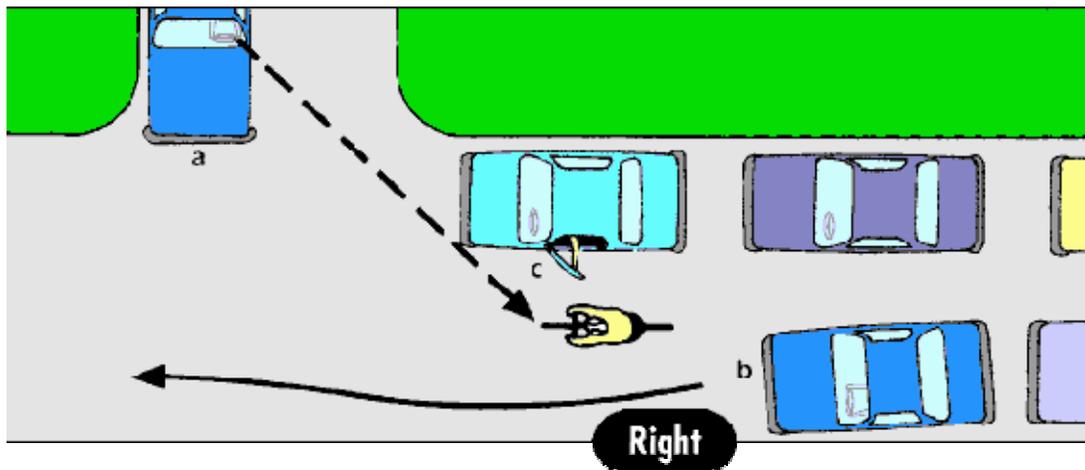
WHERE IS THE ROAD EDGE?

Normally, slower traffic keeps to the right, and faster traffic passes on the left. Since your bicycle is usually slower than other traffic, you usually ride near the right edge of the road. But how far to the right?

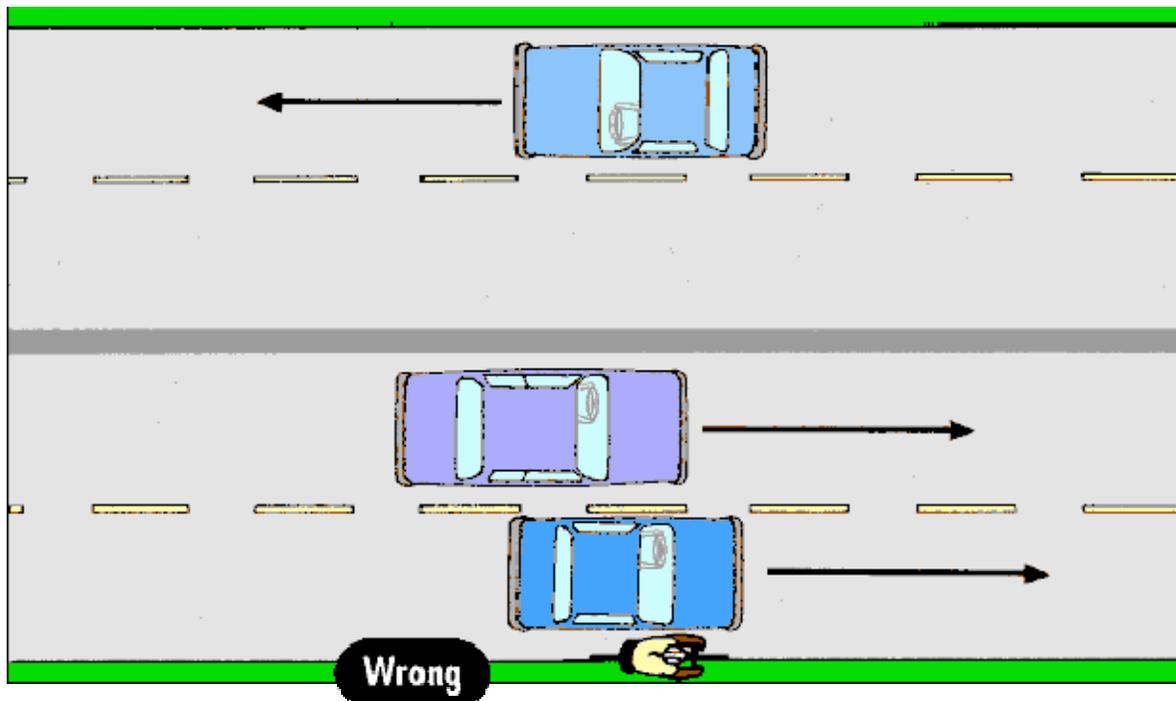
Generally, the usable width of the road begins where you can ride without increased danger of falls, jolts or blowouts. A road may have a gravel shoulder, its edge may be covered with sand or trash or the pavement may be broken. Don't ride there. Closer to the center, there's better pavement, which is swept clean of sand and debris by the passing cars. The right side of the road begins here.

Most bicycle crashes are simple falls or are caused by hazards in front of you. Train your eyes to scan the scene ahead, and be wary of blindspots. Keep your eyes moving - you have to look up at the traffic and also down at the road for potholes and cracks. You may sometimes need to slow down in order to spot hazards in time.

Ride far enough into the lane to avoid the risk from blindspots. If you ride too close to parked cars on your right you can't see around them into side streets and driveways. A pedestrian, car or bicycle could come out from between the parked cars. Drivers in side streets might nose their cars out in front of you to look right and left. And the door of a parked car could open in front of you.

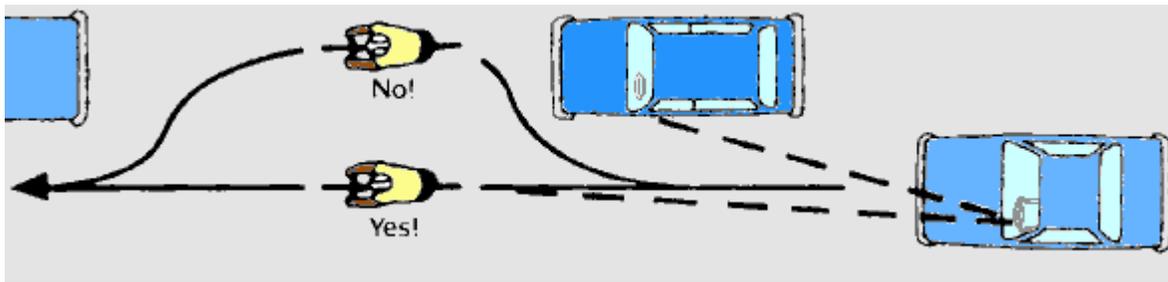


By riding a safe distance from roadside hazards, you increase your safety. When you ride correctly, the motorist in the driveway (a) sees you; the motorist overtaking you (b) will not take the easy way out and skim by your elbow; and the car door (c) is no threat.



Where there are parked cars, the usable width of the street begins about 3 feet out from them - or from a wall, hedge or other obstruction. As you approach a blind intersection or driveway, you should be even farther from the edge of the road - imagine a car hood poking out. **Don't ride in the danger zone!** Only if you are riding very slowly - less than 5 miles per hour - can you safely ride within reach of the car doors; even then you must be attentive to opening doors and your reduced visibility to cross traffic.

Sure, many people - even some bicycling "experts" - will tell you, "Always keep as far to the right as possible," and, "Look out for opening car doors." But at speeds above 5 miles per hour, you can't stop in time to avoid a car door. Then your only choices are to hit the door or to swerve out into the street - maybe into the path of a passing car. Avoid this problem by riding outside the reach of car doors.



Don't weave between parked cars, where you become invisible to overtaking drivers and must repeatedly reenter the traffic flow.

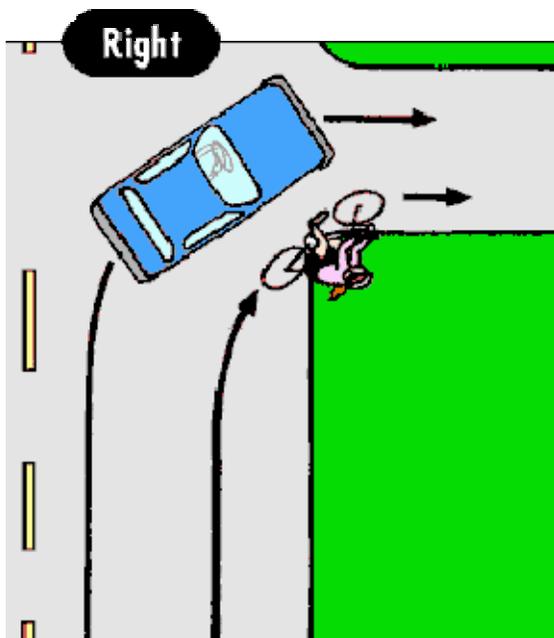
Don't weave in and out between parked cars. If you weave to the right after passing a parked car, it will hide you from drivers approaching from behind you. Then you have to pop back out into the path of overtaking traffic when you reach the next parked car. Put yourself in the place of a driver a couple of hundred feet behind you. Could this driver see you?

It's much safer to ride in a predictable, straight line, where everyone can see you. Motorists don't mind slowing down for a predictable, visible bicyclist nearly as much as they mind a bicyclist who swerves out in front of them.

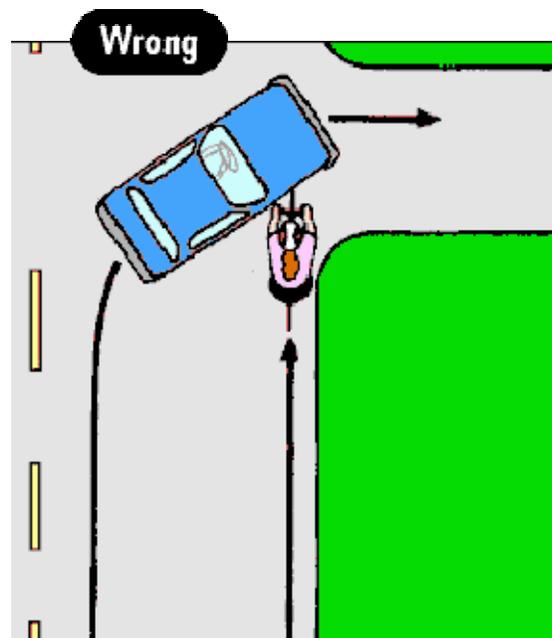
EXTRA-WIDE LANES

If the road has a paved shoulder or an extra-wide right lane, don't ride all the way over at the right edge. Instead, keep riding in a straight line 3 or 4 feet to the right of the cars. Stay at a steady distance from the left side of the right lane.

If you stay all the way over at the right edge in an extra-wide lane, you give up your escape zone to the right, and you're much more likely to be cut off by a right-turning car. When this happens, it's harder for you to avoid a crash. By the time you see the car, it will be blocking your path. If you're closer to the car, you can turn with it and avoid a crash.



In a wide lane, you are safer if you stay 3 to 4 feet to the right of the cars. You can turn to avoid a crash if a motorist makes a right turn from your left side.

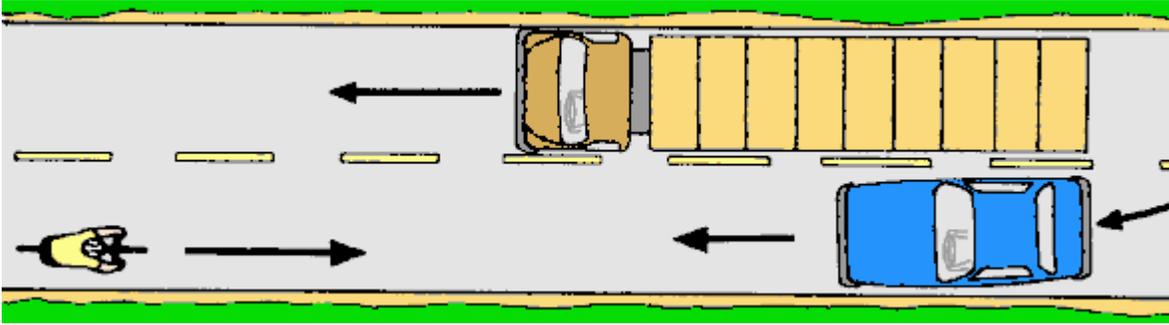


If you hug the curb, the car is across your path before you see it.

There are two important exceptions to this rule: When you are just past a sharp hillcrest, motorists behind you cannot see you, so it is best to keep to the right until you have picked up some speed. In several U.S. states, it's legal for bicyclists to ride on some high-speed limited-access highways. Here, you can ride at the right side of the shoulder, avoiding the wind blast from big trucks. Except at the rare on- and off-ramps, limited-access highways have no cross traffic, so there's no problem with turning cars or pedestrians.

RIDING IN A NARROW LANE

In a wide lane, there's room for cars to pass you. But in a narrow lane, cars have to move partway into the next lane to pass you. Narrow lanes are common on city streets and on back roads in the country. On a narrow two-lane, two-way rural road, stay alert to strings of oncoming cars in the opposite lane, in case one pulls into your lane to pass. You can ride nearer the edge of this type of road if cars are coming from only one direction at a time. Then cars from the rear can pass you without having to move as far into the other lane.

