



Bike Sense

THE WISCONSIN BICYCLE OPERATOR'S MANUAL

A GUIDE TO THE RULES OF THE ROAD, BICYCLE HANDLING,
TRAFFIC SKILLS AND THE ENJOYMENT OF BICYCLING LIFE



ALWAYS

Wear a properly fitted helmet

Do a safety check on your bike before riding

Obey all traffic laws

Be visible

Be predictable

Be alert

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This manual condenses and paraphrases language in the Wisconsin State Statutes. It also provides safety advice not included in the law. This manual is not a proper legal authority to cite and should not be relied upon in a court of law. In the event of a difference between material included in *Bike Sense* and the Wisconsin State Statute, the state law shall apply.

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Forward

Bicycling for transportation, recreation and fitness has seen enormous growth in recent years. People everywhere are rediscovering the joys of bicycling; how much fun it is, how practical it is, and how good it is for their health and well-being. However, with the increase in bicycling there has also been an increase in conflicts with other road users. Many of these conflicts stem from confusion about how bicyclists are to behave in traffic.

The Wisconsin Vehicle Code says that bicyclists have the same rights and duties as drivers of motor vehicles. Certified bicycling instructors teach their students that 'bicyclists fare best when they act and are treated as drivers of vehicles.'

Wisconsin State Statutes state that bicyclists have the same rights and responsibilities as drivers of other vehicles.

To do this, bicyclists must understand how to operate their bicycles as vehicles and how they fit into the flow of traffic. *Bike Sense* provides information on traffic laws and riding strategies to help bicyclists understand their rights, responsibilities and how best to protect their own safety in traffic.

By following the rules of the road and bicycling in a predictable manner, bicyclists will find more courtesy and respect on the road. For further information on the rules of the road you should consult the Wisconsin Vehicle Code or the Wisconsin Motorists Handbook available from the Division of Motor Vehicles and on the Department of Transportation website.

All bicyclists should consider taking a course taught by a certified bicycling instructor. Contact Bicycle Federation of Wisconsin for a list of courses in your area or to arrange for new classes.

Why Bicycle?

Bicycling is fun. People bicycle for many reasons. Riding your bicycle allows you to feel active and energetic, to improve your fitness, and to enjoy the surroundings of the natural environment. Bicycling provides the independence of using only your own power, free from the constraints of motor vehicles. Wisconsin has an extensive system of both on- and off-road facilities for all abilities. Paved rural roads, multi-use trails, paved shoulders on county and state trunk highways, bike lanes in urban areas, and signed bike routes all make bicycling for transportation as well as recreation easier.

Bicycling is healthy. Incorporating exercise into your lifestyle brings many health benefits. It can strengthen your immune system, lower blood cholesterol, reduce stress, strengthen your heart, and increase

**Bicycling is fun. Bicycling is healthy.
Bicycling is low impact exercise.
Bicycling is practical and cost effective.
Bicycling is good for the environment.**

**Bike Sense is designed to make your bicycling safe and enjoyable.
Enjoy the ride!**

energy levels. Bicycling can improve personal health, and a healthier population will ease pressure on health care costs.

Bicycling is low impact exercise. It is easy on your joints because it is a non weight-bearing form of exercise. It can be done at any level of intensity, which makes it suitable for people of all ages and levels of fitness.

Bicycling is practical and cost effective. It is often just as fast as a car or a bus in city traffic, and bicycling makes it easy to avoid traffic jams. There are no gas tanks to fill, and parking is usually free and available next to your destination. Once you have the basic equipment, bicycling is an extremely economical form of transportation.

Bicycling is good for the environment. Bicycling produces no air pollution, greenhouse gases or noise. It also reduces traffic congestion, deterioration of road surfaces, and land requirements for roads and parking lots.

Equipment



**To ride your bicycle safely and efficiently
it is important to have all equipment operating
smoothly and properly.**

Your Bike

What to consider when buying a bike:

What type of bike to buy depends on a number of factors. The best advice is, "Talk to your local bike shop staff." They will help you pick out a bike that suits your riding style, budget, and bicycling goals. Just as there is no perfect pair of shoes or coat for every circumstance, bikes have advantages and disadvantages for different types of riding.

Here are some questions to consider:

Where will I ride? Paved streets and road? Unpaved, but smooth trails? Grass? Rough trails?

On what kind of terrain will I be riding? How hilly is it? If you plan to ride mostly flat areas, then gearing will be less critical. If you want to be able to ride in hilly areas, you will need a wide range of gears.

Will I be carrying things? Commuters and bicyclists carrying gear while traveling should buy a bike that can accommodate a rack and added weight.

How devoted a cyclist do I want to be? Is this bike going to be used every day, or only a few times a year? How important is quality, durability and speed?

Is riding position important? Consider back, shoulder, neck or knee problems when deciding riding position.

How far do I want to ride? Almost any bike is appropriate for short weekend rides, but consider a better, lighter bike if you plan to go on long rides or a tour.

Size and fit

Make sure your bike is the right size and adjusted to fit you properly.

The right size bike and proper adjustments are important for both adults and children

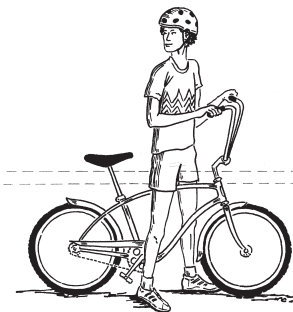
The right size bicycle is easier to control and more comfortable, causing less fatigue. Your local bike shop can help you choose, adjust and equip the right bicycle for your needs.

Does Your Bike Fit?

Your bike's most important safety feature is you: If you're not comfortable, you're more likely to ride poorly. Getting exactly the right fit depends on many things including your height, weight, and riding style. You should contact your neighborhood bicycle store to help you find the right fit. Consider these points:

Frame Size: If your bike's frame is too tall, too short, or too long, it will be very hard to adjust other things to make you comfortable. You might need a different bike.

To Check the Height: If your bike has a men's frame (with a tube across the top), stand with the bike between your legs, just in front of the seat. Measure the space between the top tube and your crotch. For



road or street riding, a one-inch to three-inch space is safest. If your bike has no top tube or a slanted top tube, ask your bicycle store's staff to size you.

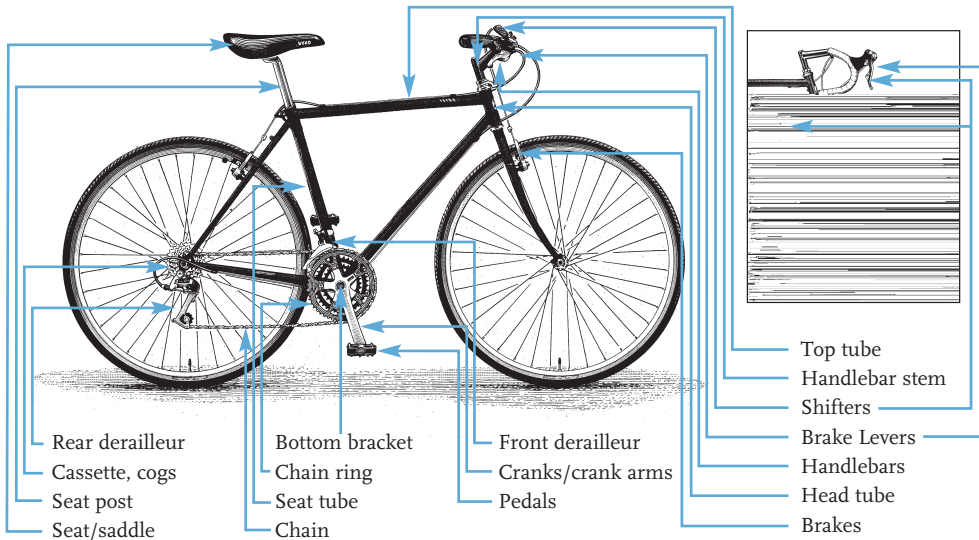


Frame Length: If, when you ride, you feel overly stretched or have pain in your neck, shoulders, or back, your frame might be too long. Try moving the seat and handlebars closer together. Also, some people, including many women, have torsos shorter than what most bikes are made for. If you're one of them, look into a shorter handlebar stem extension, a taller stem, different handlebars, or a custom bike made for people with smaller torsos.

