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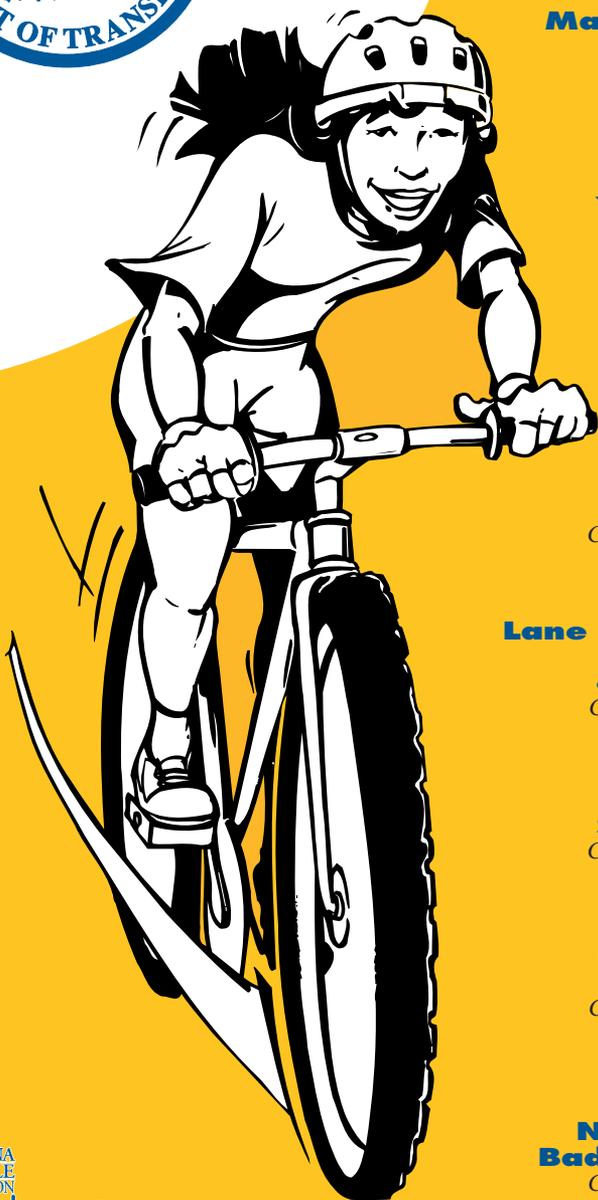
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SAFE BICYCLING



IN INDIANA



How to Use This Booklet

How should you use this booklet? First, look at the subjects listed on the front cover. You'll see what page to turn to for that information.

If you want other information about how to bike safely in Indiana, read the Table of Contents. There, we've listed everything this booklet covers. If you can't find what you want, check the list of bicyclists' resources on the inside back cover.

This booklet is intended for bicyclists above 12 years of age. Parents and teachers can use the booklet to teach younger cyclists how to bike safely.

If you have questions or comments, please call the Indiana Bicycle Coalition at 317/466-9701.

A MESSAGE FROM INDIANA GOVERNOR MITCH DANIELS

Regardless of where you travel in Indiana, you will see folks on bicycles. Bicycling is a great way to see our Hoosier state, as many discover each year.

My administration started the INShape Indiana initiative, aimed at spurring Hoosiers to live healthier lives. Bicycling is an excellent form of exercise, and can be a great way to stay active and healthy.

In an effort to encourage greater exploration of our Hoosier heartland, we are also pursuing a comprehensive statewide trails plan that will create additional bicycling opportunities for bike riders to enjoy.

I commend the Indiana Bicycle Coalition's efforts to promote safe bicycling in our great state.

This booklet is filled with helpful facts and tips. Please use it as a guide to learn the skills you need to ride safely and enjoyably.

Governor

A MESSAGE FROM THE INDIANA BICYCLE COALITION

The Indiana Bicycle Coalition is pleased to publish this booklet to help you bicycle safely and more often. We're dedicated to creating a bicycle-friendly Indiana. As a result of our efforts:

- ▶ "Share the road" rules for motorists and bicyclists appear in Indiana state highway maps.
- ▶ "Share the road" public service announcements for radio and TV are available.
- ▶ Bicycle safety resources now available include "Indiana Bicycle Laws" cards, "Share the Road" brochures, "Bicycle for Fun and Safety" coloring books (for ages 6-12), and this booklet.
- ▶ Thousands of Indiana students have participated in BikeSmart poster contests.
- ▶ Bicyclists have a central resource for bicycling information through our staffed office and Web site, www.bicycleindiana.org.