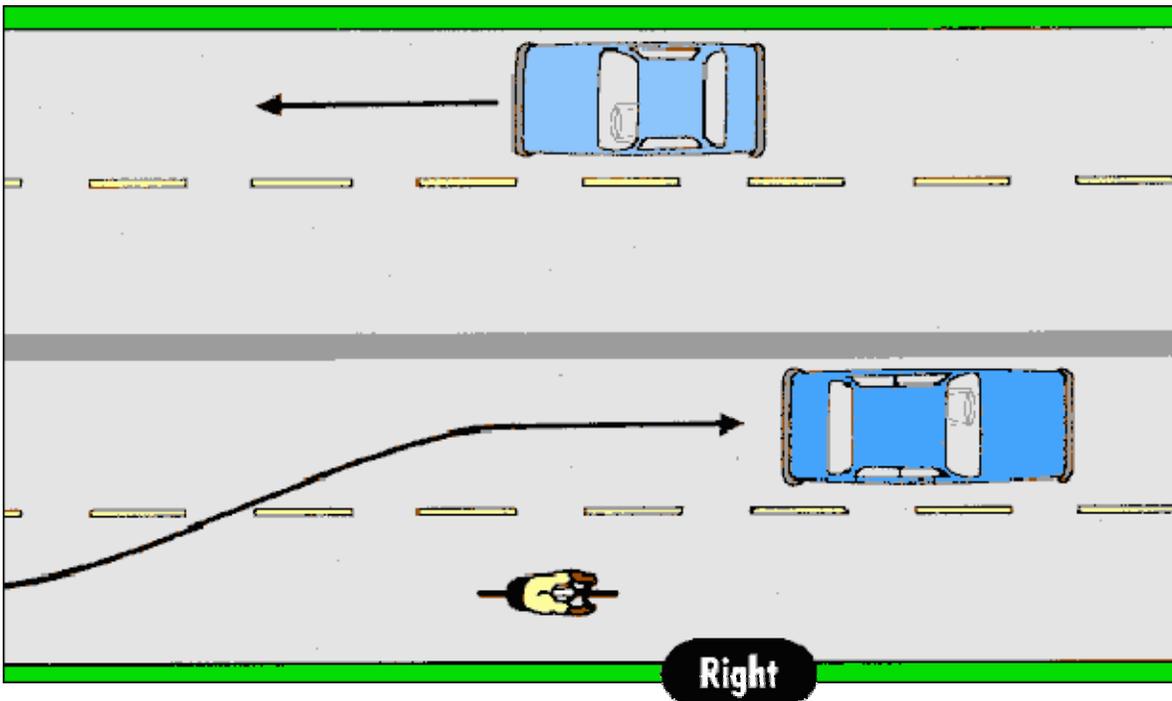


On a two-lane highway, be alert to drivers ahead of you pulling out to pass, especially if the lanes are narrow.

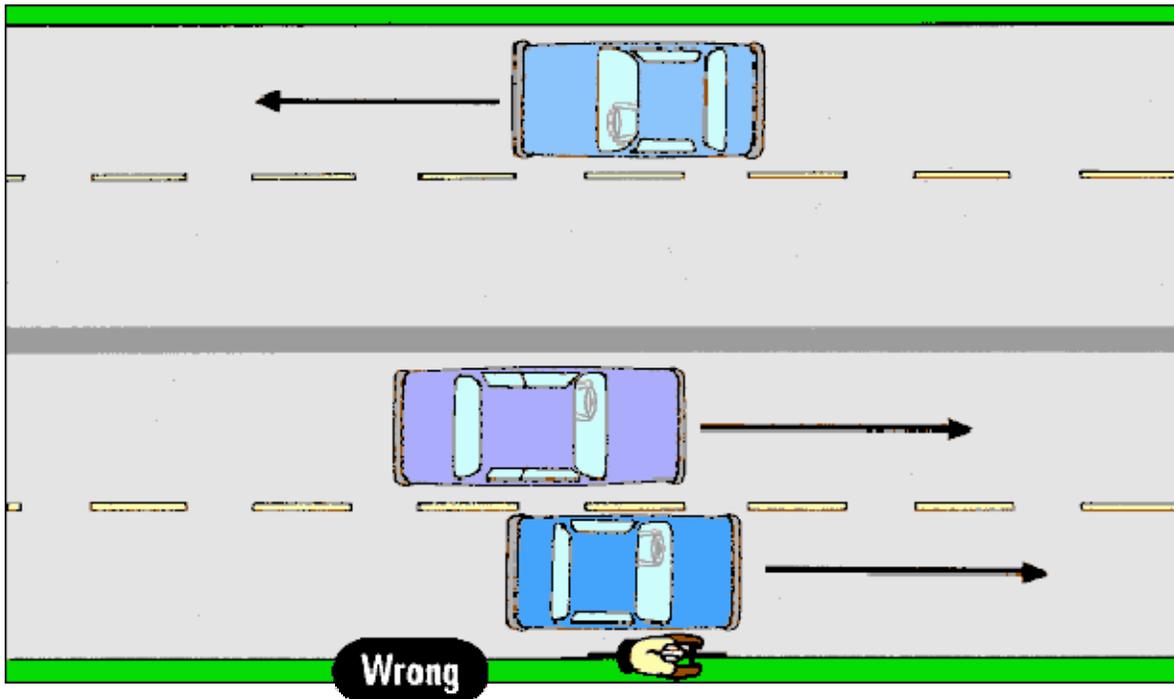
But if cars are coming from both directions, you have to take control of the situation. You can't take chances that the drivers behind you will try to pass you in oncoming traffic.

Glance behind you, and if there's traffic there too, take the first opportunity to merge safely to the middle of the right lane. Also merge to the middle of a narrow right lane at a blind curve where there might be oncoming traffic. On a right curve in a narrow lane, this technique makes you visible earlier to the drivers behind you.

The driver behind you will have to slow and follow you. It helps to make a "slow" signal (left arm extended downward) to indicate that you're aware of the car behind you and that it's unsafe to pass. Don't let an impatient driver cause a crash.



On a multilane road with narrow lane, ride in the middle of the right lane.



If you hug the edge, you are likely to get squeezed out.

Understand that the law is on your side. The law gives you the right to use the road, the same as a motorist, and to make other traffic slow down for you sometimes. The driver approaching from the rear is always required to slow and follow if it's not possible to pass safely.

It may seem dangerous to make a motorist slow for you, but it's not. The usual reason that bicyclists feel unsafe on narrow roads is that they do not take control of the situation. Remember, the drivers behind you don't have room to pass you safely anyway. If you ride all the way over at the right, you're inviting them to pass you where the road is too narrow and, too often, you will get squeezed off the road. If you show clearly that it's not safe for drivers to pass you, they're unlikely to try.

But be courteous. When it becomes safe for the car behind you to pass you, give the driver a wave-by signal. If you block traffic for more than a short time, common courtesy suggests, and the law normally requires, that you pull to the side and let the traffic by when you can safely do so.

On a road with two or more narrow lanes in your direction - like many city streets - you should ride in the middle of the right lane at all times. You need to send the message to drivers to move to the passing lane to pass you. If you ride all the way to the right, two cars may pass you at the same time, side by side, and squeeze you off the road.

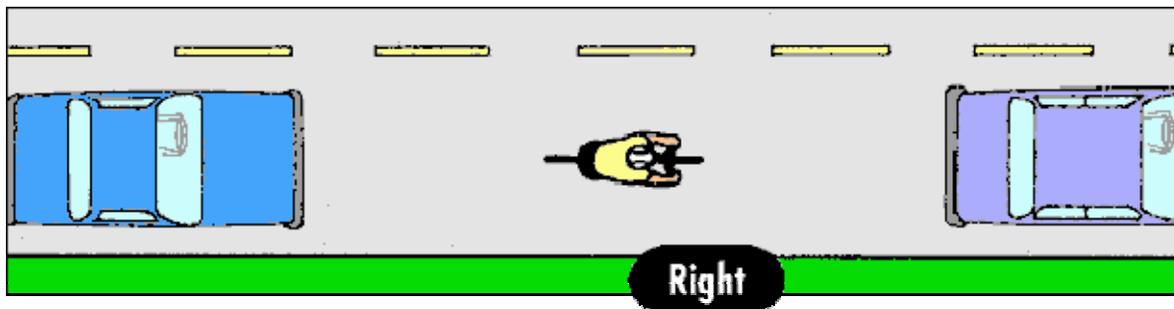
RIDING IN A BIKE LANE

A well-designed bike lane should encourage you to ride in the correct position on the road when you go slower than the cars. It should also encourage you to move left, out of the bike lane, before an intersection if you are going straight or turning left. Don't be lulled into riding in the danger zone close to parked cars; you often need to ride along a bike lane's left edge. Remember that motorists will cross the bike lane to park and pull in and out of driveways. Pass on the left whenever possible. If local laws permit passing on the right, do so only very slowly and where a car could not possibly turn right. You may be in a motorist's blind spot; a car door could open, or a pedestrian could be jaywalking between the cars. Never pass a long truck or bus on the right. Remember: don't hesitate to leave the bike lane when necessary for your safety - all the guidelines about lane position in this book apply whether or not there is a bike lane.

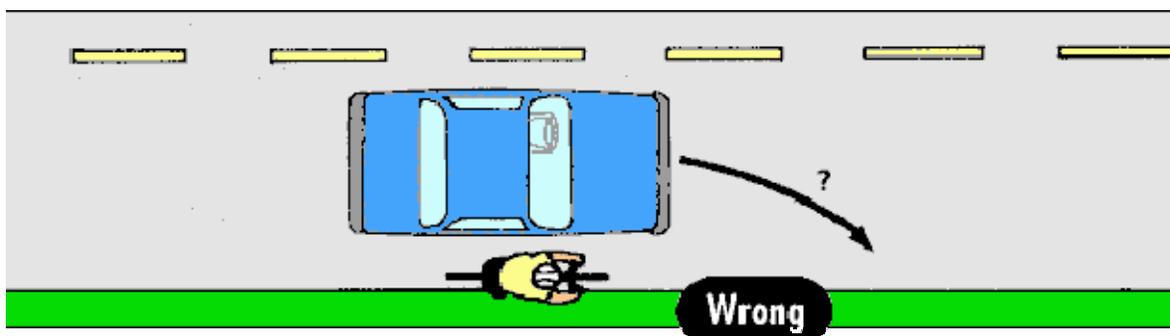
WHEN YOU GO FASTER THAN CARS

Usually, cars travel faster than bicycles, but not always. A row of cars may have slowed in a traffic jam. Or you may be riding down a hill where you can keep up with the cars.

If you're going as fast as the cars, pull into line with them. When riding down a hill at high speed, you need more room to steer and brake. Besides, it's dangerous to ride along next to the right side of a car. The driver could turn right or edge closer to the curb without ever seeing you. The safest position in traffic doesn't depend on whether you're riding a bicycle or driving a car. It depends on how fast you're going and where you're headed.



When going as fast as the cars, you're much safer if you ride in the middle of the traffic lane where the driver behind you can see you.



The driver next to you has not seen you and could turn or merge right.

As long as you keep up with the car in front of you, stay in line with it. If you begin to fall behind, pull to the right. But if you're traveling faster than the car, pass on the left, just as if you were driving a car yourself. Drivers expect to be passed on the left, so they look back to the left before they pull out.

Before you pass, look back for traffic to make sure that you can pull safely into the passing lane. Keep your distance from the side of the car you're passing. Don't sneak along next to it. Put yourself where the driver will look for you. If you're passing a big truck or bus, give it even more clearance - 5 or 6 feet - since it could move farther before you could get out of its way. When you're finished passing, move back into the right lane.

Sometimes the car, bus or truck you're passing will pick up speed while you're still next to it. Then just keep the same position in the lane, and brake lightly if necessary to fall back. When you've fallen behind, look back to the right for traffic, then merge back to your normal position in the right lane.

On a street with multiple right-turn lanes or heavy, slow traffic, you may move left more than one lane to pass slower traffic.

SUMMARY

Many cyclists believe they are safer and more comfortable riding further to the right than this booklet recommends. They fear being passed uncomfortably close by a motorist, or feel intimidated by impatient drivers. Riding too far to the right is very dangerous for several reasons. It puts the cyclist in the **danger zone** of poor sightlines and opening car doors; it gives motorists an opportunity or even invitation to attempt a close pass; and it takes away the cyclist's escape route to the right in the event of the unexpected. The correct lane positions described in this booklet are the safest and most efficient. Do not be intimidated. Take responsibility for your own safety, even if other traffic must occasionally slow and follow you.

Your correct position on the road follows a sensible set of rules, the same as for a car driver: keep to the right if you're going slowly, but pull to the left to pass. The way you carry out these rules is a little different - as explained here - since your bicycle is narrow and usually slow. An understanding of road positioning makes the difference between the rider who weaves and wanders and the one who blends smoothly and safely into the traffic flow.

3. Riding Through the Intersections

Intersections are where all of your traffic-riding skills come together. If you ride smoothly through the intersections, you can handle almost any riding environment.

At intersections, move to the correct lane position depending on which way you'll be going. Often, you'll need to move away from your normal position near the right side of the road. If you're turning right, keep to the right. But if you're turning left, move to the center of the road. If you're going straight, go between the right- and left-turning traffic.

RIGHT TURNS

Right turns are easiest. Just stay in the right lane, look around for traffic and go around the corner. To avoid being squeezed against the curb, ride in the middle of the right lane if it's narrow, just as you would on a straightaway. Remember that the rear end of a car cuts the corner as it makes a right turn.

At a stop sign or legal right turn on red, yield to traffic coming from the left on the cross street. You're always required to yield to pedestrians in crosswalks. Bicyclists follow the same set of rules as motorists do.

A right-turn signal is a useful courtesy to drivers who would have to wait for you if you were going straight. Pointing with your right arm is the most effective right-turn signal.

CHANGING YOUR LANE POSITION

To prepare for most intersection maneuvers, you need to change your lane position. Even between intersections or when making a right turn, as just described, you may have to move farther toward the left side of the right lane. So far, we've gotten by with a quick description of how to look back and check for traffic.

But when making a left turn, you often have to move across more than one lane. It's time to go into more detail. ***Before you change your lane position, you must always look back for traffic.*** Your sense of balance is in your head, so you need some practice to turn your head without swerving.

Some bicyclists change lane position without looking back, because they're afraid of swerving. Don't trust your ears! Many cars are very quiet, and a bicycle behind you is even quieter.

Practice looking back in an empty parking lot. Ride along a straight, painted line. Turn your head to glance back, and then look forward again to see whether you're still riding straight. To keep from swerving, think about the position of your arms. If you don't turn the handlebars, you won't swerve.

Turn your head to look even if you have a rear-view mirror. A mirror can help you to keep track of the traffic directly behind you, but no mirror will show cars or bicyclists at your side. The best way to look back depends on your riding position. If you're sitting upright, swivel your neck and your back. If you're in a low crouch, duck your head sideways. Some bicyclists even duck their heads underneath their arms.