Seat Height: A seat that's too low will strain your knees and achilles tendons, while a seat that's too high will make it hard for you to pedal and to put your foot onto the ground. Here are some ways to get the right seat height for most riding:

Bicycle brakes work less efficiently when they are wet.

Aluminum rims have much better braking performance than steel rims.



Sit on your bike and push one pedal all the way down. With the heel of your foot on the pedal, your knee should be slightly bent and your leg almost straight. If your hips rock from side to side when you pedal, your seat's too high. Don't raise your seat so high that less than two inches of your seat post extends into the frame .

Handlebars: After you've set your seat height, set your handlebars so you feel comfortable. Some things to guide you:

Start by raising or lowering your handlebars so they block your view of the front axle when you're sitting on your bike with your hands on the handlebars. In this position, your elbows should be slightly bent (not locked).

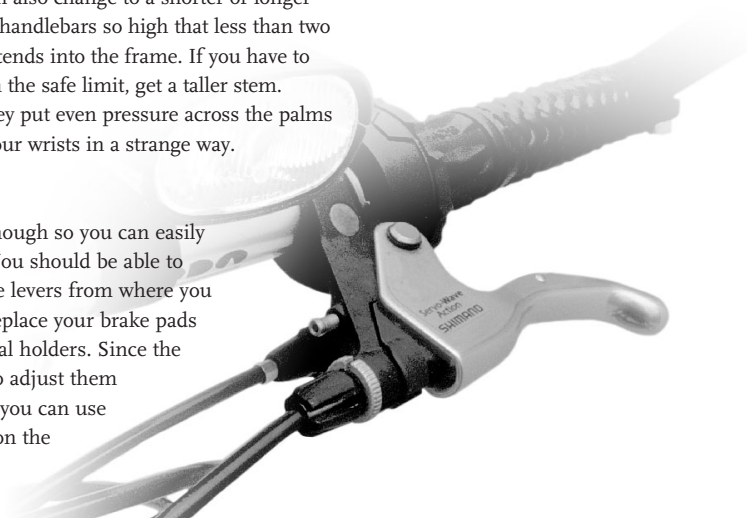
Lower-back pain often means the handlebars are too far away, while upper-arm or shoulder fatigue often means the handlebars are too close to you. Try raising or lowering the handlebars, or moving your

Regular maintenance and inspection are important for bicycle safety.

seat forward or backward. You can also change to a shorter or longer handlebar stem. Don't raise your handlebars so high that less than two inches of your handlebar stem extends into the frame. If you have to raise your handlebars higher than the safe limit, get a taller stem. Rotate your handlebars so that they put even pressure across the palms of your hands without bending your wrists in a strange way.

Brakes

Your brakes must be powerful enough so you can easily bring your bike to a quick stop. You should be able to quickly and easily reach the brake levers from where you normally position your hands. Replace your brake pads before they wear close to the metal holders. Since the pads wear down, you may have to adjust them regularly. For small adjustments you can use the threaded adjustment screws on the brakes or brake levers.



All traditional bicycle brakes work less effectively when they are wet. Aluminum rims have much better braking performance than steel rims in wet conditions. It is dangerous to have only one brake in working order. Make sure both front and rear brakes work properly and have regular maintenance performed by a bicycle mechanic.

Lights and reflectors

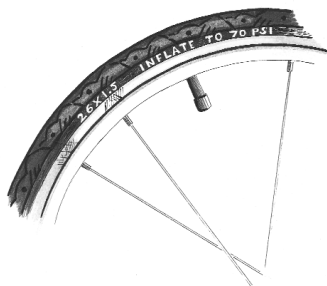
After dark, all bicyclists are required by Wisconsin State law to have a front white headlight visible to others from a minimum of 500 feet, and a rear red reflector visible to others from 50-500 feet when directly illuminated by a car headlight. A red rear flashing light may be used in addition to a reflector and will make the rider more visible. Lights and reflective devices come in a wide range of shapes, sizes, colors, and costs and can be mounted directly on the bicycle or clipped to the rider or accessories. Check with your local bike shop for advice on the most appropriate set up for your needs and to ensure that the lights you intend to purchase meet or exceed these

After dark, bicyclists are required to have a front headlight visible for 500 feet and a rear reflector visible between 50–500 feet

requirements. This is discussed further in the chapter on visibility.

Tires

Narrow tires inflated to higher pressure provide less rolling resistance, and therefore easier pedaling on hard surfaces. Fat tires provide more comfort and better traction, especially if riding off-road or in snow. Ask your bike shop what type of tire would be best suited to your riding needs. Keep tires inflated to their recommended pressure, which is marked on the sidewall of the tire. Under-inflated tires reduce your efficiency and increase your chances of flat tires. For off-road use or in snow, tire pressure can be reduced to absorb greater impact and provide better traction.



Look for the recommended tire inflation on the sidewall of the tire.

Fenders

Fenders keep you dry and clean. They also prevent lights, reflectors, and your bike, from getting dirty in wet weather.

Panniers (saddle bags)

Panniers allow you to comfortably and safely carry a load while keeping your hands on the handlebars and, by keeping your center of gravity low, they increase stability. These bicycle-mounted packs also keep the weight off your bottom, reducing 'saddle sores' and back pain. DO NOT hang grocery bags or carry loose loads on your handlebars as they can upset the control of your bicycle and prevent you from properly turning your front wheel to avoid an obstacle or to make an emergency maneuver.



Tool Kit/Pump

A tool kit and a pump are a necessity for longer road trips and useful around town to prevent a potentially long walk for minor repairs. A basic tool kit includes: tire levers, spare tube, patch kit, pump, screwdriver, and multi-purpose tools or wrenches suitable for adjusting a variety of nuts and bolts. Be sure that the tube and tools fit your bike, since there are many types and sizes. If you are unsure, consult your bike shop.

Proper tire inflation and chain lubrication will improve your comfort and performance

Bell

A bell or horn is useful as a warning and as a courtesy to alert pedestrians and trail users of your approach. Remember that a bell or horn will probably not be heard by motor vehicle operators.

Regular maintenance and inspection

Perform maintenance and safety checks yourself, or take your bicycle to a qualified bicycle mechanic regularly. (See the 2 Minute Bike Check in the appendix.) It is particularly important to frequently check the brakes and tires, and to clean, inspect, and lubricate the drivetrain (the gears, chain, and derailleur). By doing this you will ensure the efficient performance of the bicycle, ensure that your bicycle will perform properly in an emergency situation and minimize the risk of a mechanical breakdown far from home or assistance.

Each time you ride you should do this minimum ABC Quick Check:
A = Air. Be sure your tires are inflated to the recommended pressure on the sidewall



To be effective, the bicycle helmet must fit correctly and be worn properly. When in doubt, check with a bike shop for the proper adjustment of your approved bicycling helmet.

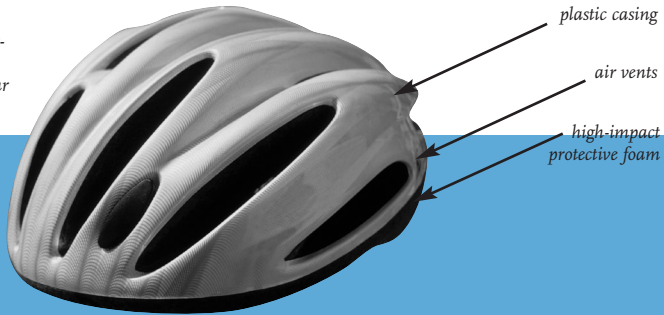
B = Brakes. Squeeze your brake levers hard to be sure the brakes are working and the levers don't reach all the way to the handlebars.

C = Chain. Don't ride with a dry chain. Lube your chain on a regular basis to reduce wear and rust and make pedaling easier.

Quick = Quick releases. Take a look to be certain the quick releases on your wheels and brakes are closed and tight.

