Road I

An educational program conducted exclusively by League Cycling Instructors

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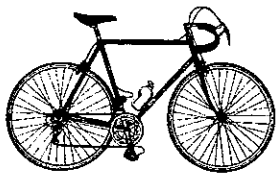
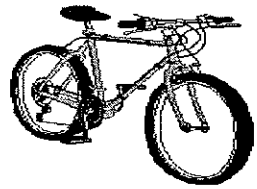
LEARNING THE LINGO

Attack	In bicycle racing, to accelerate suddenly, pulling away from other riders
Bonk	When you completely run out of energy
Cadence	Your rate of pedaling measured in revolutions per minute (rpm)
Century	A 100-mile ride completed in one day
Criterium	A multi-lap race on a course one mile or less in length, also known as a crit
Draft	To follow closely behind another rider to reduce the effects of wind resistance
Dropped	Failing to keep pace with the group of riders
Drops	Lowest, most aerodynamic position on road bike handlebars
Hoods	Tops of the brake levers where you can rest your hands
Metric Century	A 100-kilometer or 62-mile ride completed in one day
Off the Back	Describes one of more riders who have failed to keep pace with the main group
Road Rash	Any skin abrasion resulting from a fall
Saddle Time	Time spent bicycling
Sag Wagon	A motor vehicle that accompanies a group of riders, carrying equipment and lending assistance in the event of bicycle difficulties on the road
Sit on a Wheel	To ride directly behind someone in order to benefit from the reduced effects of the oncoming wind resistance
Spin	To pedal at a high cadence
Sprint	To accelerate quickly and ride as fast as possible

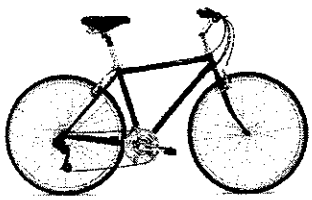
What type of bike?



Road Bikes have dropped handlebars, two or three chainrings and skinny tires. Road bikes are built for racing or touring. The ability to carry cargo depends on what the bicycle is designed for. Manufactures equip each of these bicycles with different types of gearing based on where and how they will be ridden.



Mountain Bikes have a flat or raised handlebar. The heads-up riding position, the larger, lower pressure tires and wide range of gears provide a comfortable ride. They can be as light as road bikes even though they are designed for riding on unpaved, challenging terrain. Front wheels or both wheels can have suspension.



Hybrid Bikes are flat-bar, general-purpose bikes. They have upright stems and handlebars, mountain bike style brakes and a wide gear range. Hybrid bikes are generally referred to as comfort bikes and are more stable and comfortable than a road bike, but more efficient than a mountain bike. They are not off-road capable like a mountain bike, however they work well on unpaved roads.

Recumbent Bikes come in a wide variety of styles. From short wheelbase with under seat steering to long wheelbase over seat steering, two or three wheel, folding, with or without suspension, on or off road designs, there is a recumbent for everyone. Curiosity will eventually lead you to at least test ride one. Some 'bent riders enjoy the relaxed position while others tout their aerodynamics.

Women's Bikes are designed to address the physical needs of female riders. Women generally have shorter torsos and arms relative to their height than men. As a result, women's bikes have different frame geometry and may have smaller wheels. Many manufacturers offer women specific bikes.

What size bike?

The frame size of a bicycle is determined by seat tube length and stand-over height. The seat tube is the vertical tube that your seat sticks into. Frame size is determined by measuring from the center of the crank in the bottom bracket to the top of the seat tube: centimeters for road bikes, inches for hybrid and mountain bikes.

A quick sizing method for bikes is to stand over the bike straddling the top tube with both feet flat on the floor, shoulder width apart. Lift the bike by the handlebar and seat as far off the ground as is comfortable. For a road bike, the bike should be 1 to 2 inches off the floor for a basic fit. For a mountain or hybrid bike, there should be 3 to 4 inches between the tires and the floor for a basic fit. Women should pay attention to the reach to the handlebar. Be sure to have a reputable bike shop fit your bike to your body. This can be done at time of purchase or later on down the road to accommodate a desired riding style. As adjustments are made, test-ride the bike to see how the bike feels. You will be surprised at the difference that small adjustments can make to your riding comfort and efficiency.

PRE-RIDE SAFETY CHECK

ABC QUICK CHECK

Do you have a routine to check your bike for mechanical safety? The **ABC Quick Check** of your bike's fitness should be followed each time you ride. Timely bicycle maintenance can prevent a serious crash.