We hope this booklet helps you to bicycle safely and enjoy exploring Indiana by bicycle!

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1: FITTING & EQUIPPING YOUR BIKE

HOW TO GET A GOOD FIT

Your bike's most important safety feature is you: If you're not comfortable, you're more likely to ride badly and hit something. 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.

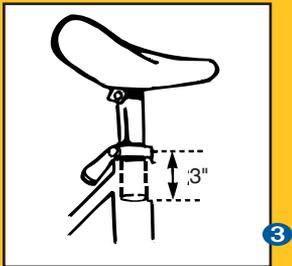
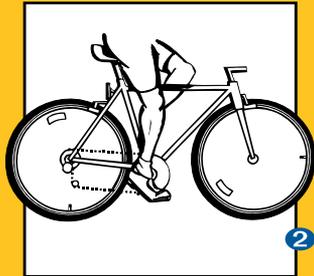
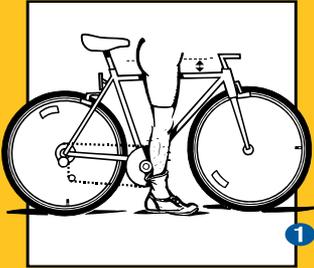
Frame Size: If your bike's frame is too tall, too short, or too long, it's very hard to adjust other things to make you comfortable—so you might need a new bike.

To Check the Height: On a men's bike, stand with the bike between your legs, just in front of the seat. Measure the space between the top tube and your crotch. **1** For road or street riding, a one-inch to three-inch space is safest. (Off-road riding might require a bigger space.) For women's frames, 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 (see page 3). 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, 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:

- ▶ Sit on your bike and push one pedal all the way down. **2** Put the ball of your foot on the pedal. If your seat's high enough, your knee should be slightly bent.
- ▶ 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 three inches of your seat post extends into the frame. **3** (Most seat posts have a mark showing how high you can raise them.) If you have to raise your seat higher, consider getting a longer seat post, or a taller bicycle.





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

- ▶ Start by raising or lowering your handlebar so it blocks your view of the front axle when you're sitting on your bike with your hands on the handlebar. **4** In this position, your elbows should be slightly bent (not locked).
- ▶ Lower-back pain often means the handlebar is too far away, while upper-arm or shoulder fatigue often means the handlebar is too close to you. Try raising or lowering the handlebar, or moving your seat forward or backward. **5** You can also try a shorter or longer handlebar stem.
- ▶ Don't raise your handlebar so high that less than two and a half inches of your handlebar stem extends into the frame. **6** (Most stems have a mark showing how high you can raise them.) If you have to raise your handlebar higher than the safe limit, get a longer stem or stem extender.
- ▶ Rotate your handlebar so that it puts even pressure across the palms of your hands without bending your wrists in a strange way. **7**

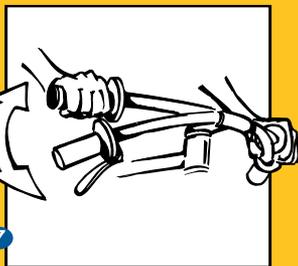
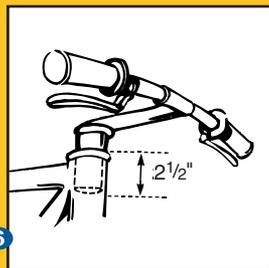
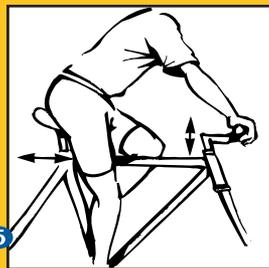
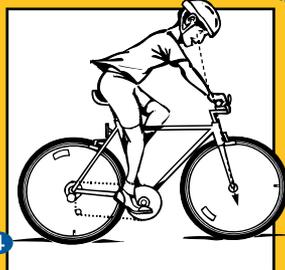
Seat Tilt: Last, adjust your seat tilt for comfort: Many cyclists keep their seats level. Many women, however, tilt them nose-down, and many men tilt them nose-up. Try different angles until you find a comfortable one.