Helmets

Studies have shown that in the event of a crash, a helmet will greatly reduce your chances of a serious brain injury. Your helmet should have CPSC standards approval clearly designated on it. Hockey or other types of sports helmets are not appropriate for bicycling since they are designed and tested for other types of impacts.



Studies show that wearing a properly fitted helmet will greatly reduce the chances of sustaining a head injury in the event of a crash

Clothing

Wear, and carry, layers of clothing, including a lightweight, wind-proof outer layer. By adding or subtracting layers, you can keep your body temperature constant, and adjust to changes in the weather. As a general rule, start your ride fairly cool. You will warm up quickly once you get going. If you dress so that you are warm before you even start riding, you will get too hot.

Specialized clothing, such as padded bicycling shorts and gloves, can increase your comfort level on longer rides, but are not absolutely necessary.

For winter riding, a waterproof outer layer will keep you dry, and therefore warm. Remember that you will warm up as you ride, so don't overdress. Layers that can be easily removed will allow you to adjust to changing conditions. If you live in Wisconsin, you have the clothes to ride in winter!



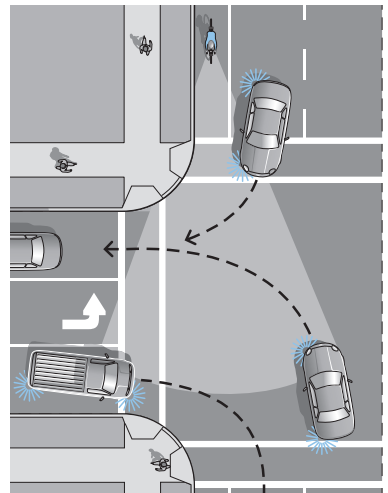
As a narrow vehicle, bicyclists can be less visible to motorists. It is therefore extremely important for bicyclists to use every means possible to make themselves conspicuous.

Position yourself where motorists are looking

The Wisconsin State law requires bicyclists to keep to the right, but that does not mean hugging the curb. You should be at least three feet away from the curb or parked cars. This will reduce the risk of hitting the curb or debris, and also will place you within the motorist's field of vision. This allows you to move away from traffic to avoid an obstacle or crowding by another vehicle. Avoid riding in a motorist's blind spot.

Do not pass on the right

Do not pass moving traffic on the motorists' right side, since car drivers do not expect anything to interfere with a right turn from the right lane, and, as such, often neglect to look right before turning. Drivers may also drift close to the right edge of the road. If using a bike lane, slow down and be sure to watch for inattentive drivers who may be turning across your path. Passing on the left is recommended.



Wear brightly colored clothing

Wear brightly colored clothing such as neon green, yellow and orange, and/or wear a safety vest, day or night.

Turn on your lights

Turn on your lights, front and rear, whenever visibility is reduced. Aim your rear light to the traffic behind you and aim your front light on an angle for vehicles to see you and for you to be able to see the road. You need to BE SEEN, and be able to see the road, as well.

Consider increasing the strength of your lights

Dual headlights will allow you to aim one toward oncoming traffic and one at the road ahead of you. Make sure the batteries for your lights are fully charged and consider carrying a spare.

Put reflective materials on your bicycle and clothing

Put reflective materials on your bicycle and clothing, including front



It is especially important to increase visibility to others after dark, at dawn, or dusk, or in bad weather, such as rain, fog or snow.

forks and rear stays, wheels, pedals, helmets, wrists and ankles. Reflective bands or lights on wrists make your hand signals more visible. Reflective materials on your legs will also show motion, helping distinguish you from a stationary object.

Be aware

Be aware that lights and reflectors are primarily useful for traffic coming from behind or ahead. Drivers coming from the side may have trouble seeing you regardless of your lights. Reflective tape and devices on the frame of your bike will allow you to be seen by others from more angles. It is particularly important to increase your visibility in the dark or in difficult weather conditions such as rain, fog, snow, dawn, or dusk.



Bicycling & Traffic Skills

Always make hand signals well in advance of any turn to increase communication with other road users.

Practice stopping as quickly as possible to get a feel for how much distance is needed at different speeds and under different conditions.

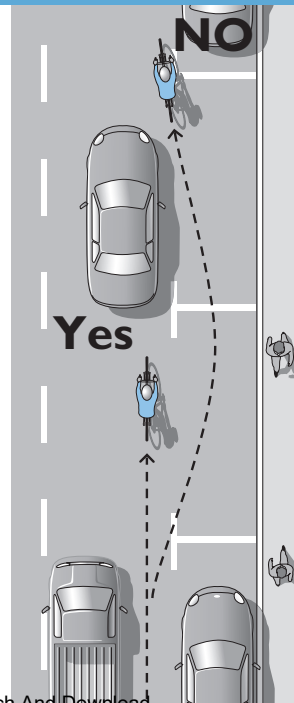
Consider registration in an approved bicycling course taught by certified bicycling instructors, such as those offered by Bicycle Federation of Wisconsin, to improve skills, knowledge and confidence on the road. Here are some skills that you will learn and practice in these classes.

Bicycling in a straight line

Ride in a straight line without weaving between parked cars or when going through an intersection. Keep your head up and look 300-500 feet forward. Being able to ride in a straight line under varying conditions is the key to riding safely in traffic. Practice following a painted line as closely as possible at different speeds. With practice you can minimize wobbles. Riding in a straight line makes you predictable to other road users.

You should be able to look over your shoulder - to both the left and the right - while still riding in a straight line. This is a critical skill when riding in traffic. A mirror does not replace the need to look over your shoulder.

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requires bicyclists to use the same hand signals. Hand signals are required within 50 feet of a turn. Hand signals are not required if you need both hands to control the bicycle. Signaling requires riding with one hand, you must keep your feet on the pedals while maintaining a straight line. You must check over your shoulder for traffic before making a turn.

When braking, the front brake accounts for up to 80 percent of the power during abrupt braking because forward momentum shifts your weight over your front wheel. For optimum braking, shift your weight towards the rear and try to keep your weight centered towards the rear wheel. This, in addition to proper braking technique, reduces the tendency for the rear wheel to skid during hard braking. You are also less likely to flip your bike.

Most important rule Be prepared for mistakes by others.

Keep both hands on the handlebars when riding. Practice stopping as quickly as you can to get a feel for how much force is needed at different speeds and under different conditions. You will need considerably greater stopping distances at higher speeds. Also make sure you can stop in a safe place.

When riding on a road bike, the easier it is to pedal, the more control you have. Pedaling in a lower gear. On the front (chainring) you want a smaller ring; on the back (sprocket) that will be a larger ring. The opposite: large ring in the front, small cog in the back. A large change in the front will make a big change in your gear, a small change in the back will make smaller adjustments.

Low gears are for slow speeds, climbing hills or starting from a dead stop. High gears are for faster speeds or descending. Shift into a low, easy gear before you stop.

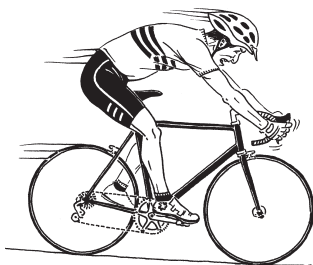
Check ahead and shift into a lower gear well in advance of hills. Use a gear that gives you a fast comfortable pedal rotation speed (cadence) of around 70-90 revolutions per minute. Change gears often to maintain this average cadence. Pedaling in a gear that is too high can damage your knees and tire you out on a long ride.

Turning

Practice turning to give yourself a feel for how sharply, and at what speeds, you can turn comfortably and safely. As you lean into corners, keep your inside pedal up to avoid catching the pedal on the road.

Think and plan your next 30 seconds

Anticipate behavior and movements of other road users and hazards that might appear. Make eye contact and observe the traffic on the road ahead, behind and around you. Practice this so that it becomes automatic behavior.



Shift your weight back during an emergency stop.

The law requires traffic moving less than the normal speed of traffic to keep as close as practicable to the right. This does *not* mean hugging the curb or roadway edge.

Ride on the right, in the same direction as other traffic. Ride no closer than 3 feet from parked cars to avoid being hit by an opening door.

Be assertive

Be assertive but remember that a conflict between a bicyclist and a motor vehicle usually results in injury to the bicyclist. It is best to remember that, when in doubt, do not bicycle beyond your confidence level.