A is for AIR

Check tire pressure

Tires should be inflated to the rated pressure noted on the sidewall (Pounds/ Square Inch). Use a gauge to verify that you have reached the recommended rate. While checking pressure take a moment to check for damage to the sidewalls and/or tread. Damage to the sidewall is common if the brakes are not adjusted properly. If the tire casing is showing below the surface, the tire should be replaced.

B is for BRAKES

Check the brakes for:

Pad Wear and Adjustment by visually checking the brake pad. If there is less than 1/8" of rubber showing at any place, replace the brake pad. Make certain that the pads are parallel to and aligned with the side of the rim when applied.

Cable and housing - Watch to make sure the cables travel smoothly and the cables are not frayed. Frayed cables should be replaced. If the cables stick, apply lubrication at the ends of the housing and work it in by applying the brakes until it feels smoother.

C is for CRANKS

Check the Cranks

The cranks consist of the bottom bracket, the crank arms and chainrings. To do this check, take the left and right crank arms in your hands and attempt to move them sideways. If both move you have a problem with the bottom bracket. If only one moves, the individual crank arm is loose and must be secured. A loose crank arm should never be ridden on.

Quick is for QUICK RELEASES

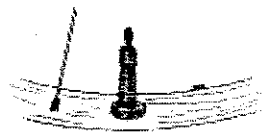
Hubs with quick releases need to be tight. The proper pressure is obtained by spinning the lever until you feel resistance at the halfway point as you flip the lever from open to closed. Do not spin it closed. Use the cam action of the lever to tighten the quick release. The closed lever should be facing up and back to minimize the chances of it catching anything while you ride. Brakes with quick releases need to be in the closed position.

Check is for a brief, slow ride to check that your derailleurs and shift levers are working properly.

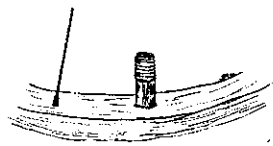
Must I do all these steps every time I ride? **Yes!**

Many items of the **ABC Quick Check** can be accomplished visually; others require a brief minute to physically check. If you determine that adjustments are necessary and beyond your ability, enlist the help of a mechanic at your local bike shop. There are other bicycle maintenance issues that need to be addressed on a weekly, monthly or annual basis to keep your bike in top fitness.

TIRE REPAIR



Presta Valve



Schrader Valve

Fixing a flat tire is inevitable. Flats happen to everyone, sooner or later. Understanding how flats happen can help reduce the probability of one.
A puncture is caused by a tack, a glass shard or a thorn penetrating the tire and the tube.
A pinch flat or snakebite is caused by riding over a rock or a pothole. The tire is flattened against the rim by the impact. The tube shows two parallel slits.
Flats can also be caused by improper remounting of the tire, worn out or damaged tires or rim tape failure which exposes sharp surfaces that can puncture the tube.

How to Fix a Flat Tire

This can be the most frequent maintenance on your bicycle. With practice, a flat can be fixed in less than 10 minutes. You will need to carry the appropriate equipment for the task: spare tube, tire levers, pump and patch kit. By being patient and following the procedure, you will find that the likelihood of follow-up flats will be reduced.

1. Remove wheel from bike. If the flat is on the rear wheel, shift to the smallest cog on the cassette and remove the wheel. Release the brakes to allow the tire to clear the brake pads.
2. Check the outside of the tire for signs of damage and mark the location of the damage.
3. Deflate the tire completely. Push the valve pin in (Schrader), or first unscrew the nut, then push the valve pin (Presta).
4. Push one bead of the tire towards the center of the rim around the entire wheel. Insert tire levers opposite the valve. Two or three spokes further around, insert the second tire lever. If necessary, insert a third tire lever.
5. Pull the rest of that side of the tire off by hand, working around, starting at the location of the tire levers.
6. Extract the tube from the tire keeping the relative positioning of the tire and tube intact. This way the wheel, tire, and the tube retain their relationship.
7. Inflate the problem tube with enough air so you can find the hole by feeling or hearing the air escape. The hole(s) in the tube will tell you where to look for the cause of the flat. Make absolutely sure the offending foreign object is gone before you continue.
8. Inflate the good tube with enough air to give it shape.
9. Insert the tube into the tire starting with the valve stem then feed it around.
10. Seat the tube over the center of the rim. Work the bead of the tire back onto the wheel. Use your hands to avoid pinching the tube with a tire lever.
11. As you refill the tire, check that the tire does not bulge off of the rim. Pump the tire up to the maximum recommended pressure shown on the tire sidewall.
12. Install the wheel on the bike. Connect any brake cables you may have had to release.