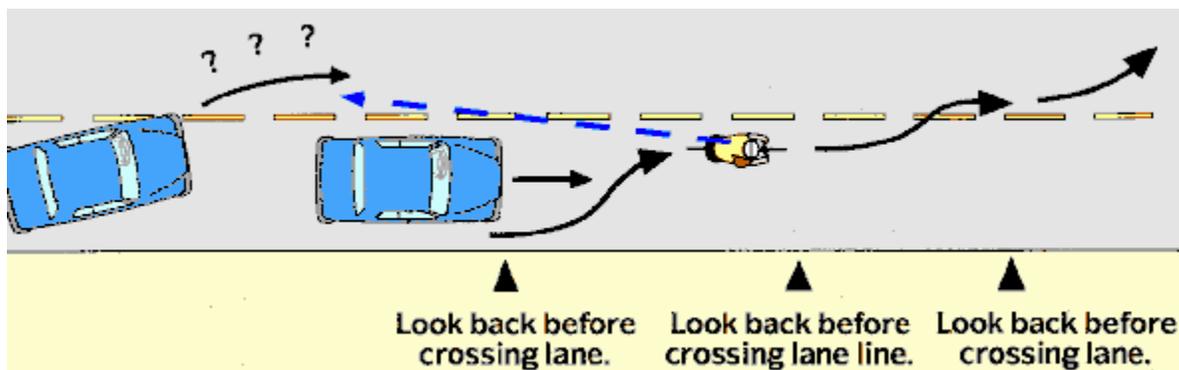
GETTING A DRIVER'S COOPERATION

So now you've looked back. What next? If there's a car close behind you, let that car go by, and deal with the next car.

Usually, the next driver will have time to react to your signals. If you make your intentions clear, the driver will almost always let you into line.

Extend your left arm to signal that you want to move to the left. Wait a couple of seconds, then look back again to check that the driver has slowed down or moved aside to make room.

Turning your head to look back is a signal, too. In slow, crowded traffic, you need to keep your hands on the handlebars, ready to brake. You can usually move into line with the cars while signaling only with a turn of the head. Whatever signal you use, always make sure that the driver behind you has noticed your signal and made room for you.



Cross a lane in two steps; one to cross the lane line and the next to cross to the other side of the lane.

Do not change your lane position until you're sure that the driver has made room for you. Most drivers will, but there's no guarantee. Your signal doesn't make it safe to change lane position. Only the driver's response to your signal makes you safe.

If you begin your lane change early enough to deal with two drivers, you'll almost always succeed; if the first driver doesn't make room for you, the second one almost certainly will. So anticipate turns and plan for them in time.

In high-speed highway traffic, drivers may not have time to react to you. Then you need to wait for a gap in the traffic and move across all of the lanes at once.

LEFT TURNS

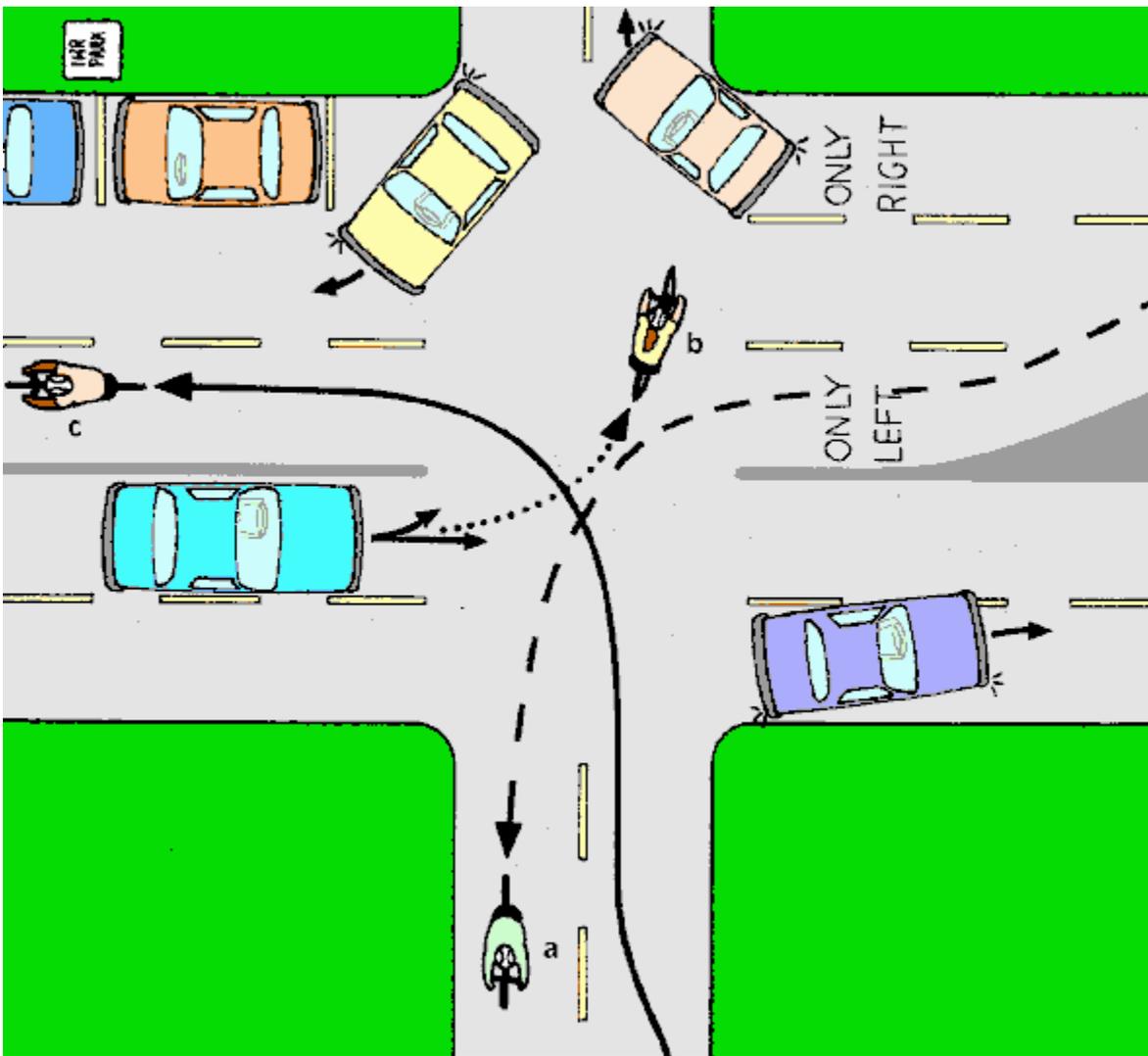
To prepare a left turn, change lanes until you reach the left-turn position in traffic. As you move toward the center of the street, this is where no cars on your left will go straight ahead. If the lane carrying left-turning traffic also carries through traffic, ride at its left side. If it's a left-turn-only lane, ride at its right side or in its center, depending on its width. On an ordinary two-lane street, turn left from just to the right of the centerline.

It may seem dangerous to move to the middle of the street, but in fact, the middle is the best position for a left turn. When you're in the correct position, all the traffic you have to deal with is in front of you. Since you're to the left of the through traffic coming from behind you, you don't have to look back while making your left turn. You can concentrate on the traffic from the left, right and front.

You may have to cross more than one lane to reach the left-turn position. Cross each lane in two steps. With one step, cross the lane line so you're just inside the next lane. With the next step, cross to the far side of the lane. At each step, look back and get a driver to make room for you.

When in position for your turn, yield to traffic from the left, right and straight ahead. So you don't have to come to a stop, you may move slowly out to the middle of the intersection, the same way cars do. Then you can get moving faster when there's a gap in the traffic. Pass an oncoming left-turning car right side to right side.

When turning left, don't let left-turning cars behind you pass you on the right. While waiting, keep near the middle of the lane or make a slow signal with your right hand. As you enter the intersection, ride straight ahead a short distance so the left-turning cars behind you can pull to your left.



Correct paths for left turns: **Left turn only lane:** bicyclist (a) has turned left from near the middle of a narrow left turn lane. **Left and through lane:** Wait for a traffic light near the middle of a left and through lane, so a motorist won't sneak past on the wrong side. Bicyclist (b) has turned left from the left middle of a left and through lane. **No special turn lane:** bicyclist (c) turns from near the centerline of a two-way, two-lane street and enters the inner lane of a four-lane street to avoid right-turning car entering the outer lane.

If you don't make it to the left-turn position by the time you reach the intersection, don't force the situation. Go straight through the intersection. Make your left turn at the next intersection, or cross to the other side of the street, double back and make a right turn.

It's also okay to make a left turn as a pedestrian. This way, you can turn left legally at a "no left turn" sign or handle traffic situations you feel are beyond your abilities. At the far right corner of the intersection, come to a complete stop. **Do not swerve left;** it's never safe because you would have to look for traffic in all four directions at once. Instead, stop and walk to where you can safely reenter the traffic flow.

GOING STRAIGHT THROUGH

Going straight through an intersection is easy compared with a left turn. You may have to change lanes, but not usually as many.

When going straight through, stay out of a right-turn-only lane. Make sure right-turning traffic passes you on your right. If there's a lane marked for right turns and through traffic, ride near its left side. You may sometimes have to merge into the second or third lane from the curb to avoid the right-turning traffic.

4. Getting Across Non-Standard Intersections

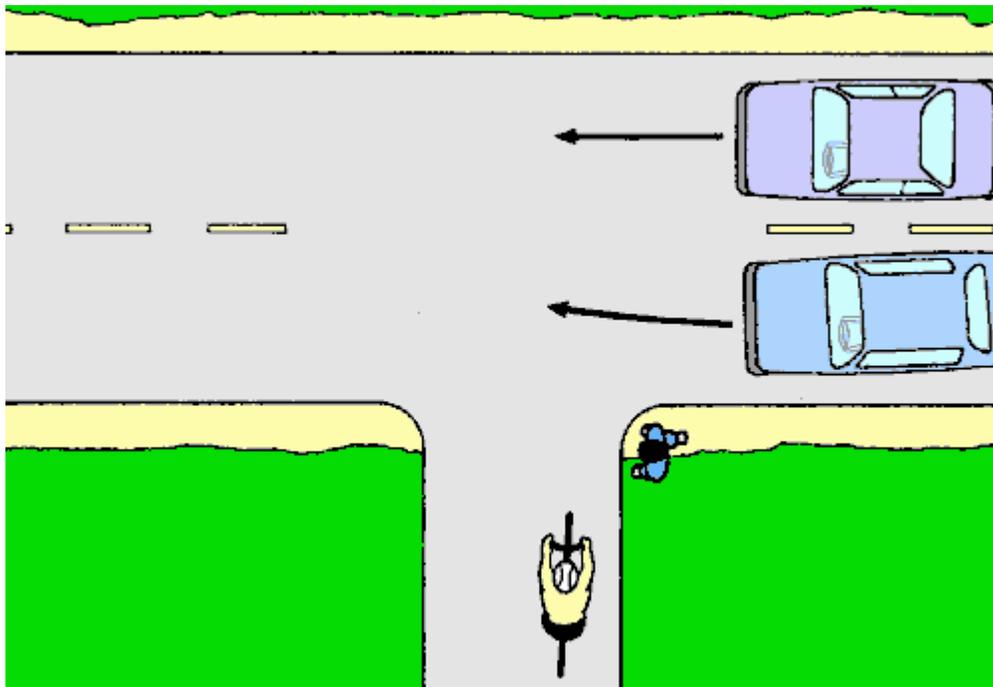
Not all intersections are of the standard, "crossroads" type. Though the same principles of lane positioning apply to all intersection maneuvers, some situations can be confusing and deserve a second look.

ENTERING THE ROAD

Bicyclists sometimes will ride against traffic or take unusual routes across intersections to get to their lane positions. Don't do it!

Instead, look for a good place to enter, where you can start out with a normal intersection maneuver: a left or right turn, or a lane change to merge into traffic. The traffic laws apply as soon as you're on the road, and even if you have to walk your bike a short distance to a driveway, a legal start is much safer. Besides, you often get started faster, since you can then move with the normal flow of traffic.

When entering the road from a narrow driveway, ride down its middle. A pedestrian could be approaching on the sidewalk from either side, and a car could be about to enter the driveway from either direction. By placing yourself in the middle, you can see in both directions equally well.



When entering the road, look left, but always look right as well for pedestrians and overtaking cars.

Even when preparing for a right turn onto a rural highway, look left, right, left, and then right again. A car approaching from your right can pull out to pass very quickly and head for you in the lane you're about to enter.