By Wisconsin State law, bicycles are vehicles and riders have the same rights and duties as operators of motor vehicles. The same rules of right-of-way, traffic signs and signals apply to bicyclists as apply to motorists. If you are in doubt about the rules of the road, obtain a copy of the Wisconsin Motorists Handbook. A bicycle law sheet and wallet card are available from the Department of Transportation or the Bicycle Federation of Wisconsin.

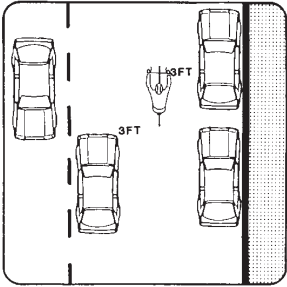
Ride on the right, in the same direction as other traffic.

Some people still believe that bicyclists are like pedestrians and should ride facing traffic. This is not only illegal, but has also been shown to dramatically increase the risk of a collision. Drivers won't expect a road

user to be going the wrong way and won't be looking for you. Riding the wrong way makes it difficult to avoid other road users and obstacles; it forces you out into traffic if you need to swerve. You can't see road signs or make proper turns. And finally, the "closing speed" between you and another road user makes a collision more dangerous.

How far to the right should you ride?

The law requires bicyclists to ride as close as practicable to the right hand curb or edge of the roadway, but that does not mean hugging the curb or edge of the road. (See the Wisconsin Bicycle Laws in the appendix for conditions where you are not required to ride as far to the right as practicable.) You always need some extra space to maneuver around road hazards without running the risk of hitting the curb or going off the edge of the road. This allows you to move away from traffic instead of directly into traffic in the event of an emergency. As a general rule, ride at least 2–3 feet from the edge of the pavement.



If there is no shoulder or bike lane and the curb lane is narrow, bicyclists may choose to use the whole lane by riding in the center of it. This can be safer than riding far to the right, which may encourage motorists to squeeze by where there isn't sufficient space.

Motorists are required to pass with a minimum of three feet clearance and must not return to the right of the roadway until they have fully passed you. Bicyclists are also required to maintain three feet clearance when passing a stopped or moving vehicle - including parked cars.

When to take a lane

If there is no shoulder or bike lane, and the curb lane is too narrow for a bicycle and motor vehicle to share the lane while maintaining 3 feet clearance, bicyclists may choose to take the whole lane by riding farther left, towards the center of the lane. This can be safer than riding near the curb, which may encourage motorists to squeeze by where there isn't sufficient room. You should also consider taking the lane when you are traveling at the same speed as other traffic. This will keep you out of motorists' blind spots and reduce conflicts with right-turning traffic. Be prepared for the occasional frustrated driver who is not familiar with the safe and legal operation of a bicycle.

If you are uncomfortable in the center of the lane, consider taking an alternative route. It is important to bicycle within your confidence limits and comfort when dealing with heavy or high-speed traffic. See the Wisconsin Bicycle Laws in the appendix. 346.80(2)(a) lists conditions when it is not practicable to ride far right.

Road surface hazards

Keep an eye on the road well ahead of you to see if there are potholes, gravel, glass, drainage grates or other hazards coming up. If you have to move over into traffic to avoid these, look over your shoulder first and use a hand signal if necessary. An abrupt swerve into traffic can easily lead to a collision. To make riding safer for you and other bicyclists, report unsafe road conditions to local authorities as soon as possible.

**When you approach an intersection,
ride in the right-most lane that takes you where you want to go.**

**Watch for vehicles turning across your path
and be prepared to avoid them. Always enter intersections
either ahead or behind vehicles in your lane.**

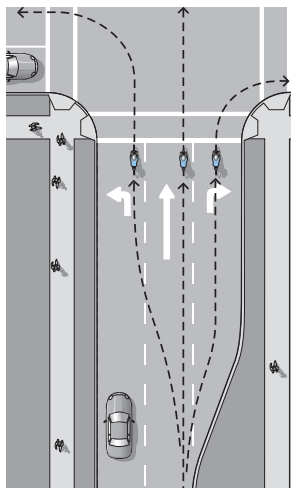
Parked cars

Ride no closer than three feet from parked cars to avoid being hit by an opening door. The doors of some vehicle types can swing far into your lane. If you can see that the car is occupied, be particularly careful. Where cars are parked intermittently, ride in a straight line instead of swerving in and out between the parked cars. This increases your visibility and predictability for car drivers on the road.

Intersections and turning lanes

Approximately 60% of motorist-bicyclist collisions occur at intersections. The majority of these happen when the bicyclist is moving straight ahead. To minimize the dangers you must observe the following rules at intersections and turn lanes.

When you approach an intersection with several lanes, choose the rightmost lane that takes you where you want to go. You may get cut off by turning cars if you are not in the appropriate lane. If there is a single lane of traffic, position yourself in the third of the lane appropriate to



your destination: right third if you are turning right, center if you are going straight, and left third if you are turning left. If you cannot make it across traffic to position yourself in the correct lane, you have the choice to use the crosswalk as a pedestrian instead.

If there is a straight-through bike lane, use it only if you are going straight ahead.

Watch for vehicles turning across your path either coming towards you or from behind. Be prepared to avoid them.

Always enter intersections either ahead of or behind the vehicle in your lane. You may not see the turn signals of a vehicle directly beside you and the driver may not see you.

Make eye contact with other road users, when necessary, to be sure that they have seen you.

Never make a left turn from the right side of the road, even if you are in a bike lane.

If you cannot get into the proper lane position to turn left, make a pedestrian-style left turn.

Ensure that you are away from the curb to increase your visibility.

Avoid entering an intersection on a yellow light since it is likely to turn red when you are still in the middle of it. Most lights are timed for motor vehicles that can cross the intersection more quickly.

When there are four-way stop signs, the first vehicle to come to a complete stop has the right-of-way. If two vehicles stop simultaneously or so close as to constitute a hazard, the vehicle on the right has right-of-way. However, legally you must not proceed until it is safe to do so.

Treat every driveway like an intersection and watch for traffic emerging from the driveway. Do not assume that a driver backing out of a driveway has seen you.

Going straight through an intersection

To go straight through an intersection, use the rightmost lane that

goes straight ahead. Do not ride in a right-turn-only lane if you are going straight.

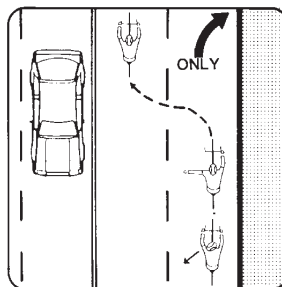
Right turn only lanes when going straight

If the curb lane becomes a right-turn-only lane, you will need to change lanes to go straight. Look over your shoulder for traffic, signal, and then go to the right side of the closest straight-through lane when an opening appears.

Making a left turn

There are two main ways of making a left turn on a bicycle.

a) As a vehicle: As you approach the intersection, look over your left shoulder for traffic, signal your turn, and, when clear, move over to the left side of the lane (on a two-lane road), or into the left lane or the center-turn lane. You should be positioned so cars going straight through cannot pass you on your left. Yield to oncoming traffic



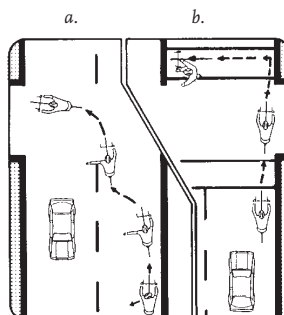
**When overtaking slower traffic,
it is safer to pass on the left.**

**Do not pass drivers on the right if there is a driveway
or intersection where they could turn in front of you.**

before turning. If you are riding in a bike lane, or on a road with several lanes, you need to look and signal each time you change lanes. Never make a left turn from the right side of the road, even if you are in a bike lane.