ADJUSTING DERAILLEURS

Rear Derailleur Adjustment
Many problems with the rear derailleur are a result of the cable having stretched.

1. Prepare rear derailleur by shifting it to the smallest cog. Screw the barrel adjuster in all the way and loosen the nut that holds the cable at the derailleur.
2. By sighting down from the rear of the bike, use the 'H' set screw to line up the upper pulley on the derailleur with the smallest cassette cog.
3. Remove slack from cable and tighten the cable anchor bolt.
4. Shift down one gear while pedaling. If shift is precise and quick, go to step 6.
5. Unscrew adjuster barrel in half-turn increments until shifting is precise.
6. Shift to largest cog. Loosen 'L' set screw if chain does not reach largest cog.
7. Tighten 'L' set screw while in largest cog. This will limit the travel of the rear derailleur.
8. Check all gears. Repeat steps as necessary until shifting is smooth. Make fine adjustments by loosening or tightening barrel adjuster at derailleur.

Front Derailleur Adjustment
Adjustment to the front derailleur is necessary when shifting drops the chain off of the inside or outside of the crankset or the chain rubs the derailleur in your smallest or largest gear combination.

1. Release the cable from the anchor bolt.
2. It is crucial that the derailleur cage is perfectly parallel to the chainrings and exactly 3mm above the largest chainring when shifted to that position. Loosen the clamp bolt and reposition the derailleur, if necessary.
3. With the chain on the smallest gear combination, tighten the 'L' set screw until the inside plate of the derailleur is 1 to 2 mm away. Remove slack from cable and tighten in anchor.
4. While turning the cranks by hand (or riding), shift the front derailleur to the large chainring and small cassette cog.
5. Tighten 'H' set screw if you shift chain off of large chainring. Loosen 'H' set screw if the derailleur cannot reach the large chainring.
6. Check all gears. Repeat as necessary until shifting is smooth. Loosen 'L' set screw one half turn to improve shifting to small chainring. Make fine adjustments by loosening or tightening barrel adjuster at shifter.

CLOTHING AND EQUIPMENT BASICS: Helmet Fit

Remember: **Bicycle helmets are for injury prevention, not crash prevention.**

A bicycle helmet, like any piece of protective equipment, is designed to be worn a certain way. When it is not, it will do what it's supposed to do: protect your head.

So what is the correct way to wear a helmet? Level on the head (not tilted up, back, or sideways), with the side and chin straps properly adjusted and fastened securely. Follow the instructions below to make sure you are wearing the right size helmet and that you are wearing it correctly. *If you already own a helmet and it won't adjust right after following these steps, you probably need to try another size or brand.

1. Start out with the smallest size helmet that fits your head. Try on different sizes and brands of helmets until you find one that fits your head. It should cover the majority of your forehead, with only an inch or so of skin exposed above your eyebrows. Even without the straps fastened or the pads in place, there should be little movement when you move your head from side to side.

2. Now put in the foam pads that come with the helmet, allowing you to get a custom fit. Try out thin or thick ones where you need them for fit and comfort.

3. There are really five straps that need to be adjusted for a proper fit. The ear straps are first, with each section of the strap (front and back), and each side (left and right) done separately. When adjusted correctly, each ear strap should meet at a point at your ear lobe, with no loose play in the straps. **Make sure you base your adjustment decisions on the helmet being worn correctly, level on your head!** Only after these straps are adjusted should you try adjusting the chin strap (which, unfortunately, is all most people do when fitting a helmet). The chin strap should be snug, with room for only one or two fingers between the strap and your chin.

4. Check your adjustments by rocking your head from side to side and back and forth. Also take the palm of your hand and try to push the helmet up on your forehead. There should be little movement in any of these actions. For added confidence, try standing in front of a mirror while making and checking these adjustments. Following these steps will ensure that your helmet is protecting your head as it was designed to do. As long as the helmet meets certain standards (CPSC) and you wear it every time you ride, you've taken great strides in safeguarding that brain of yours.