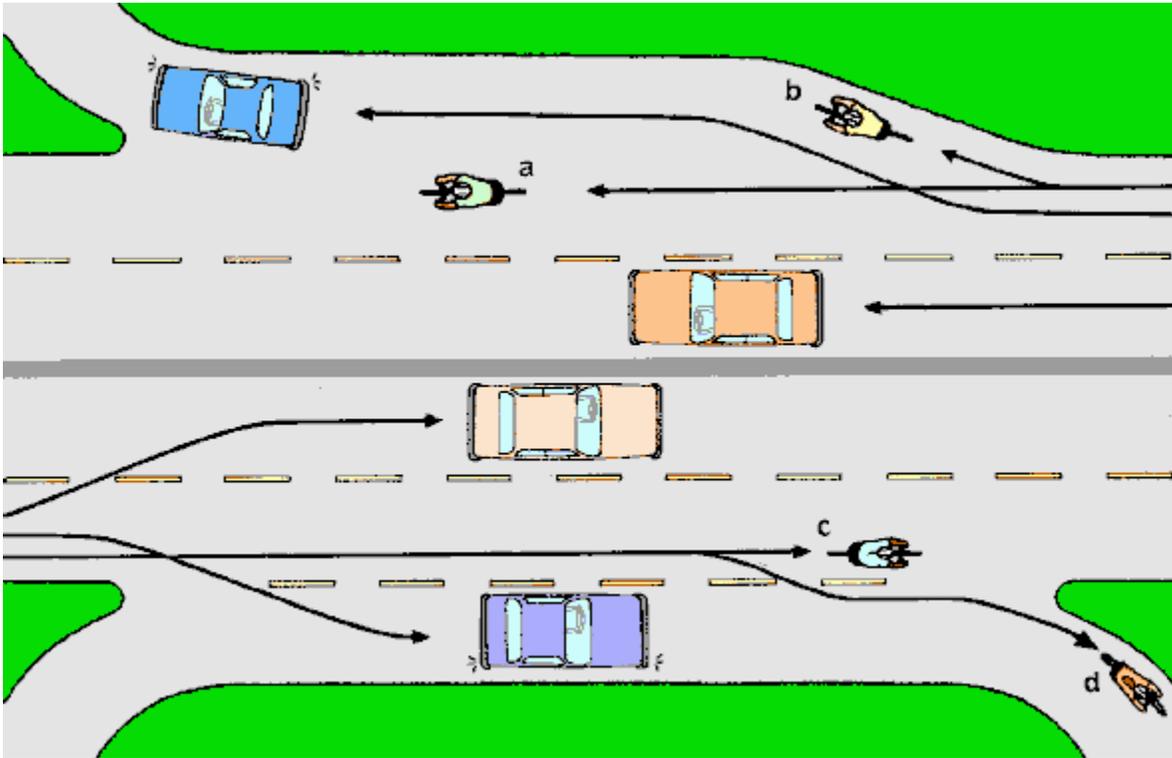
DIAGONAL INTERSECTIONS

Traffic follows the usual rules at a diagonal intersection, but it's harder for drivers to look into the diagonal cross street behind them. Be especially careful of vans and trucks, which have a right rear blindspot.

Some of the turns in a diagonal intersection aren't very sharp, so cars may not slow down very much. Be alert to oncoming left-turning traffic, and be sure the drivers have seen you.

ON- AND OFF-RAMPS

When you're riding along a road and an on-ramp comes in from the right, stay in your normal lane position. Traffic from behind you on the ramp will first pass to your right, and then to your left.



If passing an on ramp or off ramp as in (a), ride in a straight line. Enter or exit by following the right side of the ramp as in (b). If a combined roadway is short, keep your position as in (c), avoiding the need to merge right and then left again. You may avoid having to merge across a lane by riding the left side of a ramp as in (d), but then move into your normal lane position when traffic allows.

An off-ramp is much like a right-turn lane, except that the traffic is faster. If you're going straight and the ramp goes off to the right, stay in your normal traffic position, to its left. The exiting traffic will pass you on your right, and the through traffic will pass you on your left.

When you're passing an off-ramp, exiting drivers may hesitate to pass you on the right. It's effective to stay a little farther to the left than usual and make a left-turn signal. Drivers can see your hand signal for hundreds of feet behind you, so it's useful even when cars are traveling at highway speed.

A one-way roadway can have on- and off-ramps to the left side. When entering on a ramp from the left, ride along its left side, then the left side of the roadway until you can merge across to your normal lane position. When exiting on a ramp to the left, cross to the left before the ramp and ride on the left side of the ramp until it is safe to move to your normal lane position.

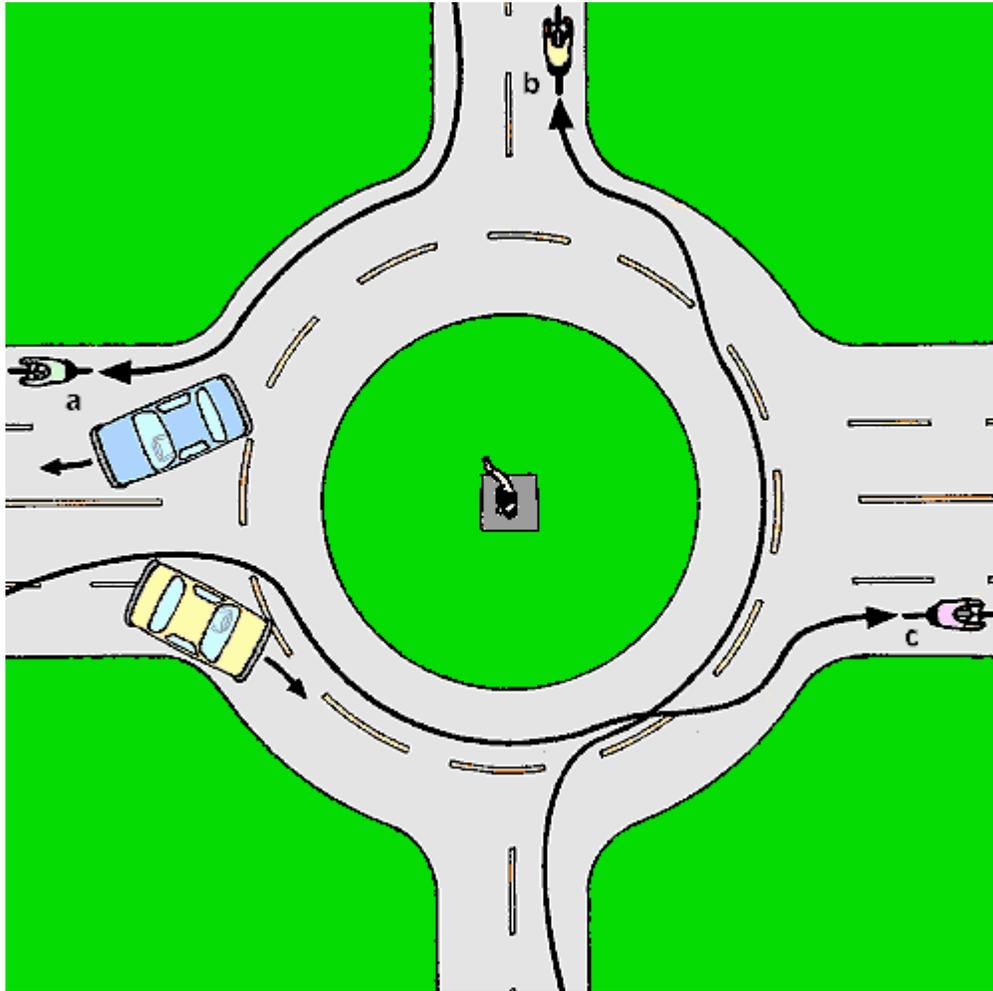
Sometimes two roadways will join or divide, but the total number of lanes will stay the same: For example, a couple of one-lane roads can join into a single two-lane one-way road. In high-speed traffic, it's best to ride near the edge, as with ramps. When entering or exiting from the left in slower traffic, you may ride on the right side of the left road, so you avoid having to cross as many lanes.

TRAFFIC CIRCLES

A traffic circle is a left-curving street with several side streets going off to the right.

The right lane of a traffic circle is, then, a right-turn lane used by entering and exiting traffic. Enter the traffic circle in the right lane if you're going to turn right at the first exit. But if you're going past the first exit, change lanes to the inside as you enter the circle. Ride around at the outer edge of the inside lane. It sometimes helps to make a left-turn signal while in the inside lane; drivers then feel comfortable about passing you on the right as they exit the circle.

Change back to the outside lane as you approach your exit. Use your normal tactics and hand signals for lane-changing.



Traffic circle or rotary intersection: Keep to the right if you will take the first exit, as in (a). Ride in the inside lane if you are going past the first exit, as in (b) and (c).

Because of the traffic circle's left curve, cars go straight to turn right. For this reason, it's especially dangerous to cross an exit of a traffic circle in the right lane. Bicyclists who always keep to the right will tell you that traffic circles are very dangerous. On the other hand, you'll find it surprisingly easy to ride around in the inside lane. Drivers don't go very fast there, since they follow the curve.

TWO LEFT TURNS IN A ROW

Sometimes you need to make two left turns quickly, one after the other; for example, if you're turning left at an intersection and then turning left into a driveway at the middle of the block.

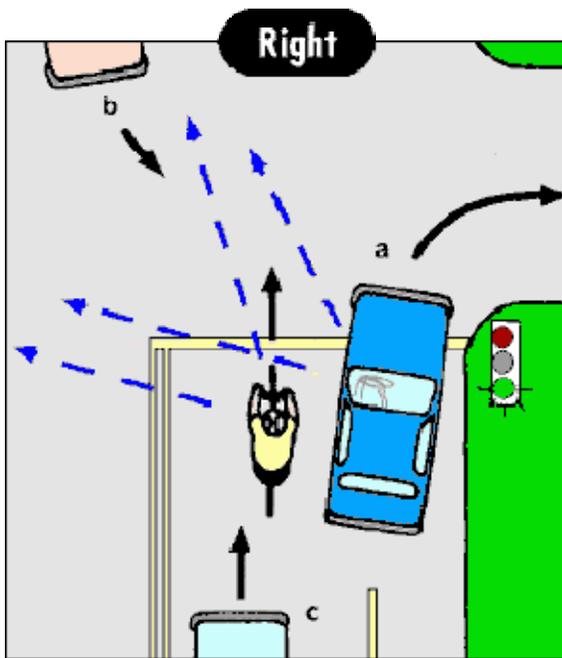
In this case, don't head for the right side of the street after the first left turn. You may not have time to change lanes to the left again. Finish your first left turn in the correct lane to begin your second left turn.

LEFT TURNS ON ONE-WAY STREETS

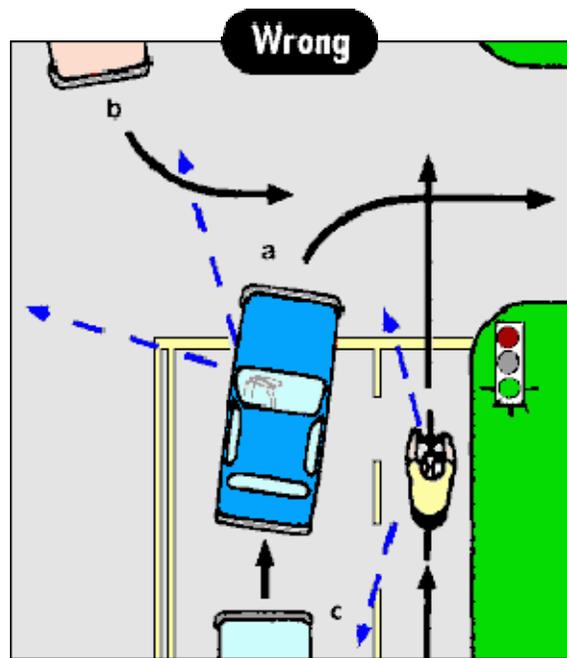
If a one-way street is two or more lanes wide, laws in most places allow you to ride at either side. When you make a left turn from a one-way street onto another one-way street, it's easiest and safest to ride around the corner on the left.

BIKE LANES AT INTERSECTIONS

Bike lanes give bicyclists a narrow lane to the right of motorists. Sometimes you must ride outside the bike lane to be safe, especially at intersections. Pass slower vehicles on the left. If you pass on the right, the vehicle you are passing might turn right without the driver ever seeing you, and that vehicle also hides you from oncoming drivers who might turn left in front of you.



Bike lane right turn problems. Straight-through bicyclist must cross paths with right-turning traffic. Motorist (a) must look left and ahead for other traffic and may not see the bicyclist. If motorist (a) does yield to bicyclist, left-turning motorist (b), who can not see the bicyclist, may proceed into path of the bicyclist, and motorist (c) must wait. The bicyclist, not sure if motorists (a) and (c) are turning, must look both backward and forward.



The bicyclist has merged out of the bike lane in advance of the intersection. Now nobody has to look backward and forward at the same time. Motorist (a) can make a safe and legal right turn. The bicyclist and motorist (c) can both continue through the intersection. Motorist (b) can see the bicyclist and knows to yield. Dashing of bike lane stripe indicates to right-turning motorists that they should merge right.

When turning left, merge left before the intersection as described earlier in this booklet. When going straight through, don't let right-turning traffic get on your left and "hook" you. Unless the bike lane goes to the left of a right turn lane, this means moving left (out of the bike lane) before the intersection, merging into line with the cars. When turning right you can usually stay in the bike lane.

Some motorists may think that the bike lane is "your space" and you should stay in it. Your safety is more important. Bike lane or not, follow the lane positioning guidelines in this booklet.

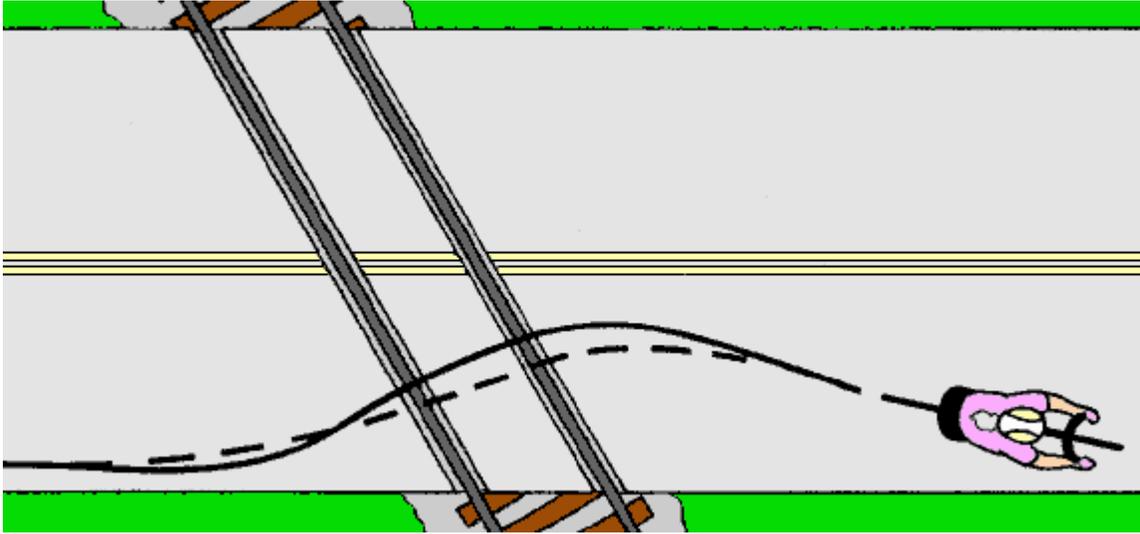
SUMMARY

And there they are - the difficult intersection types. Once you can handle these, you can ride just about anywhere. You can even figure out how to handle intersections not described here by using the principles of lane changing and positioning on which all intersection maneuvers are based.