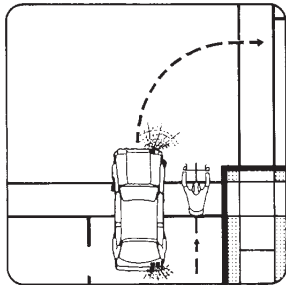
b) Pedestrian style: Proceed straight through the intersection on the right. Then stop, make a 90 degree left turn, and either walk your bicycle in the crosswalk, or proceed as if you were coming from the right. If there is a signal, wait for the green or WALK signal before crossing. Yield to pedestrians in the crosswalk.

On rural or high-speed roads you should time your left turn so that you can complete the whole turn at once without affecting motorists. You don't want to get caught in the middle of high-speed traffic. If necessary slow down or stop on the right edge of the road and wait until you get a large enough gap in traffic to make your turn safely. If the traffic is too heavy without a sufficient gap, continue on to the nearest intersection and do a pedestrian-style turn.



Passing on the left

When overtaking slower moving traffic, you may pass on their left and should allow at least three feet of clearance. When passing other bicyclists, warn them in advance by voice or bell.

**Passing on the right**

You may pass on the right if it is safe to do so. It is safe only if you can maintain at least three feet clearance from both stopped and moving vehicles. When passing, be sure to check for drivers positioning themselves to make a right turn. Motorists may not signal their turns and often do not expect you to be to their right. This is a common cause of crashes.

When approaching an intersection with stopped traffic, it is often best to look over your shoulder, move into the middle of the lane, and line up with the rest of traffic. This will also prevent motorists from making a right turn into you as you enter an intersection.

**Rain makes roads, metal and paint slippery,
especially after a long dry period.
Slow down and leave extra room to stop.**

**Visibility is poor in wet weather.
Ride defensively and increase your visibility**

When NOT to pass on the right:

- when traffic is moving;
- when there is a street, driveway or parking spot a car can turn into;
- when motorists have moved left to go around you or will have to move over before the next intersection; or
- when you cannot maintain three feet clearance from another vehicle.

Riding side by side

Riding two abreast is permitted in Wisconsin on any street as long as other traffic is not impeded. Both riders must stay in the same lane. It is never legal to ride more than two abreast.

Hazards**Buses, trucks and motor homes**

Drivers of large vehicles have large blind spots where they are unable to see bicyclists. If you cannot see the driver in the vehicle mirrors, the

driver cannot see you. Avoid riding in these blind spots and only pass slow moving large vehicles on the left.

In urban areas watch for right-turning buses and semis, since their length and rear overhang require more space than you might expect. Large vehicles will often move toward the left lane in preparation for a right turn. Never pass on the right unless you have a lane to yourself and are positive they are not preparing for a right turn. The most dangerous point in a turn is when the cab has made the turn but the trailer has not.

When traveling at the same speed as a transit bus requiring frequent stops, use common sense and courtesy to avoid conflict and a potentially dangerous situation between yourself and the bus that can happen when you re-pass each other. Recognize that it is often difficult for the bus to pass you, especially in heavy traffic.

**Brakes work less efficiently when wet,
especially during initial exposure to wet conditions.**

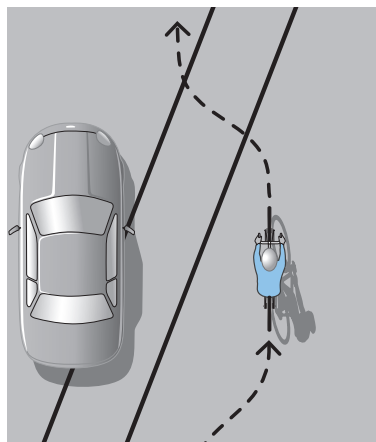
**Black ice is particularly dangerous since it is hard to see.
It is most common on bridges, metal surfaces and shady areas.**

Large vehicles traveling at high speeds create varying degrees of air turbulence that can cause a bicyclist to be pulled into the path of passing vehicles. Use extra caution to avoid being drafted (pulled) into the lane behind a truck. Be especially cautious in windy conditions, where the draft can be magnified by the wind-blocking action of the trailer.

Railroad tracks

Cross railroad tracks carefully. Cross as close to 90 degrees as possible to avoid getting your wheel caught in the tracks. If the tracks cross the road at less than 45 degrees, change your road position well in advance so that you cross them at close to 90 degrees. Ensure that you have indicated your intention to other traffic.

Watch for uneven pavement and grooves along the rails. Keep firm control of your bicycle. When crossing rough pavement or railroad tracks, rise up from the saddle and allow your legs to act as shock absorbers. Tracks can be slippery when wet, so avoid turns while crossing.



Weather hazards

Rain makes roads slippery, especially after a long dry period. Watch out especially for painted markings on the road, leaves, oily spots and metal utility access covers; these locations are likely to be slippery. Avoid them if possible or cross them with great care. You have less traction on the road, so turn more slowly.

Visibility is poor in wet weather and when the sun is low (winter, sun rise or sun set) and motorists may have more difficulty seeing you. Ride defensively and see the visibility section on how to make yourself more visible.

Leave extra room and be prepared for sudden stops or swerves by traffic around you.

Brakes work less effectively when wet, especially during the initial exposure to wet conditions. If possible, try them out on a quiet street to

Special care should be taken when transporting small children by bicycle. All children should wear an approved bicycle helmet and should be secured by a seat belt system when in a trailer or bicycle child seat.

test their stopping power before heading into heavier and faster traffic. Dry rims by feathering brakes (applying them lightly) before you need to stop or slow down. Always give yourself extra room to stop when rims are wet.

Avoid puddles when possible since they might hide potholes, broken glass or other exciting surprises.

Cold weather leads to frost, black ice and snow, all reducing traction dramatically. Remember that two wheels do not slide in the same manner as four wheels. A bicycle is more likely to slide out from under you on ice. Whenever traction is reduced you should bicycle more slowly and cautiously, especially at intersections. Using wider tires with lowered pressure can help.

Black ice is particularly dangerous since it is hard to see and can suddenly eliminate your grip on the road. It is most common on bridges, metal surfaces, and shaded areas.

Traffic signals

Many traffic signals are triggered by electrically charged wires buried under the pavement. When a vehicle passes over or stops over the wires, the metal disrupts the current, which sends a signal to a traffic light control box.

Most bicycles contain enough metal to trigger the light, but you should know where the most sensitive spots are. Look for cut lines in the pavement, filled with tar. Depending on the shape, the most sensitive spots are:

- Diamonds: just inside one of the points.
- Rectangles: on the edges.

If you cannot trigger the signal, and you have waited an appropriate amount of time, treat the traffic signal as an uncontrolled intersec-



Trailer-Bike

**Because headphones obstruct your hearing,
they should not be worn while bicycling.**

tion and proceed when it is safe to do so. You may also dismount and cross as a pedestrian. Report the malfunctioning signal to your traffic engineering department.

Carrying children

Special care should be taken when transporting a child by bicycle. There are a number of options available for transporting children depending on their size and age. For carrying younger children, a bike trailer offers more protection for the child if you should fall. Bike trailers are generally considered to be a safer alternative than a bicycle child seat. When using a seat mounted on the back of a bicycle, special care should be taken to ensure that the child's feet, hands and clothing cannot be caught in the spokes or other moving parts of the bike. Bike trailers and trailer-bicycles should be equipped with a taillight and reflector if



Trailer

being used at night. Bike trailers should also have a bike flag attached to the trailer to improve visibility since they are lower to the ground. All children should wear an approved bicycle helmet and should be secured by a seat belt system when in a trailer or in a bicycle child seat. Prior to taking your child out in any type of carrier you may wish to practice turning, stopping, hill climbing and other maneuvers with a sand bag or other weight to simulate the effect of the additional load.

Riding two on a bicycle

Riding double is only permitted when carrying a child in an approved carrier or when riding a tandem or trailer-bicycle.

Several studies have proven that bicyclists on sidewalks face a far greater collision risk than bicyclists on the roadway. The main danger points are driveways and street crossings where sidewalk bicyclists surprise motorists and pedestrians by appearing from unexpected directions. Bicyclists on sidewalks traveling in the opposite direction from traffic are especially at risk.