Bicycling Gloves
Gloves help distribute the handlebar pressure across your palms, preventing blisters and nerve compression. Gloves are an important piece of safety equipment: they protect your hands in a fall.

Cycling Shoes
Cycling shoes have a stiff sole that resists bending and transmits power to the pedals more efficiently. They help you ride longer and stronger, while preventing foot fatigue and soreness.

Steering a Straight Line

If started in motion carefully, a bicycle without a rider can coast all the way across a parking lot before it eventually falls down.

Caster Effect The wheel of a moving bike tends to line up in the direction of motion.

Lean Effect If the bike leans to the right, the wheel will tend to steer itself to the right, and if the bike leans to the left, the wheel will steer to the left, assuming no force on the handlebar is applied.

On a bike that is moving and upright, the caster effect keeps the wheel lined up in the direction of motion. A lean effect will steer the front wheel of the bicycle in the direction of a lean, thus tending to correct for the lean by steering the bike into a gentle turn in that particular direction. This explains why riding a bike without touching the handlebars is simply a matter of leaning the bike in the direction you wish to travel.

Steering, therefore, becomes a matter of leaning the body to lean the bike and help initiate a turn using the lean effect. The rider's job, when riding upright, is to steer the front wheel so as to keep the bike directly under the center of gravity of the rider at all times.

PRINCIPLES OF TRAFFIC LAW

What Principles of Traffic Law do all drivers follow?

First Come, First Served
Each driver on the road is entitled to the space they are using, with reasonable clearance behind and to each side, and reasonable stopping distance in front of them. Drivers who want to use this space must first yield to the vehicle now using it. This applies both between intersections and at intersections.

Drive on the Right-hand Side of the Roadway
All across the United States, drivers of all vehicles operate in the right-hand side of the roadway. It is normal and understood as the basis for all other traffic laws. Bicycles are treated as vehicles and should obey the same basic rule. Operating with traffic is safer and more predictable to motorists and other road users.

Yielding to Crossing Traffic
Drivers on less important roads, including driveways and alleys, yield to traffic on more important roads. Yielding means proceeding onto a roadway only when it is safe to do so.

Yielding when Changing Lanes
Drivers who want to move laterally on the roadway must yield to traffic in their new line of travel. Yielding means moving only after looking behind you to see that no traffic is coming and looking in front to see that the way ahead is clear.

Speed Positioning
Parked drivers are at the curb, slow drivers are next to them and fast drivers are near the centerline. Never overtake on the right, almost always overtake on the left. There are exceptions when the vehicle ahead is turning left or on multi-lane roads. The specifics of speed positioning will be discussed later.

Intersection Positioning
Approach intersections in the proper position. Right turners are next to the curb, left turners are near the centerline and straight-through drivers are between these positions. Always travel in the lane that the normal flow of traffic follows to your destination.

LANE POSITIONING

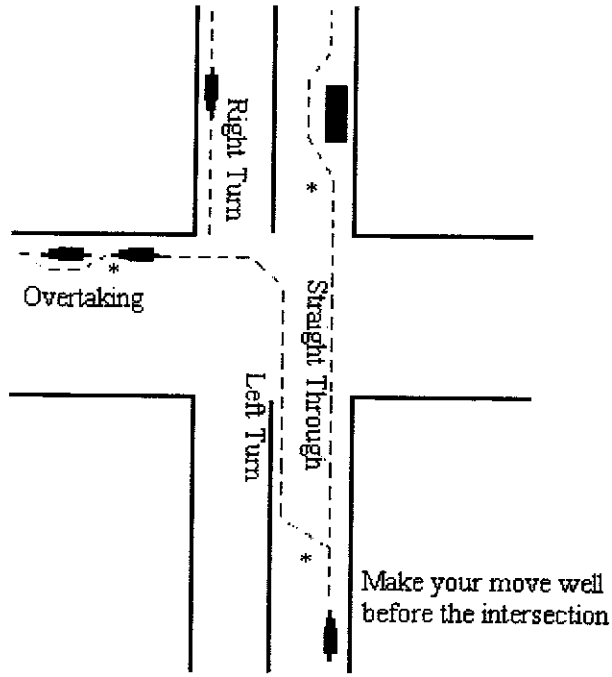
Intersections are where most bicycle crashes occur, but many of them can be avoided. When you approach a multi-lane intersection, think about where you would position yourself if you were driving a car. You wouldn't be in the right-turn-only lane if you were continuing straight. And you wouldn't attempt a left turn from the right lane of a four-lane road.