5. Steering Out of Trouble

A bicycle is a highly maneuverable machine, but it stays upright only by being balanced. You have to take extra care to stay upright and read the road for hazards that can cause a fall.

Beware of any slippery or loose surface: gravel, snow, ice, leaves, oil patches, wet manhole covers and crosswalk markings. Avoid these, or ride over them slowly. Don't turn, brake or accelerate. Be ready to put a foot down for balance.



Check behind yourself for traffic, then cross a diagonal railroad crossing more nearly at a right angle.

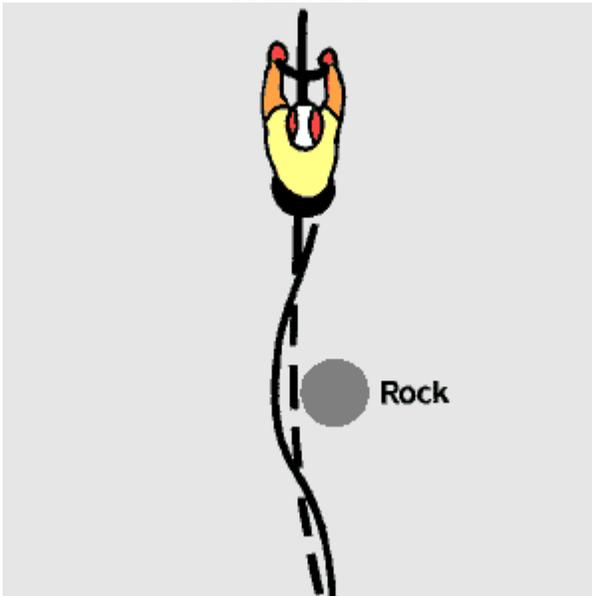
Be especially careful of diagonal railroad crossings, trolley tracks, a row of raised lane-line dots or a step between the shoulder and the travel lane. Any of them can push your front wheel to the side and sweep your bike out from under you. When you can't avoid them, cross them as nearly as possible at a right angle.

Beware of steel-grid bridge decks, which, especially when wet, will steer your bike parallel to the gridding, making balancing difficult. Test a grid deck at a low speed, and walk or use the bridge sidewalk if necessary.

Drainage grates with slots parallel to the road pose a special hazard. Most often you will be riding to their left, but if not, be sure to avoid going over one. Your front wheel can fall into the grate, causing you to go over the handlebars. It's a good idea to notify the applicable road or public works department of these and other hazards, as they are dangerous to bicyclists, and a liability issue.

Any bump, rock or pothole more than an inch high can squash your bicycle's tires flat against the rims, damaging the wheels. Avoid the bumps if you can, and walk your bike if the going gets too rough.

GOOD NEWS



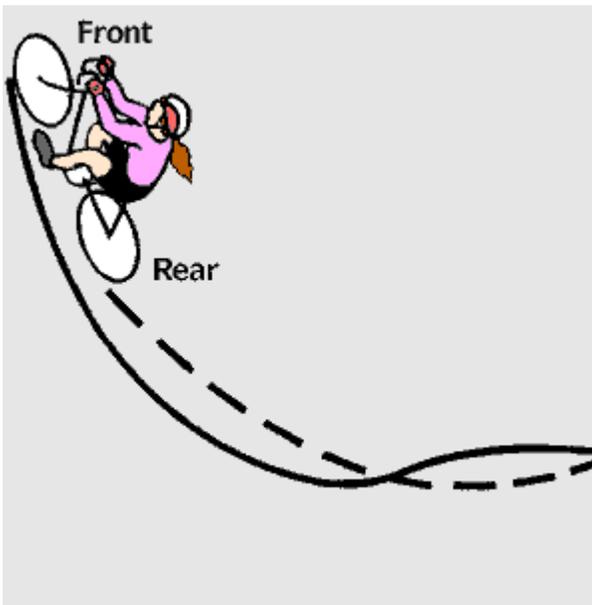
Now for the good news: Thanks to your bicycle's small size and quick steering, you can prepare yourself for situations like this one:

It's a pleasant, two-lane country road, just wide enough for cars to pass you in your lane. You look up at the scenery and then down at the road. There's a rock directly in front of you. And there's a car just behind you. You can't swerve left into the traffic and you don't want to swerve to the right, into the gravel and dirt. What to do?

Make your wheels weave around the rock while riding in a straight line - the rock-dodge maneuver. Just as you reach the rock, steer quickly left, then right to correct your balance, then straight again.

Because you correct the balance quickly, your body doesn't have time to follow the bike's weave. You continue nearly in a straight line. To give yourself better odds against rocks and potholes, go to an empty parking lot and practice the rock dodge until it becomes easy.

Avoid a rock by turning the handlebars to one side; then correct your balance by turning them the other way.



QUICK TURNS

Picture yourself in another pinch: You're riding along a street, approaching an intersection, and a car on your left suddenly begins a right turn. You are about to crash into the side of the car! You have to turn quickly alongside the car to get out of trouble. To begin a turn quickly, you have to lean your bike quickly. But how do you do that?

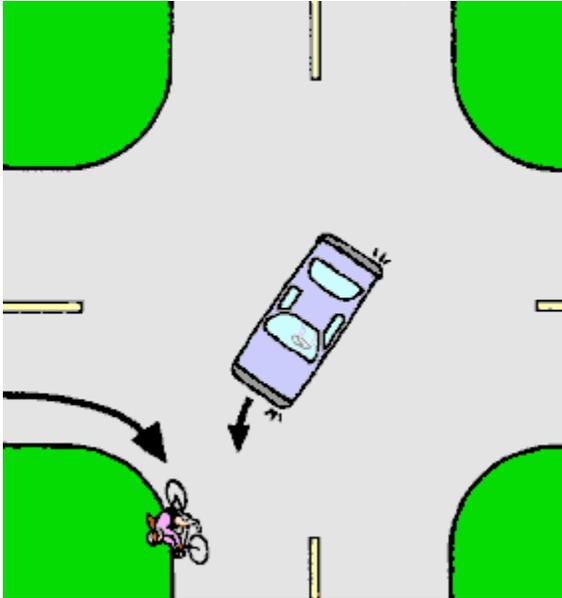
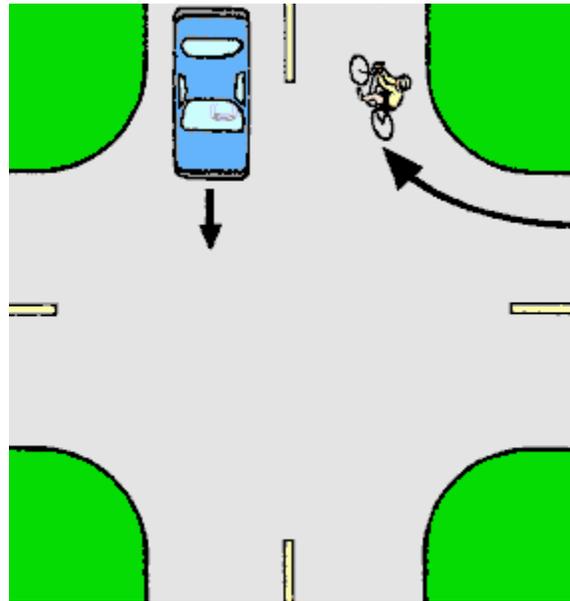
Your bicycle balances the same way you balance a yardstick upright on the palm of your hand. If you want to move the yardstick to the right, you move your hand to the left. Then, the yardstick leans to the right, and you follow it with your hand.

Just the same way, if you steer your bicycle out from under you to the left for a moment, you can then turn to the right. You must first steer momentarily toward the car you're trying to avoid.

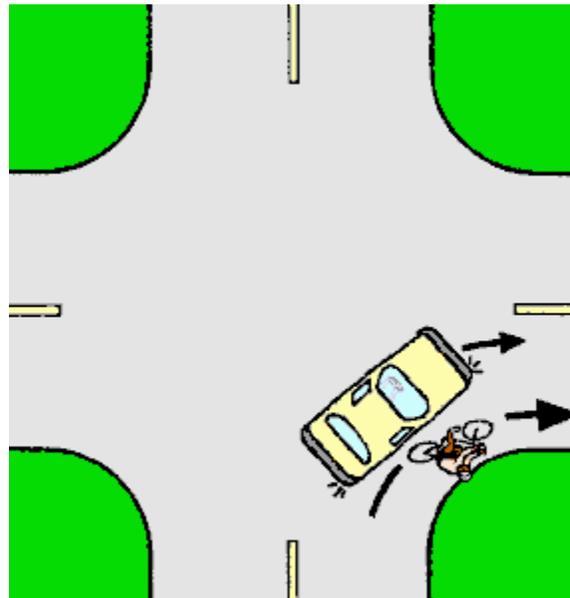
Twitch the handlebars to the left first to start your lean to the right for a quick right turn.

Try this technique in your parking-lot practice area. At slow speeds at first, yank the handlebars quickly to the left. Your bicycle will lean to the right, and then you can steer right. Practice first at slow speeds, then at faster ones. The faster you go, the less sharply you have to steer.

Collision avoidance:
Quick turn to avoid a car
running a stop sign.



Collision avoidance:
Quick turn ahead of a
left-turning car
that failed to yield.



Collision avoidance:
Quick turn to the right
of a right-turning car.

The quick turn is useful in many situations. If a car coming toward you begins a left turn, turn right into the side street with it. If a car pulls out of a side street from the right, swerve into the side street. It's best to turn to the right, behind the car - but if it's too late for that, turn left with the car. Even if you hit the car, the more nearly you are traveling in the same direction, the lighter the impact.

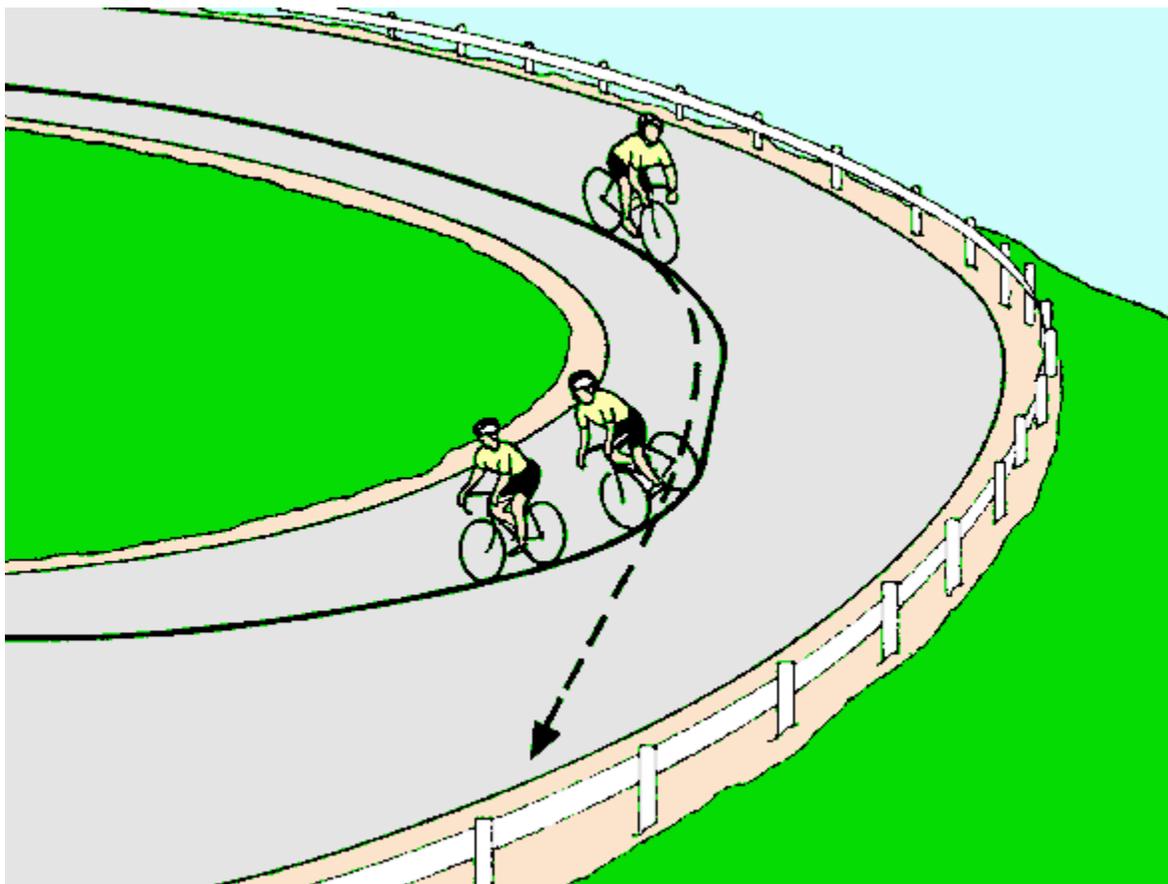
TOO FAST!

On a winding downhill, brake before you enter the turns, so you don't lose traction while turning. But sooner or later, you may find yourself going around a downhill curve too fast. If it's too late to slow down, a variation on the quick turn can get you through this situation in one piece.

The usual, panic reaction is to steer straight and brake. But then you're likely to go headfirst off the road before you can

stop. Instead, steer with the curve. Don't brake. Straighten the handlebars momentarily, as in the quick turn, to drop your bike into a deeper lean.

Usually, you'll make it around the curve - your tires have more traction than you normally use. If you do skid out, you'll fall on your side and slide to a stop.



If you're going around a curve too fast, straighten the handlebars momentarily to drop into a deeper lean.

If you're about to ride into a wall or over a cliff, you may decide deliberately to skid out. Lean into a turn, then hit the brakes. The fall may hurt - but not as much as the alternative.

JUMP?