Riding on multi-use paths

Except for street crossings and driveways, paths are safe from car/bicycle collisions, and you don't have to endure the noise and pollution. However, bicyclists must yield to pedestrians and slower path users in general. Other users, such as joggers, skaters, children, pets, and pedestrians may

Some jurisdictions allow riding on the sidewalk, but several studies have shown that bicyclists face a far greater risk of collision on the sidewalk than on the roadway.

On multi-use paths, bicyclists must yield to slower users and give an audible warning when passing.

Headphones

Because headphones can obstruct your hearing, they are not recommended while riding a bicycle and are illegal in some jurisdictions. Check your local ordinances.

Bicycling restrictions

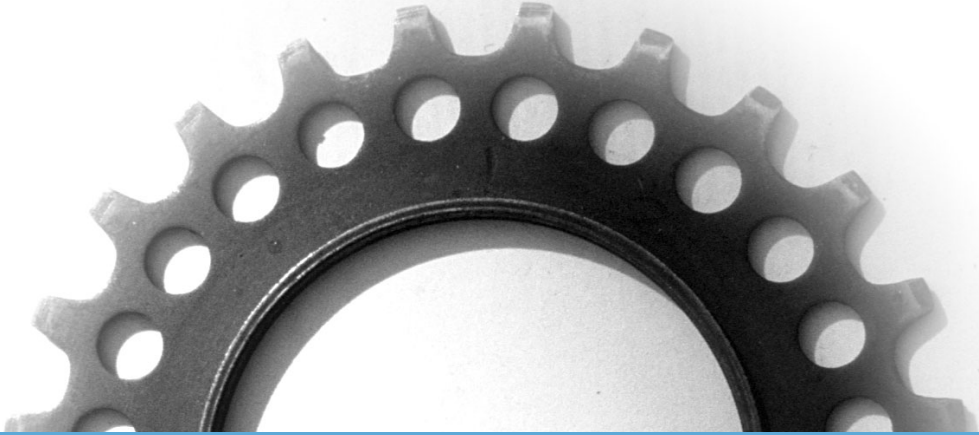
Bicycles may not be ridden on roads where signs indicate bicycling is prohibited. Bicycling is permitted on all other roadways.

Riding on sidewalks

Local jurisdictions may or may not permit bicycles on sidewalks, but bicyclists must yield to pedestrians and give an audible warning when passing. At intersections and other sidewalk crossings, bicyclists have the same rights and duties as pedestrians.

act unpredictably, and a bicyclist maintaining a high speed can be a danger on such a path. Therefore, bicyclists who want to travel quickly should opt to use roadways rather than heavily used paths. Remember that you are sharing the path with others and need to respect their rights. Reduce your speed where appropriate and give an audible warning before passing other path users.

Appendices



**Bicyclists are a legitimate and recognized part of traffic,
and they have a legal right to safe riding conditions on our roads.**

**There are individuals at the local, state,
and national level who can help you.**

Who can you contact?

While bicycle commuters may sometimes feel embattled and overlooked, there are, in fact, a number of resources available to help improve life for those who use their bikes as a primary means of transportation. Bicyclists are a legitimate and recognized part of traffic and they have a legal right to safe riding conditions on Wisconsin's roads. Listed below are some people and groups that you can contact if you have bicycle-related concerns and issues to be addressed.

Madison has a Bicycle/Pedestrian Coordinator in its Department of Transportation office. The

coordinator can deal with many of the questions of bicyclists in Madison such as road conditions, construction, safety, bicycling hazards, and appropriate facilities for bicycling. It is the coordinator's job to ensure that bicyclists' needs and concerns are being taken into account when municipal decisions are being made.

In other communities, call the planning department or traffic committee chair to ask who is in charge of bicycle planning. Your voice is important.

You can also ask if your community has a Bicycle Advisory Committee. Some communities have committees which are composed of city staff members (police, planners, engineers) and members of the public. Many public officials are happy to have members of the public become involved

in local issues. Find out which committee best addresses bicycling issues. In Madison this would be the Pedestrian/Bicycle/Motor Vehicle Commission. The UW and Dane County also each have a Pedestrian/Bicycle Sub-committee.

Below are helpful resources for bicycle information in the area:

City of Madison

www.ci.madison.wi.us/transp/bicycle.html
Pedestrian-Bicycle Coordinator
Madison Traffic Engineering
PO Box 2986
Madison, WI 53701-2986
608-266-6225

Dane County

Highway & Transportation Department
www.co.dane.wi.us/highway/hwyhome.htm
2302 Fish Hatchery Rd.
Madison, WI 53713-2495
608-266-4261

Parks Department

www.co.dane.wi.us/parks/parkhome.htm
4318 Robertson Rd
Madison, WI 53714
608-246-3896

Call your community's planning or traffic departments to ask who is responsible for bicycle planning and safety. Your voice is important.

Wisconsin DOT

www.dot.state.wi.us/modes/bicycles.htm
State Bicycle Coordinator
Wisconsin Department of Transportation
4802 Sheboygan Ave.
PO Box 7913
Madison, WI 53707-7913
608-267-7757

For regional bicycle issues and planning, contact:

Madison Area Metropolitan Planning Organization

121 S Pinckney #400
Madison, WI 53703
608-266-4336

UW-Madison

www.fpm.wisc.edu/trans/TDM/Bicycling.htm
Pedestrian/Bicycle Coordinator
610 Walnut St, Rm 142
Madison, WI 53705
608-263-2969

You can also find the Bicycle Transportation Plan for the Madison Urban Area and Dane County on the City of Madison's web site:
www.ci.madison.wi.us/transp/bicycle/sept2000/bicycletranplan.html

Public Transit

Bus Bike Racks

Madison Metro has bike racks on its buses. The racks each hold two bicycles and are easy to use. Instructions on how to use the racks can be found on the rack or the Madison Metro website: www.mymetrobus.com There is no charge for taking your bike on the bus. One way to learn to use the racks is to practice while a bus is waiting at a transfer point or time point such as the Capitol Square.

Lift your bike onto the bike rack, fitting wheels into proper wheel slots. Each wheel slot is clearly labeled for the front wheel. (NOTE: The rack operates properly even if a bicycle is loaded in the wrong direction.) The purpose of the directional placement is to make the bike nearest the bus easier to unload.

Raise the Support Arm over the front wheel. The Support Arm's number one purpose is to add lateral support for the the bicycle when the bus is in motion or at rest. Many bikes will sit in the wheel well without the use of the Support Arm, but the rack must not be used without the use of the Support Arm. Bikes with especially thin rims and tires will sway back and forth without its use.

The integration of bicycles into existing and planned transit systems is a highly effective way to expand the range of travel possible on two wheels.

Loading Bikes

Prepare your bike for loading. Remove water bottles, pumps and other loose items that could fall off while the bus is in motion.

Inform the bus driver that you will be loading your bike. You must load your bike from the curb or in front of the bus. Do not step into oncoming traffic to load your bike.

Squeeze handle up to release latch, then fold down the bike rack. You only need to use one hand to unlatch and pull the bike rack down, so you can hold your bike with your other hand. It is not necessary to lean your bike against the bus.



The Support Arm needs to be raised so that the hook rests at the highest point on the front wheel.

Board the bus and enjoy the ride! Choose a seat near the front of the bus to keep an eye on your bike. **DON'T FORGET** you have a bike with you when you get off at your stop. New riders often do!

Unloading Bikes

Inform the bus driver that you will be unloading your bike as you approach your stop. Use the front door to exit the bus. Unload your bike from in front of the bus or from the curb, not from the street.

Van Galder Bus

608/752-5407
800/747-0994
www.vangladerbus.com

Metro Transit

608/266-4466
www.mymetrobus.com

Badger Bus

608/255-1511
www.badgerbus.com

Bicyclists have the same rights and responsibilities as drivers of motor vehicles

Raise the Support Arm off the wheel. The Support Arm automatically folds down to a secure position.

Lift your bike out of the bike rack.

Fold up the Bike-Rack-for-Buses if there are no bikes on the rack and no one else is waiting to load their bike. The bike rack locks in place.

Step away from the bus with your bike.

Bus companies such as Van Galder and Badger Buses will generally take bikes as luggage as long as there is space. They may or may not require them to be boxed and may charge a fee. Call ahead to ask about rules if you want to take your bike on an inter-city bus trip.