Generally speaking, as a bicyclist, you should be in the right-most lane that goes in the direction you are traveling. As a bicyclist, though, you also have three positions within the lane to choose from: the right third, the center, and the left third. The specific portion of the lane depends on the distinct characteristics of the intersection.

The diagrams below show correct lane positioning for a variety of different scenarios.

BASIC MANEUVERS:

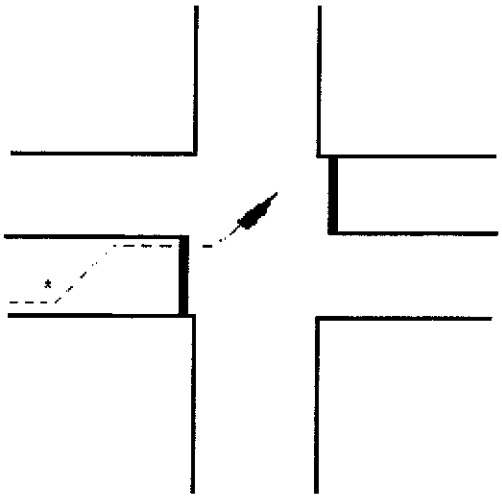
- Straight Through
- Right Turn
- Left Turn
- Overtaking
- Passing Parking Cars



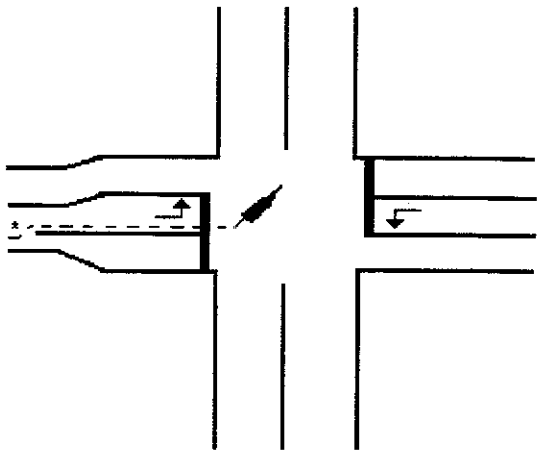
*Indicates: Look behind, and make your move as traffic permits.

COMMON LEFT TURN SITUATIONS

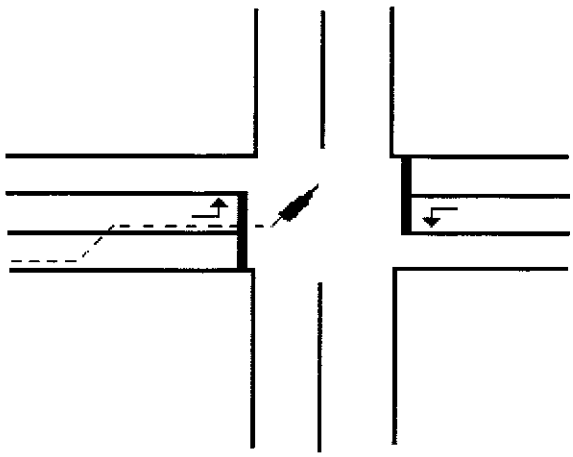
TWO-LANE ROAD WITH NO TURN LANE



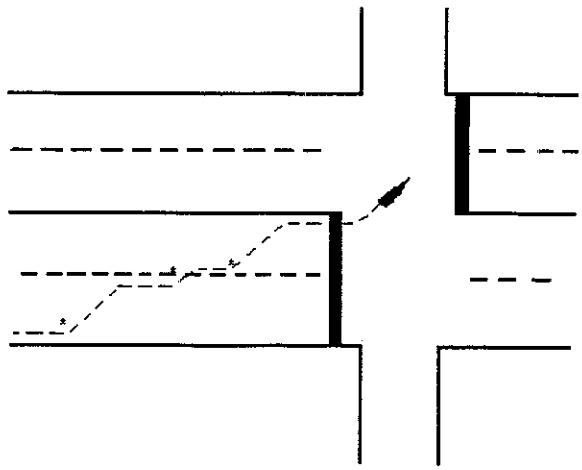
ROAD WITH LEFT-TURN-ONLY LANE



ROAD WITH CONTINUOUS LEFT TURN LANE (USUALLY 3 OR 5 LANES TOTAL)