There is a pothole straight ahead, and no time for even a rock dodge. You were so busy looking up at the traffic that you didn't see the pothole, and now you're about to trash your wheels. If only you could fly . . . Unfortunately, you can't fly your bike like the kid in the movie E.T., but you can jump your bike. Holding the pedals horizontal, squat down and pull up on the handlebars. Then jump up and yank your legs up under you. You'll be past the pothole faster than reading "squat-pull-jump-yank." You can't easily get your back wheel over the obstruction unless you use toeclips or clip-in pedals, but getting your front wheel over will usually prevent a crash.

Jumping is the quickest last-resort way to avoid a pothole or other road-surface hazard. Once you get good at it, you can even use it to climb low curbs or to cross diagonal railroad tracks. In your empty parking lot, practice jumping your bike. You must lift first the front wheel, then the rear wheel as it takes its turn with the bump. Your timing depends on how fast you're riding.

SUMMARY

Once you know your emergency maneuvers, you'll gain a much expanded sense of security, confidence and style. You'll be able to "ride loose," to use the language of California all-terrain riders. It's a sign of an experienced rider, and it saves you and your bicycle a lot of wear and tear.

6. Using Your Brakes

Picture yourself on a city path. Suddenly, you notice that you're about to ride down a flight of stairs. Or you're riding on a country road and there's a bridge out just a few feet in front of you. In cases like these, your bike's brakes could save your life. But even if you don't have such a dramatic experience, you'll feel more confident and go faster if you're ready to stop quickly and smoothly.

It takes practice to get peak performance out of your brakes. You can't just jam them on and skid to a stop as in a car.

Your brakes must be in good condition to give you the most control. Good bicycle brakes work powerfully and smoothly. If your brakes are weak or grabby, it's time for an overhaul. But to get the quickest possible stop, you also need to understand *weight transfer* and how it affects your stopping.

HOW WEIGHT TRANSFER WORKS

When you're stopping - in a car, on a bicycle or on foot - your weight shifts to the front. You see this happen every day. When you're running and stop suddenly, you have to put a foot out in front of yourself to keep from toppling forward. In the same way, when you stop a car, it "nosedives" as more weight goes to the front wheels.

When stopping your bike, the weight also goes to the front wheel. Try a little experiment: Walk along next to your bike. Squeeze the front brake lever. The bike will stop quickly, but the rear wheel will rise off the ground.

Also try squeezing the rear brake lever. Braking will be weak, and the rear tire will skid. The same things happen when you're riding. If you rely too heavily on the rear brake, the rear wheel will skid and wear out the rear tire quickly. On the other hand, you can go right over the handlebars if you use the front brake too hard.

How, then, do you get a powerful stop without risk? There's a trick to learn. Use the rear wheel as a signal to tell you how hard to apply the front brake. You become an antilock braking system for your bicycle.

THE REAR BRAKE'S SIGNAL

Practice on your bicycle in an empty parking lot. Squeeze the front lever three times as hard as the rear, while increasing force on both brake levers at the same time. With your light force on the rear brake lever, you're braking the rear wheel only lightly.

For a powerful stop, squeeze the brake levers harder and harder - the front always three times as hard as the rear. The rear wheel will eventually skid. But by this time, most of the weight will be off the rear wheel, so it will skid only lightly. You won't wear a big bald spot in the rear tire - though you will feel and hear the skid.



a) If you use the rear brake alone, the rear wheel will skid and stopping distance will be long.



b) If you use the front brake too hard, the bicycle will pitch forward.



c) Achieve a quick stop by squeezing the front brake three times as hard as the rear brake. If the rear wheel skids, reduce force on the front brake.

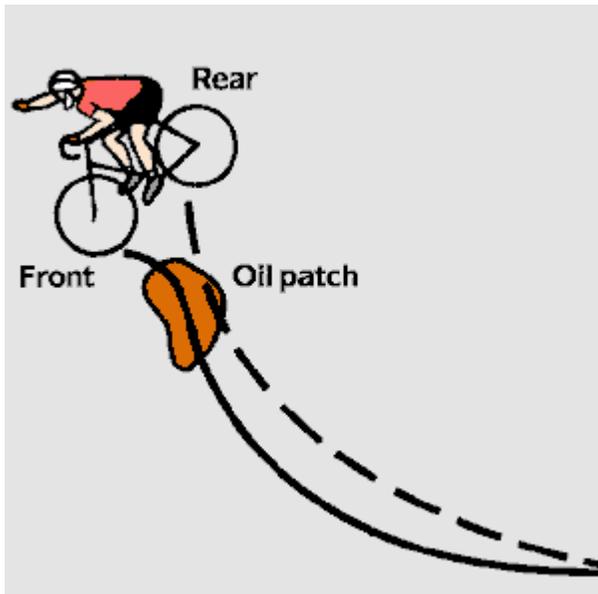
The rear wheel's skidding is your signal to release the front brake a little, transferring weight toward the rear to reduce skidding and avoid pitchover. Once the rear wheel stops skidding, squeeze the front brake harder. Continuously adjust the force on the front brake lever to keep the rear wheel just below the point of skidding.

This is your braking technique for straight-ahead stops on clean, dry pavement. Under these conditions the front wheel will never skid, so you can adjust the front brake to keep the bike under control.

You can also train yourself to release the brakes whenever the bicycle begins to go out of control. Practice only with great care in a quiet location. At a very low speed, 2 or 3 miles per hour, squeeze the front brake lever hard enough that the rear wheel begins to lift off the ground. Then release the brake lever instantly. Wear your helmet!

BRAKING UNDER POOR CONDITIONS

Braking technique is different when the road surface is slippery, or if you're turning. Under these conditions, the front wheel can skid. You must brake lightly and use the front brake less.



On pavement that is good except for a few places, look ahead for the slippery spots and bumps. Release the brakes as you go over the bad spots, then increase force again once you're back on good pavement.

On dirt, gravel or any surface that looks as though it might be slippery, test the surface by applying the rear brake lightly. If the rear wheel skids easily, avoid using the front brake. Keep your speed down so that you can still stop in time to avoid hazards.

In wet weather, the streets will be more slippery and so will your rims. Dry the rims by applying the brakes ahead of time. It can take 100 feet or more before the brakes begin to work normally.

Avoid turning and braking on a slippery surface. If your front wheel skids out, you'll fall.

When turning, you may have a choice to swerve out of danger or stop - but don't try to do both at once. Practice braking on turns and slippery surfaces to get a feel for these conditions.

On a long, steep downhill grade, use both brakes equally to control speed and avoid overheating either rim. If the slope is extremely steep, the risk of pitchover is increased, so ride slowly to avoid the need for a quick stop.

SUMMARY

Your training will pay off as you become more confident on your bike in all types of riding situations. You never know when you might have to stop - and the better you can stop, the more confidently you can go.

7. Riding in Groups

Whether you're touring, training or just exploring country roads, riding with friends can add a lot of fun to your bicycling. With a local bicycle club, you can meet people and share information about routes, equipment and bicycling events. In addition, athletically inclined bicyclists often push themselves harder and improve more when training together. But you can spoil the fun if you run into one of your companions. Bike-bike crashes are just as common as car-bike crashes, so it's a good idea to give some attention to safe group riding.

THE SAFETY COCOON

Imagine a "cocoon" of space around each bicycle in your group of riders. It's easy to think that you can safely pass closer to a bicycle than a car, because the bicycle is smaller. But the bicycle can turn to the side just as fast as a car. Keep 3 feet of clearance when you're passing another bicyclist - more at high downhill speeds.

At any time, one of your riding companions might be about to pass you, so be especially careful to ride in a straight line. You don't have eyes in the back of your head, and you can't constantly trace the position of bicyclists behind you as you ride.

When you're about to pass another bicyclist, it's your responsibility to do it safely. The other members of your group can't read your mind to know that you are about to change position in the group. Check behind you before you change your lane position. Call out, "On your left" to the bicyclist you're passing, and pass on the left.

Never sneak past another bicyclist on the right - if you do, you force the other bicyclist farther toward the middle of the road without warning.

RIDING SIDE BY SIDE

Bicyclists often like to ride side by side so they can talk with each other. Riding two abreast is legal in most places. It's okay on a straight, flat road. There, drivers can see you from behind, and you can usually see or hear them approach.

Side-by-side bicyclists occupy a whole lane. On a multilane road with light traffic, cars can pass in the next lane. On a narrow road or with heavier traffic, be courteous! Don't make drivers wait for you. Pull into a single line well before cars reach you. It takes only one thoughtless rider out to the left of the group to endanger the whole group. Call out, "Car back" to let the group know it's time to single up.

A rear-view mirror helps you to check on the cars behind you. With a mirror, you can ride side by side more often and still pull back into a single line to let the cars pass you.

Never ride side by side on a hilly or winding road. Don't make yourself into a last-moment surprise to a motorist coming around a curve or over a hilltop.

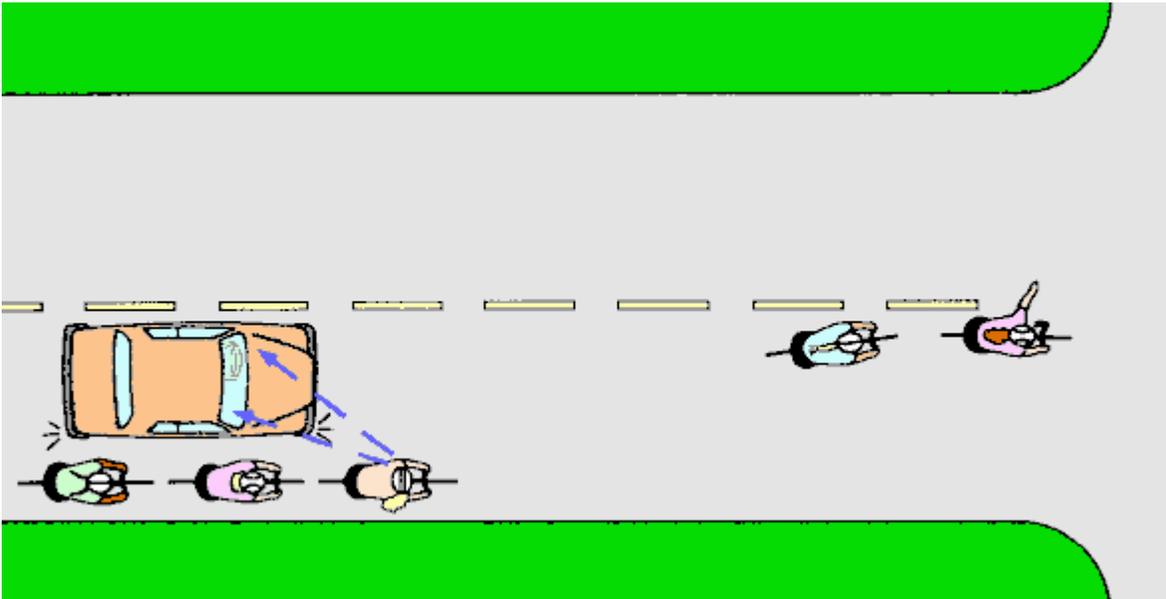
INTERACTING WITH OTHER ROAD USERS

Some bicyclists fall for a "herd instinct" when riding in groups - as if the group protected them, or there's nobody else on the road besides the group. It's tempting to play "follow the leader" in a group of bicyclists - tempting but dangerous.

When preparing a lane change or turn, you must look out for yourself. It can be safe for the bicyclist ahead of you to change lane position, but not safe for you, since cars or other bicyclists could be approaching from the rear. You must look back for them just the same as when you ride alone. Look left, right, and left again for traffic at stop signs - don't follow the rider ahead of you into an intersection.

The only exception is in a tightly organized, small group that moves completely as a unit. The first and last riders are understood to be on the lookout for the entire group. Don't count on this service unless it's understood in advance.

When crossing lanes, a line of bicyclists should "snake" across, one at a time, each rider in turn. This way, you leave a safe passage for cars. A ragged line of bicyclists blocks the entire lane.



"Snaking" across a lane, the cyclists can allow the passing car to make its right turn, while they turn left. Each cyclist looks back before crossing the lane.

Make a neat, straight line when waiting at intersections. Groups of bicyclists who pile up at intersections block the road. This practice is unnecessary, discourteous and dangerous. When you stop to rest, to read your map or to wait for companions, pull completely off the road. It's surprising how many bicyclists fail to observe this simple caution.

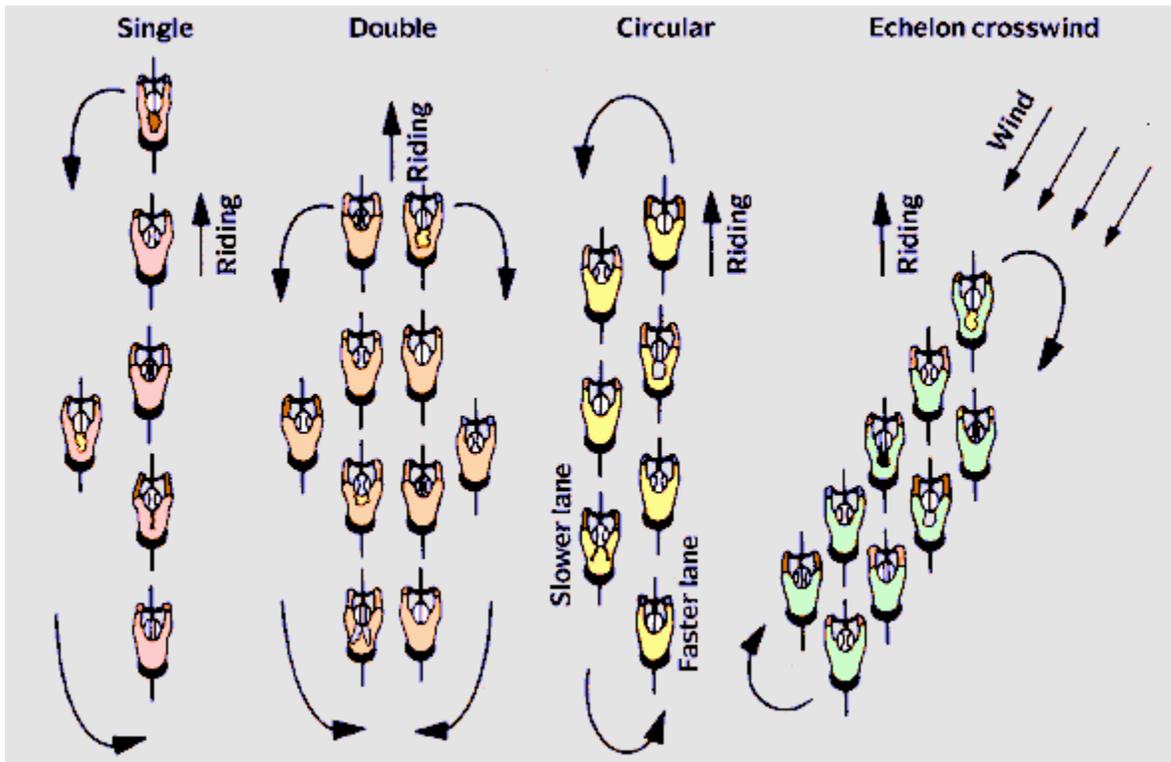
DRAFTING AND PACELINE RIDING

When you ride close behind another bicyclist, you don't have to work as hard. The bicyclist in front of you serves as a windbreak, reducing your air resistance. Experienced bicyclists take advantage of this effect, drafting each other in a paceline.