Crashes

In Wisconsin, crashes involving a motor vehicle must be reported if they involve property damage of \$1000 or more or if there are injuries requiring first aid or medical treatment whether or not treatment is administered. Other crashes should be reported to protect the legal rights of victims and aid in correcting and tracking crash causes.

Bicyclists are required to remain at the scene of a crash, the same as the driver of a motor vehicle. You are also required to provide your name and address to the other parties involved or to a police officer upon request. It is best to carry identification, emergency contact information, and medical insurance information, especially when you bicycle alone.

If you are in a crash with a motor vehicle, bicycle or pedestrian, don't ride away or shake off what seems like a minor injury. You might find later that it is worse than you thought. Bicycling injuries often don't manifest themselves until much later. It is better to be sure you have all the details of a crash in case you need medical attention or to file a report.

If you're a victim of, or a witness to a crash, **here are the steps to take:**

1. Call the police.
2. If needed, get medical help immediately.
3. Get the following information from others involved in the crash (if relevant to vehicle involved): driver name, address, phone number,

7. If you file a police report, get the report number from police on the scene. Also, if you're a victim: Don't get mad at the scene. Keep a level head so you can ask questions and take notes.

If you're injured, don't move unless you're sure you won't injure yourself more.

If the crash is not reported at the time it happens, you can also file a report after the fact. Call the law enforcement agency in the jurisdiction where the crash occurred and ask how to report a crash.

Most homeowner's insurance will cover your liability if you cause a crash while on your bike. Check with your insurance provider if you have questions.

In general, bicycle–motor vehicle crashes involving child bicyclists tend to be caused by an error on the part of the bicyclist.

In crashes involving adult bicyclists, the crash is more likely to be caused by an error on the part of the motorist.

driver's license number, license plate number, make of car, insurance company name and policy number. Copy driver name and address information directly from the driver's license, if possible. Don't accept a business card without verifying that the name is the same as on the driver's license.

4. Get the names and phone numbers of witnesses.
5. Write down how the crash happened while it's fresh in your memory. Include details of the incident, including a diagram. Describe the circumstances of the collision in as much detail as possible: weather conditions, lighting, speeds, etc...
6. Keep (or photograph) any damaged clothes or equipment. Save any receipts from repairs or medical bills. You will need these for an insurance claim.

Dangerous Traffic Violations

Many bicyclists and motorists are unaware of the rights and responsibilities of bicyclists. In the event that you are on the receiving end of dangerous driving behavior and are able to obtain a vehicle license plate number, report the matter to police as soon as possible. It is unwise to confront motorists on the road with your opinion of their traffic etiquette. Use common sense when traffic incidents occur and avoid entering into 'road rage' behavior yourself. As in the case of a collision, write down all relevant information immediately. Police can only act upon reports where there is detailed information (vehicle license plate; make and model of car; driver description) for a charge (i.e. unsafe passing, failure-to-yield,

failure to drive with due care and attention, etc.). Depending on the location of the incident and the caseload of the local police, you may find the authorities reluctant to follow up on a report. It is important to avoid making 'nuisance' complaints. However, if your concern is of a serious nature, obtain a police report number and follow up on the outcome.

Avoiding crashes

In 2000, there were 690 bicycling fatalities and 51,000 bicycling injuries reported as a result of traffic crashes in the United States. It is estimated that injuries are significantly under reported – possibly by a factor of ten. [Pedestrian and Bicycle

Although they are much less common, crashes with motor vehicles tend to be much more serious and of greater concern to bicyclists. In general, crashes involving children (up to age 14) tend to be caused by an error on the part of the bicyclist. Children often do not yield to traffic in the roadway when riding out from a driveway or sidewalk. A swerve into traffic from the side of the road is another common error among children.

In crashes involving adult bicyclists, the crash is more likely to be caused by an error on the part of the motorist. Failure to yield the right of way – either when making a turn or at a traffic control device – is the cause of most adult bicyclist-motorist crashes.

The bicycle is defined as a vehicle under Wisconsin Statute.

Follow the same rules of the road as you would if you were driving a car.

Information Center] Whatever the true number of bicycle crashes, the number is dwarfed by the number of motor vehicle crashes, injuries, and fatalities each year.

In addition, inactivity has been cited as a major contributing factor in many chronic diseases and deaths in the US. Bicycling is one way to get exercise and prevent these health problems.

To prevent injuries, it helps to understand the most common types of bicycle crashes. The majority of crashes are simply falls involving no other person or vehicle. Examples of these are hitting an object; slipping on gravel, sand or ice; getting your wheel caught in railroad tracks; or hitting a pothole.

More information on crash types and causes can be found at the web page for the Pedestrian and Bicycling Information Center, www.bicyclinginfo.org

For a full analysis of crash types from the Federal Highway Administration, this web page is very helpful: safety.fhwa.dot.gov/fourthlevel/pdf/ctan-bike.pdf

Several studies in North America have found that the primary fault in bicycle/motor vehicle collisions is approximately equally shared between bicyclists and drivers. However, these studies often do not separate adult from child bicyclists when reporting data.

All bicyclists should be aware that the three most common motorist-caused bicycle/motor vehicle collisions are:

- An oncoming driver turns left in front of the bicyclist.
- A driver on a cross street stops, and then pulls out directly in front of the bicyclist.
- A driver barely passes the bicyclist and then turns right.

Wisconsin Bicycle Laws

Bicyclists have the same rights and responsibilities as drivers of a motor vehicles. The laws that

rights and subject to the same duties as the driver of any other vehicle. [346.02(4)(a)]

Lane Positioning

- Always ride on the right, in the same direction as other traffic. [346.80(2)(a)]
- Ride as far to the right as is practicable (not as far right as possible). [346.80(2)(a)]
- Practicable generally means safe and reasonable. 346.80(2)(a) lists a few situations when it is not practicable to ride far to the right:
- When overtaking and passing another vehicle traveling in the same direction;
- When preparing for a left turn at an intersection or driveway;

A bicyclist riding at night must use a white front light and a red rear reflector

govern bicyclists are contained in the Wisconsin Vehicle Code. A copy of the information below is available as a card that can be carried in your bike bag or jersey. Contact the Wisconsin Department of Transportation or the Bicycle Federation of Wisconsin to get a copy. [See the *Who Can You Contact* section for contact information.]

Disclaimer: Please refer to Wisconsin State Statutes for actual wording of the laws. These are on the internet at www.legis.state.wi.us/rsb/stats.html. Numbers in brackets below denote relevant State Statutes.

Vehicular Status

- The bicycle is defined as a vehicle. [340.01(5)]
- The operator of a vehicle is granted the same

- When reasonably necessary to avoid unsafe conditions, including fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards or substandard width lanes [defined as a lane that is too narrow for a bicycle and a motor vehicle to travel safely side by side within the lane].

One Way Streets

- Bicycles on a one-way street with 2 or more lanes of traffic may ride as near the left or right-hand edge or curb of the roadway as practicable (in the same direction as other traffic). [346.80(2)(b)]

Use of Shoulders

- Bicycles may be ridden on the shoulder of a highway unless prohibited by local authorities. [386.04(r)]

Riding 2-Abreast

- Riding 2 abreast is permitted on any street as long as other traffic is not impeded. When riding 2 abreast on a 2 or more lane roadway, you both have to ride within a single lane. [346.80(3)(a)]

Hand Signals

- Bicyclists are required to use the same hand signals as motorists [346.35].

front light must be visible to others 500 feet away. The red rear reflector must be visible to others between 50 and 500 feet away. A red or amber steady or flashing rear light may be used in addition to the required reflector. A light and reflector are required no matter where you ride--street, path or sidewalk. [347.489(t)]

Duty to report accident. [346.70]

- The operator of a vehicle involved in an accident resulting in injury to or death of any person, or total damage to property owned by any one person of \$1,000 or more shall immediately give notice of such accident to the police.
- "Injury" means injury to a person of a physical nature resulting in death or the need of first

- Hand signals are required within 50 feet of your turn. It is not required continuously if you need both hands to control the bicycle [346.34(t)(b)]

Passing

- A motorist passing a bicyclist in the same lane is required to give the bicyclist at least 3 feet of clearance, and to maintain that clearance until safely past. [346.075]
- A bicyclist passing a stopped or moving vehicle is also required to give at least 3 feet of clearance when passing. [346.80(2)(c)]

Bicycling at Night

- Bicycling at night requires at least a white front headlight and a red rear reflector. The white

aid or attention by a physician or surgeon, whether or not first aid or medical or surgical treatment was actually received;

- "Total damage to property owned by one person" means the sum total cost of putting the property damaged in the condition it was before the accident, or the sum total cost of replacing such property.
- This section does not apply to accidents involving only vehicles propelled by human power.