MULTILANE ROAD WITH NO TURN LANE



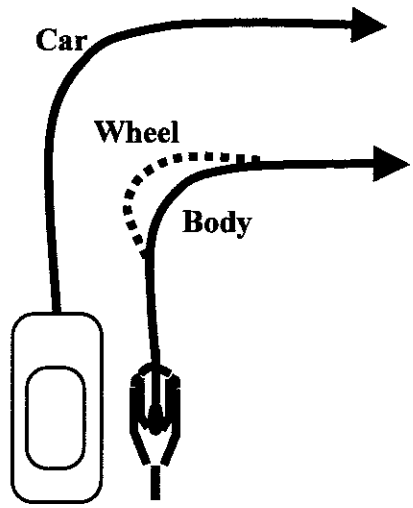
greatly reduced. The danger is that if the front brake is applied too hard, the rear wheel will lift off the road and the rider may be pitched over the handlebars.

The implications for effective braking are as follows:

- Braking with the rear brake alone will avoid pitch-over, but it is not very effective.
- In theory, the fastest stop can be made with the front brake, but only a slight error will pitch you over.
- The best system for a fast, safe stop is to use both brakes, which produces the optimum deceleration. If the rear wheel starts to skid, this indicates that you are un-weighting the rear wheel too much. Therefore, when the rear wheel skids, ease up slightly on the front brake.
- When braking hard, slide your body back on the saddle as far as possible. You can transfer even more weight to the rear wheel by moving your butt straight back.
- When carrying a heavy load on the rear of your bike, you will be able to brake harder before pitch-over occurs.

INSTANT TURN

Picture yourself riding along the right side of the roadway approaching an intersection. You plan to continue straight through and are occupying the correct position in the lane. Just as you enter the intersection a car passes you and makes a right turn in front of you. You have three choices: hit the car; execute a quick stop; or turn to the right onto the cross street.



Preparing for and executing a normal right turn takes too long and would cause a collision in this situation so an Instant Turn is necessary. For the technique to make sense you have to first understand what happens during a turn. Many people think that a turn is produced simply by turning the front wheel, but you actually lean first and turn second. Because they happen so fast, the two moves appear simultaneous.

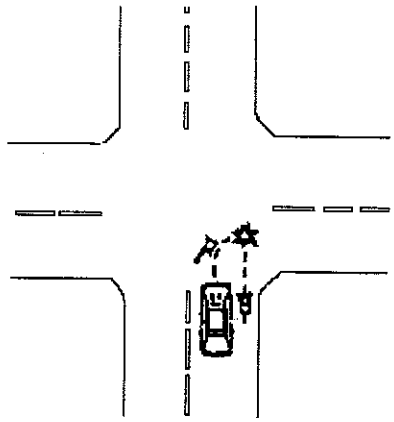
For a planned turn you start by leaning in the direction of the turn. Instead of immediately steering to get the bike back under you, you wait until you are leaning more and more. The bike then steers itself around the corner while you adjust the handlebars so it feels as if they are directly under you. By steering sharper into the turn you start to fall out of it, which lets you straighten up.

In the situation described above, this type of turn would take too long, because you are not already in a lean position, and you would end up hitting the car. To force the lean quickly you have to perform a maneuver that feels unnatural and sounds even more unlikely!

Turn your front wheel left – the wrong way, toward the car. By doing this you've forced a right lean. The moment you've got a good lean started, after a tenth of a second or so, turn your front wheel right and you'll find yourself in a tight right turn. To make a right turn you must lean right, so to hurry up the leaning process you made your bike track to the left a few inches. Then you are leaning over properly and can steer a right turn. This doesn't ever feel natural, and you must train yourself to do it. It is a jerk in the wrong direction at the start of the instant turn when you deliberately unbalance yourself by steering the whole bike out from under you.

The Instant Turn will take some time to learn and must be practiced regularly. Set a sponge down in an abandoned parking lot and start by Rock Dodging it, slowly progressing to the Instant Turn.