In a paceline, each bicyclist works hard for a little while at the front, and then drops back to the rear along the left side of the line of riders. Large groups may ride in two lines side by side - a double paceline, with the leaders dropping back along the outside, right and left.

A well-coordinated paceline is poetry in motion, but drafting is always a little risky. To take advantage of the windbreak effect, you must follow the rider ahead of you closely; but you must never let your front wheel overlap that rider's rear wheel. If the wheels touch, you suddenly can't balance and you'll almost certainly take a quick, hard fall. Other riders behind you may land on top of you. Ride in a paceline only if you've developed good control over your bike, and you know that the other bicyclists can also manage the situation safely.

Everyone in a paceline must ride smoothly, with no quick braking or swerving. Look past the rider in front of you: Don't stare at his or her rear wheel. Try to anticipate the moves the lead rider will make. The lead rider should announce road hazards: "Glass," "Dog right," "Car up," and maneuvers: "Slowing," "Left turn." The last rider should announce "Car back" when a car is about to pass the group. Hand signals aren't a good idea in a tight paceline group - it's more important to keep both hands on the handlebars.



Four types of pacelines. The two at the left are relatively easy, but the two at the right require a well-coordinated group of expert riders.

When you pull in behind another rider to draft, call out "On your wheel" so he or she will know you're there.

RACING

There's a major exception to these rules of cooperation: In a mass-start road race, riders often swerve deliberately to make it hard for others.

Meanwhile, other riders lurk behind, drafting each other until the final minutes when they sprint all-out for the finish line. The tactics of a race - drafting and solo sprints, cooperation and competition - make it exciting for the racers and spectators. But leave this kind of excitement for the racers. When riding in a group, focus on cooperation, not competition. Relax and enjoy your ride!

SUMMARY

Group riding can add a new dimension to your bicycling. Except in the special situations of the paceline or mass-start race, the rules of the road apply to you with other bicyclists just as they do with motorists. Remember to keep the safety cocoon around you, be predictable, and don't follow another bicyclist into a dangerous situation. The rewards of increased enjoyment of bicycling with others are well worth the extra attention.

8. Riding in Rain and Darkness

If you use your bicycle for transportation, sooner or later you'll find that you have to ride at night or in the rain. Though statistical studies show that it is more dangerous to ride under these conditions, they also show that the overall crash rate for bicyclists who ride regardless of weather is lower than that for bicyclists who ride only on fine days (see Jerrold Kaplan, (see Jerrold Kaplan, "Characteristics of the Regular Adult Bicycle User," Federal Highway Administration, 1975). Skill and correct equipment make it easy to ride with confidence.

NIGHT RIDING

To ride at night, you need lights. Even when streetlights show you the way, you need lights so other people can see you against the glare of car headlights.

A white headlight identifies the front of all vehicles. A bicycle is always required by law to have a headlight at night. A front reflector, such as those sold on new bicycles, is not sufficient.

A red taillight may be required, though sometimes a rear reflector is permitted as a substitute. It's a good idea to use both a taillight and rear reflector.

TYPES OF BICYCLE LIGHTS

Three major types of lights are available for bicycles: small battery lights, generator systems and high-powered battery systems. Choose your lights depending on where you ride.

Small battery lights are most useful for riding under streetlights. Aim the headlight level, so it looks as bright as possible to people ahead of you. Rechargeable batteries will cut the cost of operating small battery lights. Hardware stores and electronics stores sell these batteries and chargers.

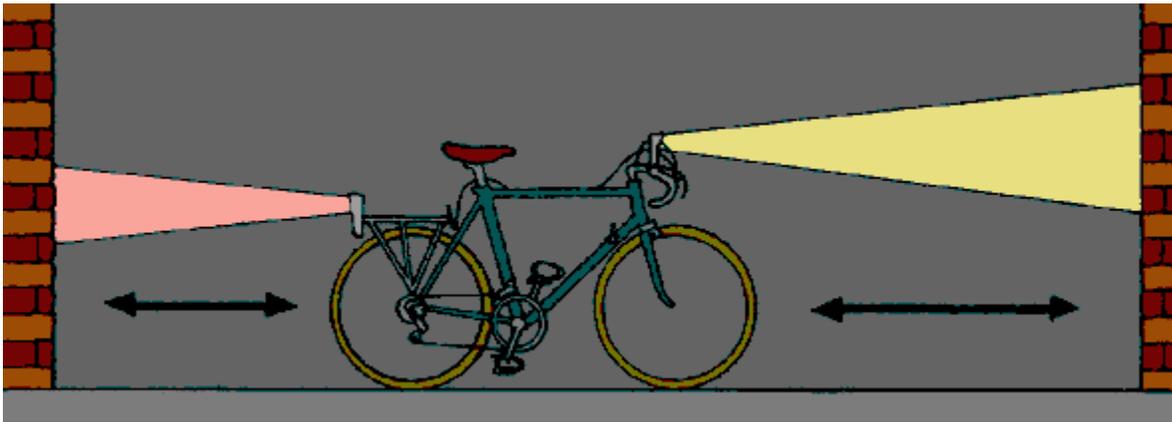
Unlike small battery lights, a good generator system is bright enough to light your way on dark roads. It's the best choice for long-distance touring, since you may not be able to buy or recharge batteries. Most generator systems go dark when you stop riding; a disadvantage in stop-and-go city riding. Some generator systems have a battery backup that keeps them lighted when you stop.

High-powered battery lights are brightest of all. They're best for night riding under demanding conditions: on dark roads or off-road. They're more expensive and heavier than other bicycle lights, and they need recharging frequently.

When riding at night, carry spare bulbs and batteries for your lights. It's also a good idea to carry a small battery light as a spare to get you home in case your main lighting system fails.

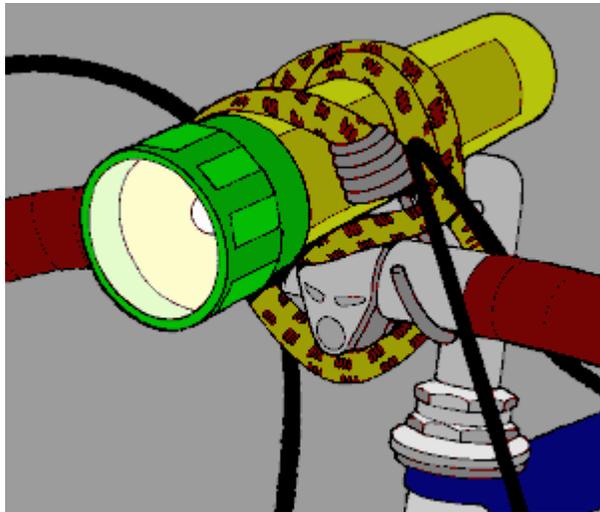


Mount a generator or high-powered battery light low, so its beam pattern extends longest and reveals surface irregularities.



Aim taillights and small battery headlights level. Test aim by rolling the bike toward and away from a wall. The center of the beam should stay at the same height.

USING REFLECTORS



The no-excuse headlight: A flashlight strapped to the handlebar stem with a bungee cord is legal, and sufficient for city use.

Don't ride at night without a rear reflector, and pedal reflectors or reflective ankle bands. Make sure that your reflectors aren't obscured by baggage or dirt. Reflectors work well for drivers approaching from behind you. Reflectors also continue to work if your taillight bulb has burned out, or if you're stopped and your generator lights go out.

It's a good idea to use additional reflectors beyond those sold with a new bicycle. Most bicycle shops carry reflective leg bands and vests. Adhesive-backed strips of reflective material are also sold for the bicycle frame and fenders. The rear reflector sold on new bicycles isn't as bright as it could be; it has three panels to reflect to the left, right and center. A large automotive reflector is brighter directly behind you where it's really needed. Be sure to aim your rear reflector directly back. If it's tilted up or down, it may not work at all.

Don't consider front and side reflectors to be a substitute for a headlight. Pedestrians stepping off the sidewalk in front of you have no headlights and won't see your reflectors. Motorists pulling out of side streets ahead of you also won't see your reflectors, because these cars' headlights throw their beam straight ahead - across the road in front of you.

Test your nighttime equipment: Have someone ride your bike past you at night and check to see how well your systems work.

NIGHT-RIDING TACTICS

When riding at night, you can't see drivers inside their cars to make eye contact, but you can flash your headlight at them by twitching the handlebars. Flash your headlight when you need to get the attention of a driver pulling out of a side street.

In some cities, the risk of theft and physical attack at night in dark, empty places like parks, pedestrian overpasses and industrial areas is generally greater than the risk of crashes on streets in residential and business districts with a reasonable amount of traffic. Choose routes accordingly.

Rural riding at night is the most demanding of your equipment and technique. Most generator lights are not bright

enough to allow you to ride downhill at full speed on an unlighted road. Stay within the limitations of your lights.

Narrow, shoulderless rural roads with moderate to heavy traffic have a bad record for nighttime bicycle crashes. On the other hand, quiet rural roads can be very pleasant to ride at night. Just be sure that your headlight is powerful enough to show you the way, and your taillight and reflectors are sufficient to alert overtaking motorists.

At night there are generally fewer drivers on the roads; but of these drivers, a much larger percentage are drunk drivers. A useful trick on an unlighted road is to look at your shadow as a car approaches from behind. If the shadow moves to the right, the car is passing to your left.

RIDING IN WET WEATHER

Riding in wet weather can be miserable, but if you equip yourself well, you can stay comfortable.

Many bicyclists carry no wet-weather gear, and they get soaked. Some bicyclists try to use raingear borrowed from the coat rack at home. Long raincoats and ponchos tangle with the spokes or frame. A hood is dangerous, because it can block your view when you turn your head. Rubberized rain suits get as wet inside as out, because they don't let perspiration evaporate.

A bicyclist's rain cape is a fine solution, along with fenders on your bike. The rain cape is like a poncho but tailored to fit you in your riding position on the bicycle. It's small and light to carry, and relatively inexpensive to buy. It has loops at the front, which you can hook over your thumbs or over road-bike brake levers, extending forward like a little tent. A waist strap holds down the back of the cape. The cape should be bright yellow, to make you more visible to drivers.

The rain cape allows ventilation underneath, and so it's the best solution on a warm, rainy day. But with the rain cape, you need a pair of full-length fenders on your bicycle. They keep dirty water and mud from flying up under your cape. A mudflap on the front fender, or toeclip covers, will keep your feet dry, and a helmet cover will keep your head dry.

High-tech rain suits of Gore-Tex or other materials that "breathe" can also do the job, especially when equipped with air holes to allow for cooling. Many have reflective stripes to enhance your visibility. You still should use fenders to keep road dirt off you and your bicycle.

Your riding technique needs some modification in wet weather. Rim brakes work poorly if the bicycle has steel rims - stopping distances may be increased by 10 times. It helps to wipe the rims dry by applying the brakes in advance, well before you need to stop.

Aluminum rims or a hub brake improve wet-weather braking. One of these is advisable if you ride much in wet weather. Check with your bike shop about the best choice.

In the rain, pay special attention to metal surfaces such as manhole covers or steel-grid bridge decks, painted traffic markings, wet leaves and oil slicks. They're all especially slippery. Avoid riding through puddles if you can't see the bottom - a puddle can hide a pothole.

When you get home, it's a good idea to relubricate your bicycle's chain to help prevent rust.

SUMMARY

Riding at night is reasonably safe if you equip yourself correctly. You must use at least a headlight and rear reflector. A taillight and additional reflectors can make you more visible, and are required by law in some places. Brightly colored clothing can also help, as can reflective strips on your baggage, clothing, or helmet. Reflective patches on the backs of your gloves allow you to make a flashing turn signal by rotating your wrist.

If you are properly equipped, riding at night is not much different from riding in daylight hours, though some situations are better avoided because of increased risk of physical attack or of a crash.

To ride comfortably in wet weather, you need to equip your bicycle with fenders, and carry rain clothing. Also be aware of the reduced traction and poorer brake performance in wet weather. Equip yourself, use reasonable caution and don't let messy conditions keep you off your bike.

9. Ways to Deal with Tough Situations

Let's face it - some traffic situations go beyond the normal rules. When the traffic system begins to break down because of overcrowding, poor planning and disrespect for the law, you may have to "bushwhack" your way through the mess. You can emerge safe and maintain the respect of other road users if you're careful. Here are some situations where you have to take the initiative.

WHEN TRAFFIC LIGHTS DON'T TURN

Always stop and wait for red lights. You not only ensure your safety, but you also increase respect for cyclists as law-abiding road users.

But some traffic lights don't turn green until they receive a signal from a metal detector buried in the pavement. Some of these detectors do not respond to bicycles.

You can recognize the detector by a square or octagonal pattern of thin lines in the pavement, where slots were cut for the detecting wires. The detector is most sensitive if you ride along one of the wires. (Sometimes, the slots for the wires are not visible, as the street has been repaved since they were installed).