Saddle Soreness: If you haven't bicycled in a while, expect to experience soreness at first; chafing or soreness should get better with time. If it doesn't, the first thing to check is the seat adjustment; see "Seat Tilt" above, and "Seat Height" on page 2. If adjustment doesn't help, try a gel-filled saddle or saddle pad; a wider or differently-shaped saddle; one with springs; or one with a center cut or groove. Many bicycle stores will exchange saddles if they're not damaged, so try alternatives until you're comfortable. Also, many cyclists like padded and/or seamless shorts for long rides.

FOR MORE INFORMATION

For help on fitting a bike:

See *Urban Bikers' Tricks & Tips*, by Dave Glowacz (Mr. Bike). Available at book stores, by calling 800/888-4741, or on-line at www.mrbike.com.





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BASIC EQUIPMENT

Here's some equipment that experienced cyclists recommend to make biking a lot safer—and easier.

Helmet: A must! See page 9 for more.

To Prevent Flats: ① Keep your tires at maximum air pressure; they lose a little air every day. Skinnier tires lose air more quickly. Many cyclists use puncture-proof tire liners (like Mr. Tuffy), Kevlar-belted tires, thorn-resistant tubes, or tube sealants. Heavy-set or rough-surface riders should try wider tires. **To fix flats:** Always carry a spare inner tube or a patch kit, and tools to get your tube out. Use tire levers (best) or a screwdriver (not as good); a wrench if you don't have quick-release hubs; an old sock or rag to cover your hand when you grab your chain; and a hand pump or quarters to pay for a gas-station pump. (Beware: high-pressure pumps can explode your tire!)

Carrying Rack: Make your bike carry your things! ② Use bungee cords to tie things to your carrying rack. Attach a milk crate as a carrying case. If you carry things often you should invest in panniers, or the many varieties of bike bags available.

Instead of a rear rack or front basket, you can use a backpack. However, a backpack can strain your shoulders and make balancing harder. And carrying stuff in your arm is unsafe; it's harder to steer and brake.

Toe Clips & Clipless Pedals: Toe clips and clipless pedals give your pedaling more power. But if not adjusted right, they can lock your feet to your pedals so you can't put a foot down when you lose your balance. When using toe clips or clipless pedals, make sure you can get your feet out fast.

Ankle Strap: Getting your pants caught in your chain can make you lose control and ruin your pants. If your bike doesn't have a chain guard, use a clip or Velcro strap ③ around your pants cuff to keep it from hitting your chain and frame.

Sunglasses or Goggles: To protect your eyes from bugs and airborne debris, wear sunglasses or clear goggles, especially with contact lenses. Wrap-around glasses are best.

Mirror: ④ Use a mirror to know what's behind you before you move left or right. A mirror, however, is *not* a substitute for looking back.

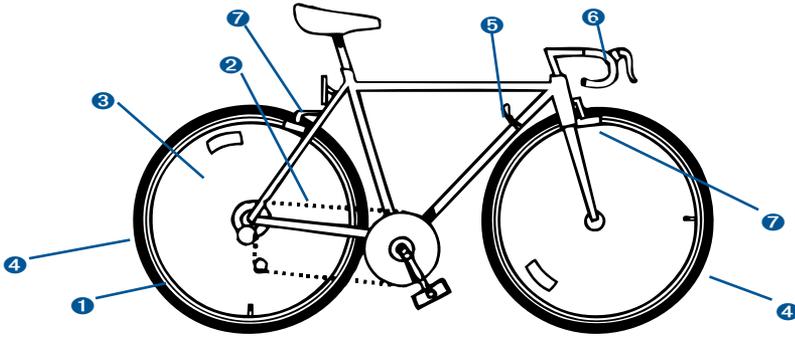
Night and Foul Weather Gear: If you ride at night or in bad weather you need lights, reflectors, and more. See pages 29-32 for details.



2: QUICK MAINTENANCE CHECKS



Safety starts with your bike. Whether you use your bike a lot or you're dusting off an old bike, this page gives you a few simple things to check for a safe ride. While these checks help you find problems, we don't have room to tell you how to fix them all. If you need help, go to your owner's manual, a maintenance book, or a bike shop.