Motorist Right Turn, Cutting in Front of Straight-through Cyclist

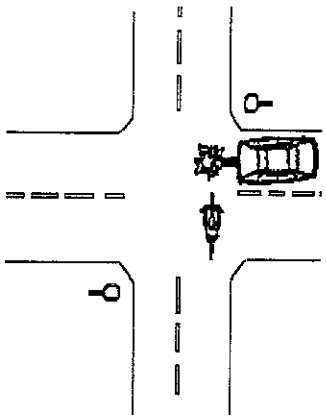


Prevention:

- Be visible - wear bright-colored clothing, establish eye contact, don't ride in motorist's blind spot;
- Be predictable - maintain proper lane position, ride a straight line, **do not pass motorist on right;**
- Be assertive - plan to take your appropriate right-of-way, and act accordingly;
- Be alert - assess the situation, look for a turn signal or watch the front wheel of the car, be prepared to take evasive action.

Avoidance: Quick Stop, Instant Turn.

Motorist Pulling out into Traffic from Cross Street Without Yielding to Through-way Cyclist



Prevention

- Be visible - establish eye contact or use sound to make the motorist aware of you;
- Be predictable - maintain position just to the right of center line so you are where motorists expect to see traffic and so you are not blocked from view by any parked cars, ride a straight line;
- Be assertive - plan to take your appropriate right-of-way, and act accordingly;
- Be alert - assess the situation, and be prepared to take evasive action.

Avoidance: Quick Stop, Instant Turn.

Use of a bicycle helmet and gloves will reduce the severity of some injuries sustained in a crash that could not be avoided.

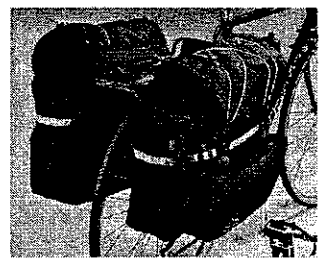
RIDING ENJOYMENT

Most people become strong bicyclists first, and then, sometimes, flowing, smooth riders. It is better to become a smooth bicyclist first and a strong bicyclist later. You'll enjoy the feeling of being one with the bike, the self-confidence that comes with knowing you are smooth and safe. Taking care of yourself will help you enjoy your riding. Learning how to shift smoothly and developing a high pedal cadence will facilitate your development as a smooth rider.

Shifting Smoothly
You want to match the effort your legs are capable of to the load that the terrain and wind are demanding at the moment. Shifting gears helps accomplish this goal. Using the gears on your bike will enable you to ride more comfortably for longer distances and periods of time. Muscles get tired from producing force as well as power. Learning to shift to an appropriate gear will reduce the need to use force.

How to Shift
Today, shifters and derailleurs are more precise than ever. Even though your derailleurs are designed to shift while under full pedaling power, a slight reduction of force will help your derailleurs to execute each shift. Think of your reduction as the clutch. This concept is most important when shifting your front derailleur.

Cadence
Cadence refers to the number of times the pedals complete a full revolution per minute (rpm). The best cadence for riding is 75 to 95 rpm. The use of a cycle computer with cadence will tell you your rpm. A cadence of 75 to 95 may feel very strange at first. Practice riding at that rpm and you will be able to go longer distances with ease. Pedaling at a low rpm will increase rider fatigue. If your bicycle has many gears, shift to a gear that enables you to easily spin the pedals at a cadence of 75 to 95 rpm on whatever terrain you are riding.



Bicyclists who develop the ability to pedal at an increased cadence will find that they can comfortably travel at 10 to 12 miles per hour for several hours at a time. It is important to remember how many miles you expect to travel. Ride pace plays a large part in the overall enjoyment of your ride. Plan to travel at an average of 10 to 12 miles an hour for the entire trip. Realize that you will climb hills slower and go down hills faster. Realize also that riding into the wind can be more difficult than pedaling up a steep hill.

Nutrition Basics
Food is a necessity that provides the energy required for riding. All foods are composed of carbohydrates, fats, and protein. Carbohydrates are the primary energy source for recreational bicycling. Fats, which also serve as an energy source, are more important in endurance sporting events. Proteins are used to maintain and repair cells throughout the body.

Carbohydrates are divided into simple and complex. Simple carbs, also called sugars, are found in fruits and vegetables. They provide quick energy and are not stored by the body to maintain energy levels. Complex carbs, also called starches, are supplied by grains and found in pasta, breads, and cereals. Complex carbs provide long-term energy to adequately fuel you

RIDE ETIQUETTE

Recreational paths and trails have become quite popular. As a result, trails have become very congested and safety is a major issue. Whether bicycling, walking, or jogging, following the same rules as everyone else will help you have a safer, more enjoyable time.