Use of Sidewalks

- State Statutes allow local units of government to permit vehicles on sidewalks through local ordinances. [346.94(t)]
- When bicycles are allowed to be operated on

sidewalks, bicyclists must yield to pedestrians and give an audible warning when passing pedestrians traveling in the same direction.

[346.804]

- At intersections and other sidewalk crossings (alleys, driveways), a bicyclist on the sidewalk has the same rights and duties as pedestrians. [346.23, 24, 25, 37, 38]

Bicycle Security

Talk to your local bicycle store about the right lock for you and your bicycle. Ask for secure, covered parking at your workplace. For short-term parking, make sure to lock both your frame and

Two Minutes a Bicyclist Can't Afford to Miss

Is bike inspection something you have been reserving for a rainy day activity? It shouldn't be. Make this two minute check each time you are preparing to ride. Correct any problems and make adjustments on the spot. When you ride, your attention should be on the road at all times. If you hear a rattle or suspect a problem, get off the road to check it. Do not start looking your bike over while you are moving. Taking attention away from the road ahead to glance down at the bike has caused many a bicycle crash.

front wheel to a bike rack or other object that cannot be moved. Best locations are in busy pedestrian areas visible from many vantage points. At home keep your bicycle out of sight and dry. Never leave your bike unlocked for even a short time. Keep a description of your bike and its serial number at home; they will help you retrieve your bike if it is stolen. Madison has mandatory bicycle registration. Even if you live in another community, you can register your bicycle with the city of Madison. Your local police may also keep records of serial numbers. Check with an insurance agent about protecting your bike—it's an investment you'll want to keep.

Madison Bicycle Registration
www.ci.madison.wi.us/transp/Bicycle/bikereg.html
 608/266-4474

The Two Minute Check:

1. Check that your front wheel quick release is tight (or axle nuts).
2. Squeeze the front brake lever and check that the brake pads align squarely on the rim. Also check the brake cable and housing for cuts or kinks (make sure to check both at the brake and at the lever).
3. Pick up the front of the bike and spin the front wheel. Check for wheel trueness (side to side wobble caused by improperly tensioned or broken spokes, or a bent rim), tire wear, and brake pad clearance from the rim (about 1/8 inch). If you have fenders or a handlebar bag, make sure these do not rub on the tire.

4. Grab the top of the front wheel and try to rock it side to side. If you feel any play your hub bearings need adjustment.

Repeat steps (1) through (4) for the rear. Also check the vertical alignment of the rear derailleur's roller cage (it should be in the same plane as the freewheel cogs).

5. Grab the front brake and try to rock the front wheel back and forth. If you feel any play, your headset might be loose and need adjustment. Pick the front wheel up off the ground and turn the handlebars side to side. If you feel any binding or excessive resistance, your headset may be too tight.

for bent or tight links. Check the derailleur cables and housing for cuts and kinks (again, check both at the derailleurs and at the levers).

8. Try hard to twist the saddle up and down, and left and right. If it does not move it's secure. Do the same to your handlebars, bracing the front wheel between your knees. Put all your weight on the handlebars when twisting up and down to make certain they will not slip in a panic stop.

9. Check other attachments, nuts and bolts to make sure nothing is loose or might rub against your tires.

6. Grab the crankarms and try to push them in and out to check the crank arms and bearings for looseness. There should be no lateral play in the crank axle. Also check that the pedals are screwed in all the way, flat against the crankarms (note: there is a left and a right pedal, the left pedal is reverse threaded. The pedals should be marked with an L or an R either on the back of the spindle or on the flats.)

7. With the rear wheel off the ground, turn the pedals and shift through the gears. Make sure the derailleurs can reach all your cog/chainring combinations and do not throw the chain off the front or back sprockets. If there are problems, you may need to make a cable adjustment or adjust the derailleur limit screws. Watch the chain pass through the rear derailleur jockey wheels looking

10. Check your tire pressure with a gauge. Keep your tires pumped up to the recommended pressure marked on the tire.

Trail Etiquette

- Whether you are walking, biking, jogging, or roller blading, stay on the right side of the path except to pass.
- Faster users must yield to slower users. When approaching another user, slow down and give the person plenty of space.
- Pass on the left. Clearly alert others before passing. State law requires an audible warning when passing a pedestrian.
- Always look before changing positions on the trail.
- Do not block the trail. If you need to stop, move to the side or off the trail.
- Control your speed. Trails are not an appropriate place for high speed riding. Respect other trail users. If you feel frustrated slowing down, the road may be a better place for your ride.



The Bicycle Federation of Wisconsin... Help Us Make Wisconsin a Better Place to Bicycle!



Please join us today!

- \$15 Limited Income
- \$25 Basic (free map)
- \$35 Supporter (free map)
- \$50 Advocate (free map and extra gift!)
- \$100 Sustaining (extra gifts!)
- \$500 Legacy (much more!)
- \$1000 Lifetime (become a Golden Spoke!)

All members get our quarterly newsletter, our annual event booklet, and discounts at select bike shops throughout the state and on BFW merchandise...plus updates and representation on bike issues!

The Bicycle Federation of Wisconsin is a statewide membership-based nonprofit bicycle education and advocacy organization. We strive to Make Wisconsin a Better Place to Bicycle by empowering citizens to build communities where bicyclists are safe to ride the roads and trails. We educate decision makers, motorists, and other bicyclists to the transportation and safety issues and environmental, health, and economic benefits of bicycling. We promote bicycling as an integral part of a balanced transportation system, a healthy and fun lifestyle, and a prosperous economy. Visit our website at www.bfw.org!

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P.O. Box 1224, Madison, WI 53701-1224

Bicycling Resources and Advocacy

Ever wonder what advocacy really is? You may be interested in advocacy and not even know it! If you are concerned about the rights and privileges of bicyclists, whether for access to trails or safer road riding conditions, then you are interested in bicycling advocacy.

There are many ways to become involved in advocacy and help ensure that bicyclists as a community of people are heard and understood. There are clubs and coalitions, as well as concerned individuals, throughout the area that work to improve bicycling conditions, rights and privileges. Don't wait for others to solve problems for you. Become familiar with the decision-makers and bicycling advocacy groups in your area to work toward improved conditions for bicyclists.

If you are concerned about the safety, rights and privileges of bicyclists, whether on trails, paths, or the road, then you are interested in bicycling advocacy.

THE FOLLOWING RESOURCES AND GROUPS SHOULD HELP YOU GET STARTED AS AN ADVOCATE:

- Bicycle Federation of Wisconsin** www.bfw.org
- Wisconsin Off Road Bicycle Association (WORBA)** www.worba.org
- Bicycling Community Page** www.danenet.org/bcp
- League of American Bicyclists** www.bikeleague.org
- National Center for Bicycling and Walking** www.bikewalk.org
- Pedestrian and Bicycling Information Center** www.bicyclinginfo.org

Bicycle Federation of Wisconsin welcomes all comments, suggestions, and additional bicycling information for Bike Sense from across the state. To reach us, or to order copies of the manual, contact:



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Bike Sense was edited by Robbie Webber with considerable assistance from Arthur Ross, Peter Flucke, and Marjorie Ward.
 Graphic design and layout by Eric Rank
 Additional original drawings by John Carr



THE 5 BASIC PRINCIPLES:

Maintain your bicycle in good working order.

Be as visible as possible to others.

Learn the skills needed to control your bicycle.

Bicycle in traffic safely and predictably.

Know and obey the rules of the road.

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