1 Air: Tires lose a little air every day. If your gauge says a tire is more than five pounds under the needed pressure (printed on the side of the tire), add air. No gauge? Push each tire hard against a curb. If you can flatten it, add air.

2 Chain: A dry chain can skip, lock up, or break suddenly. If your chain squeaks or hangs up, lubricate it. Oil will do, but it attracts dirt; a greaseless chain lubricant's best. To lube:

- Grab the bottom of the chain loosely with a lint-free rag. With the other hand turn the pedals backward, sliding the chain through the rag. Pedal the chain around twice to remove grime.

- With one hand squeeze or spray lubricant onto the chain, and with the other hand pedal the chain backward so it goes completely around once (twice if really rusty). Take care not to get lubricant on the wheel rim or tire.

- Repeat step (a) to get the excess lubricant off the chain. Extra lube can attract dirt.

3 Wheel Spin: Lift each wheel and spin it slowly. (Spin the back wheel forward so the pedals don't move.) Check that it doesn't rub against the brake pads, frame, or something else. If the wheel doesn't spin freely but it's not rubbing, the problem might be inside the hub.

4 Tires: Turn each wheel very slowly and look for big cuts, bulges, bubbles, or places you can see the inner casing. If you spot any, replace the tire. Remove glass or other debris. If the valve stem doesn't point straight at the middle of the wheel, the rim might cut it; let the air out and straighten the valve.

5 Shifting: Try all of your gears, shifting each gear lever from high to low. You have a problem if the lever sticks, you can't shift to all gears, the chain rubs the derailleur, or the chain jumps off the gears. These are usually caused by worn or dirty cables, or a derailleur that needs cleaning or adjustment.

6 Handlebar: Hold the front tire between your legs and try to turn the handlebar. If they're loose, tighten the stem bolt.

7 Brakes: You should have your brakes adjusted or replaced if you have any of these problems: (a) when you apply the brake on each wheel, one or both brake pads don't touch the rim; (b) you can squeeze your brake lever all the way to the handlebars; (c) on each wheel, the brake can't stop the tire from moving on dry, clean pavement.

Loose Parts: Pick up the bike and shake it hard. Check and fix anything that rattles.

SOME GOOD BOOKS ON BIKE REPAIR

Big Blue Book of Bicycle Repair, by Calvin Jones

Bicycling Magazine's Complete Guide to Bicycle Maintenance, by the editors of *Bicycling* magazine

Bicycle Repair Manual, by Richard Ballantine

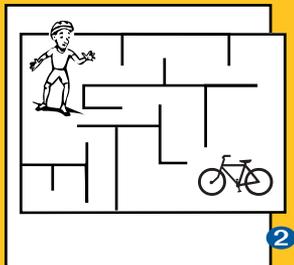
Simple Bicycle Repair: Fixing Your Bike Made Easy, by Rob Van der Plas



Check each time you ride!



3: WHERE TO PARK YOUR BIKE



PARKING & LOCKING BASICS

The first rule: Always lock it. Never, never leave your bike unlocked—even if you're leaving it for only half a minute. A thief can grab your bike in seconds. Some parking basics:

Security: Lock your bike to something that's permanent and not easy for a thief to take. Lock to a bicycle rack, a parking meter, a metal fence post, or a large tree. Don't lock to another bike, a door handle, or small tree. And if you keep your bike in a garage, basement, or on a porch, lock it.

Visibility: Park in open areas where many people pass by and your bicycle can be seen easily. **1** Thieves usually don't like an audience.

Keep It Close By: Put your bike where you can get to it fast. **2** Thieves like to steal bikes whose owners are far away.

WHAT LOCKING HARDWARE SHOULD YOU USE?

U Locks: Some U locks are stronger than others; make sure you buy a strong steel-alloy lock. **3** If the manufacturer offers a warranty or insurance, register the lock and write down the lock's serial number and when you bought it. To keep thieves from prying open your lock, try to fill the space in the middle of the lock; do this by using a narrow lock or putting more stuff (like a wheel or helmet) into the lock. One drawback to U locks: you can't lock to thick objects such as street lights; for these, carry a thick cable.