If your bicycle doesn't trip the detector, you have to wait for a car to do it, or else you have to go through the red light. Going through the red isn't against the law, because the light is defective. If you ever have a crash or get a traffic ticket because a traffic light won't turn green, it's the fault of whoever installed the detector.

Detectors that work for bicycles are available at little or no additional cost. Design guidelines exist for these detectors. If you want to promote better conditions for bicycling, alert your government officials about road conditions of any type that are unsafe for bicycling. Let them know that they are responsible to make the roadways as safe as possible for all types of vehicles, and that accommodation of bicycles is important to you. Getting involved at the local level can be very effective.

GETTING THROUGH TRAFFIC JAMS

Traffic jams don't have to stop you - that's one of the biggest advantages of bicycling in the city. But in the tight quarters of a tie-up, take extra care. Stopped cars in a traffic jam present the same hazards as parked cars: blindspots, suddenly opened doors, and unpredictable starts and turns.

If there is an open passing lane, use it rather than threading between cars. If the street is completely plugged, pick your way forward slowly with your hands on the brake levers. Remember, any car door could open!

If you're in a traffic jam, you can be fairly sure that the cars will not move, since they have nowhere to go. But if there's an open driveway or parking space into which a car could turn, you have to assume that it will. Look to see whether the car's front wheels are turned. Move away from the side of the car as you pass, and try to get the driver's attention as you approach the front of the car.

When cars are stopped, but not completely bumper to bumper, be very wary of cars from other lanes cutting across in the gaps. Stop and look before you move out into a gap. Be especially careful if the vehicle you're passing, like many vans, doesn't have a hood you can see over.

Don't pass a long truck or bus in a traffic jam unless there's a full, open lane next to it. If you ride close to the side of such a vehicle it may begin to merge toward you, leaving you no way to escape.

As you approach an intersection, change lanes to the same position as you would in normal traffic. Before you cross in front of a car to change lanes, make eye contact with the driver even if the car is stopped. When you reach an intersection, wait behind the first car at the traffic light. Don't move up next to the first car. Drivers don't always use their turn signals, so you don't know for sure which way the car will turn when the light turns green.

These traffic-jam tactics are reasonably safe, but in some places it is not legal for a bicyclist to pass on the right or ride between lanes of traffic. On the other hand, it's usually legal for you, or any driver, cautiously to disobey normal traffic

rules when the road is obstructed.

SIDEWALK AND BIKEPATH RIDING

Many people consider sidewalks a safe place to ride because cars don't travel on them. Unfortunately, sidewalks aren't safe. Stay off them, except where you have no choice.

Trees, hedges, parked cars, buildings and doorways create blindspots along a sidewalk, which is too narrow to allow you to swerve out of the way if someone appears. A pedestrian on the sidewalk can sidestep suddenly, or a small child can run out from behind an adult. Never pass a pedestrian until you have his or her attention.

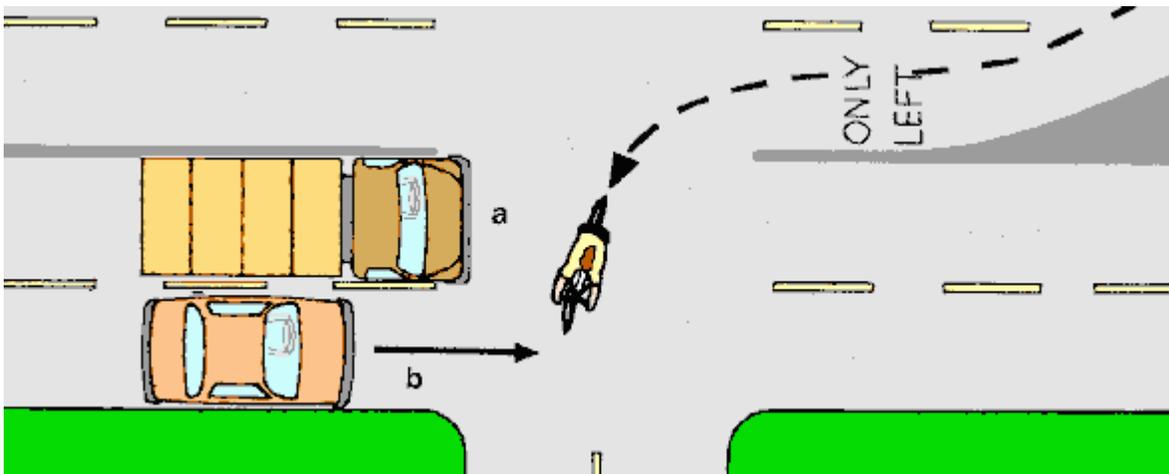
And cars do use sidewalks - at every driveway and cross street. Since there are no clear rules for travel on a sidewalk, your only choice is to ride very slowly and look in all directions before crossing a driveway or street.

A bike path can sometimes provide a useful shortcut, and it can be pleasant and scenic. Use it with caution. Even if you are supposed to have the right of way, the path may be too narrow for safe maneuvering. Pedestrians are unpredictable, and intersections are often hazardous. A bike path can get crowded with inline skaters, dog walkers and careless, inexperienced bicyclists. Most bike paths are no place for a fast ride or high-speed commuting trip.

AVOIDING THE MOVING BLINDSPOT

On your bicycle, you can see over most cars. You'll become used to this advantage. Don't let it fool you, though. You can't see over a large SUV, van, truck or bus. Moving blindspots lurk behind these tall vehicles.

Suppose that you're riding on a two-way, four-lane street. You've merged to the inside lane, because you want to turn left. You signal your left turn and continue to move forward. You see only one other vehicle on the street: a van, coming toward you in the opposite passing lane. It stops to let you turn left. Can you make your turn safely?



The moving blindspot: Motorist (a) has stopped as a favor to the bicyclist who is turning left. The bicyclist and motorist (b) have both seen the entire road at one time or another, but they have never seen each other.

No! Since you are moving forward, a blindspot behind the van is moving toward you. A car could be passing the van in the outside lane, and you would never see that car. If you were to cross in front of the van, you could be met with a terrible surprise.

ARE YOU INVISIBLE?

People will often tell you to "ride as if you were invisible." That advice only makes sense where you're actually hidden by a blindspot. To ride all the time as if you were invisible, you would have to pull off the road whenever a car approaches from behind. You would also have to stop and wait until traffic clears before crossing any intersection.

Instead, *ride to make sure you're visible*. Wear bright-colored clothes day and night, and use lights and reflectors at

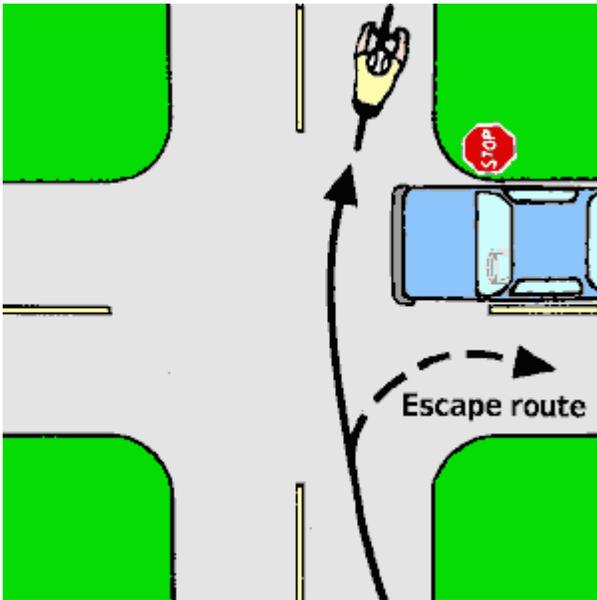
night. Ride in the correct lane position where you can be seen. Also, test to make sure that drivers have seen you. This is the safest way to ride.

MAKING EYE CONTACT

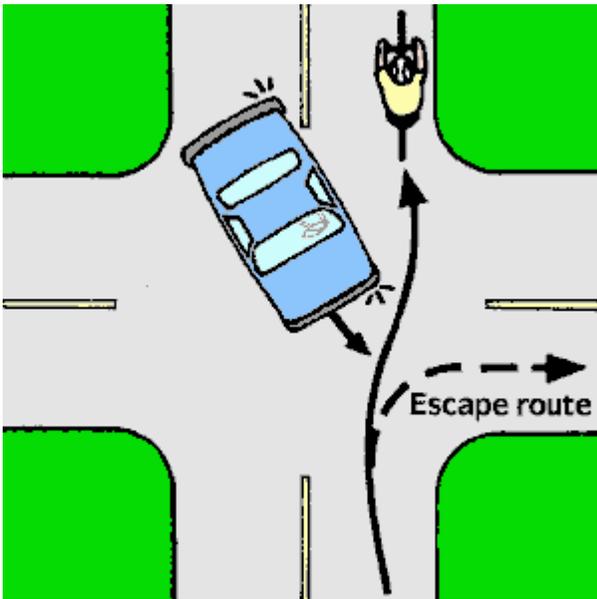
How do you test that a driver has seen you? Here's an example. Suppose that you are on a main street, riding toward an intersection. A car is approaching from the right in the cross street, where there's a stop sign. How do you handle this situation?

As you approach the intersection, look into the car window and make eye contact with the driver to ascertain that the driver has seen you. Watch for the car to slow down more than it would if you weren't there.

If you look into the driver's window and the driver isn't looking at you, then be very cautious. Even if the car is stopped at the stop sign, a driver who doesn't know you're there has no reason to stay stopped. Slow down, and call out to get the driver's attention. Proceed only when you're sure that the driver is waiting for you.



To call the bluff on a driver inching out from a stop sign, check behind you for traffic, then keep pedaling as you move farther into your lane.



To call the bluff on a driver threatening to turn left from ahead of you, move into your lane to make yourself more visible, then right to prepare your escape if necessary.

DEALING WITH RUDE DRIVERS

Some drivers try to cut across in front of you. They inch out from a driveway or stop sign and treat you as if you have no right to the road.

These drivers seem more dangerous than they actually are. Most drivers who play these tricks are only trying to bluff you. They inch forward with one foot on the gas pedal and the other on the brake pedal, waiting to see whether you'll stop.

Giving in to this bullying will slow you down and leave your self-esteem in shambles. Stand up for your rights. Don't let rude drivers spoil your trip. Outbluff them. Here's how.

With a little experience, and after learning the emergency braking techniques in this booklet, you'll have a good idea of your bike's stopping distance in any situation.

You outbluff a driver by making it clear that you don't intend to stop. Continue to move forward - and keep pedaling, since your turning pedals are a clear signal to the driver. Meanwhile, figure out when you'll have to hit the brakes, in case the driver pulls out in front of you anyway.

In 999 cases out of 1000, the driver will stop and wait for you before you have to brake. Move on past the car. In the odd case that the driver doesn't stop, you'll be prepared to brake in time.

The real danger at intersections is from drivers who run stop signs or red lights without even slowing down, or who stop and then start again without looking. But these drivers are rare; crashes tend to deplete their numbers.

REPORTING BAD DRIVERS

If a motorist inadvertently or maliciously causes you to feel threatened or attempts to harm you, make note of the license plate number and, if possible, a description of the driver. In some places you can report the incident to the Department of Motor Vehicles. If the offender is a commercial driver, inform the driver's employer. You may be able to report the driver's employer to the Department of Motor Vehicles or the licensing agencies that regulate trucking. You may also be able to press criminal charges for assault if you believe the driver attempted to hit you or threw something at you, or assault and battery if you were struck by the car or some other object.

IN THE EVENT OF A CRASH

After any fall or crash, seek appropriate medical attention, and before your next ride, have a qualified mechanic check

that your bicycle is in safe working order.

Most bicycle crashes don't involve other people, and can be prevented by good bicycle handling techniques. These crashes typically result from the bicyclist's losing control on a bad surface or hitting a fixed object (see Moritz, William, *Adult Bicyclists in the United States - Characteristics and Riding Experience*, Transportation Research Board, 1998). But if you are in a crash involving another person, first get appropriate medical attention for all parties. Gather as much information at the scene as possible including the other parties' names, addresses and insurance information. Keep in mind that you may not discover an injury, or damage to your bike, until later. Seek the advice of an attorney, especially if there is any dispute as to who was at fault. Be wary - many people including police officers and insurance officials do not understand bicyclists' rights to the road and this may cause them to have a bias against you. For this reason, do not apologize or say anything that could be interpreted as an admission of fault and do not say that you are not hurt - you may not realize that you are injured until later. If the investigating officer takes a driver's version of what happened and it differs from yours, politely insist that the police officer also record your version.

REDUCING FRICTION BETWEEN BICYCLISTS AND MOTORISTS

The main way bicyclists annoy motorists is by performing unpredictable maneuvers this booklet warns against.

Fearful instruction - "always keep away from traffic" - is passed down to children by parents who don't know much about bicycling - the blind leading the blind. From about 1930 to 1965, few adults rode bicycles in North America, and that was long enough for incorrect ideas about bicycling to become deeply rooted.

Certainly, children shouldn't be allowed to ride bicycles in heavy traffic, any more than they should be allowed to drive cars. But that doesn't mean that adult bicyclists should have to ride like children.

There will always be people in cars who yell, "Get off the road." Don't let them bother you. Position yourself to encourage drivers to maneuver around you correctly. If most bicyclists in your community use incorrect maneuvers, drivers will have some trouble understanding your correct maneuvers. You need to make especially clear signals. With experience, drivers will discover that they have an easier time with bicyclists who use correct maneuvers.

The number of adult bicyclists is increasing, and in the long run, more drivers will come to understand that it makes sense to share the road. Bicycles use less road space than cars; every person who chooses to ride a bicycle rather than drive is reducing traffic problems.

SUMMARY

Your awareness of tough situations will help you anticipate and avoid problems and deal with problems that are unavoidable. Be courteous and respectful to other road users to avoid friction, but firmly assert your legal right to ride in the manner that is safe. Always be prepared to use your emergency maneuvers.

For more information on safety tips and how to choose a bike visit us at www.panoihoperide.org

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