Trails have engineering and design limitations that require you to ride differently than you would on the road. If your preferred speed or style of cycling is inappropriate for trails, look for better-suited alternative routes.

Be Courteous
All trail users, including bicyclists, joggers and wheelchair users, should be respectful of other users, regardless of their mode of travel, speed, or skill level.

Give an Audible Signal When Passing
Give a clear signal when passing. This signal may be a bell, horn or voice. Warn in advance so that you have time to maneuver if necessary. "Passing on your left" is the most common signal used to alert other users of you approach.

Yield When Entering & Crossing Other Trails
When entering or crossing a trail at trail intersections, yield to traffic on the cross trail or road. This is often the most dangerous point on a trail.

Keep Right
Stay as close to the right side of the trail as is safe, except when passing another user.

Pass on Left
Pass others, going your direction, on their left. Look ahead and behind to make sure the lane is clear before pulling out. Pass with ample separation. Do not move back to the right until safely passed. Fast moving users are responsible for yielding to slower moving users.

Be Predictable
Walk and ride straight. Indicate when you are turning. Warn other trail users of your intentions.

Use Lights at Night
If the trail is open and you are using it between dusk and dawn you must be equipped with lights. Bikes need a white front light and a red rear light or reflector. Reflectors and reflective clothing are no help if there is no source of light.

Do Not Block the Trail
When riding in a group, use no more than half the trail. On many heavy use trails, this means that all users will need to stay single file. And if you stop to regroup, always do it off the trail.

Clean up Litter
Do not leave any debris along the trail. If you drop something, please pick it up and carry it until you find a litter receptacle. Go the extra mile – pack out more trash than you bring in.

EDUCATING MOTORISTS

SHARING THE ROAD WITH BICYCLISTS

DID YOU KNOW?

98 million people in the United States own bicycles? Bicycles are the second most popular vehicle for commuting? About 750 bicyclists are killed each year in the U.S.? 96% of these deaths result from crashes with motor vehicles. In all 50 states, bicyclists have the same rights and responsibilities as drivers of motor vehicles?

DON'T BE THE CAUSE OF A CAR/BIKE CRASH □

LEARN HOW TO SAFELY SHARE THE ROAD WITH BICYCLISTS

- Leave at least three feet of passing space between the right side of your vehicle and a bicyclist.
- Be aware that when a road is too narrow for cars and bikes to ride safely side by side, bicyclists should take the travel lane, which means riding in or near the center of the lane.
- Reduce your speed when passing a cyclist, especially if the roadway is narrow.
- When turning left at an intersection, yield to an oncoming bicyclist just as you would yield to oncoming motorists.
- After passing a cyclist on your right, check over your shoulder to make sure you have allowed adequate distance before merging back in.
- Don't blast your horn when approaching bicyclists.
- In inclement weather, give cyclists extra trailing and passing room, just as you would other motorists.
- Learn to recognize situations and obstacles that may be hazardous to cyclists, such as potholes, debris, and glass, and then give them adequate space to maneuver.
- Look for bicyclists before opening your car door.
- Children on bicycles often act unpredictably. Expect the unexpected.

WHAT TO WATCH FOR

Unfortunately, not everyone who rides a bike understands or obeys the rules of the road. Some of the common cyclist errors you may encounter as a motorist are:

- Wrong way riding. Cyclists riding on the left (wrong) side of the road, facing traffic cause 17% of all car/bike crashes. Look both ways before turning.
- Mid-block ride-outs. This is the most frequent crash type for young riders and occurs when the bicyclist enters the roadway from a driveway, alley, or curb without slowing, stopping, or looking for traffic.
- Cyclist's failure to yield to crossing traffic (25% of car/bike collisions).
- Cyclist's failure to yield when changing lanes (13% of car/bike collisions).

The League of American Bicyclists, founded in 1880 as the League of American Wheelman, is addressing these problems through their national education course, BikeEd, which teaches people to ride safely and effectively in all road and traffic conditions.

For more information about the League of American Bicyclists and the BikeEd program, our education, advocacy and recreational events and affiliated clubs and advocacy organizations, please check out our website or contact us directly.

The League of American Bicyclists offers insurance to affiliated clubs and organizations through its club membership program. Individual members receive the League of American Bicyclists magazine, a discount for *Bicycling* magazine, access to the Bikes Fly Free program and BikeLeague News, an electronic newsletter.