Padlocks & Chains: The thicker, the better; chain links and lock clasps should be at least 3/8" thick. Look for locks and chains that are case-hardened—a process that makes them harder to cut.

Cables: Some cables take thieves longer to cut than chains, because cables don't snap and thieves can't pry them open. **4** Use a cable at least 1/2" with a lock with at least a 3/8" clasp.

Ugly Bikes: In busy commercial areas, where thieves have lots of bikes to choose from, your bike is less likely to be stolen if it looks old or just ugly.

HOW TO LOCK UP

A thief with enough time and the right tools can break any lock. But you can discourage many thieves if you follow these tips about locking your bike:

Lock the Whole Bike: You should put your chain, cable, or U locks through your frame and both wheels—taking the front wheel off if you have a quick-release hub. **5** Never lock through your wheel without locking the frame, because thieves can remove your wheel and steal the rest of the bike.

Cross Locking: A good way to foil thieves is to use more than one kind of lock. **6** For example, put a U lock through your frame and front tire, and put a cable or chain through your frame and both tires.

Placing the Lock: Thieves can break a lock by putting it against a wall or sidewalk and smashing it with a hammer. If you use a padlock, try to put it where it's not close to the ground or against a wall or another solid surface—leaving little or no slack in your cable or chain. When using a U lock, leave little or no space in the lock's middle to prevent prying.

Removable Items: When you leave your bike, remove any parts you can't lock and a thief could steal easily: a quick-release seat, horn, bike bag, pump, cycle computer, or lights. If removing quick-release parts is a hassle, replace them with permanent ones.

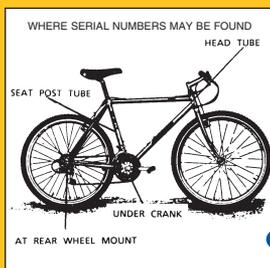
WHERE TO PARK

Parking Meters: Lock your bike to a parking meter if you're using a U lock. **5** Never lock to a meter with only a chain or cable—a thief will slide your bike over the top.

Bike Racks: Look for thick, immovable bicycle-parking racks installed outside of many buildings. Some building owners and local governments have provided upside-down-U-shaped racks, **7** which are very secure places to park your bike.

Sign Poles: Sign poles aren't the best places to lock your bike. Before locking to a pole, check whether you can pull it out of the ground. Also check how easily a thief could remove the sign and slide your bike over the top of the pole.





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Parking Lots: Some public parking lots will let you park your bike for a small fee. If you forget your lock, look for an attended parking lot.

Indoors: A good way to avoid theft: park your bike indoors. Some stores and buildings allow bikes inside, if only for a short time. When parking indoors, lock your bike securely.

CUTTING YOUR THEFT LOSSES

What's the first thing to do when you get a new bike? Write down the serial number and register your bike with the local police. (Look for the serial number stamped on your bike's head tube, seat post tube, under the crank, or on the frame's rear wheel mount.) 1 Police across Indiana recover lots of bikes each year, but can't return most because they're not registered. If your local police don't have a registration program, keep a copy of your serial number in a safe place.

Identifying Marks: You can discourage thieves by engraving your name or phone number in an obvious place on your bike frame. 2 Or put a card with your name and phone number inside the handlebar tube—so if you find your stolen bike at an auction, junk shop, or flea market, you can prove it's yours.

If Your Bike Is Stolen: First, find your bike's serial number if you have it. Then call your local police and tell them where your bike was stolen. Try to get a police report number that you can use for an insurance claim. Also find out how police will contact you if they find your bike.

Looking for Your Bike: Sometimes you can find your bicycle at places like pawn shops, auctions, or resale shops that might deal in stolen merchandise. 3 But if you find your stolen bike among other property that someone's selling, remember that they won't just give it to you; you must prove it's yours. Keep your serial number or use identifying marks as described above.

Call your local police to learn whether they auction off recovered, unclaimed property.

4: ALL ABOUT BIKE HELMETS

WHY SHOULD YOU WEAR A HELMET?

It's a fact: About 1,000 American bicyclists die in crashes each year—and around three-fourths die from head injuries. Hundreds more suffer permanent brain damage. Many of these are experienced, careful riders—maybe just like you. **And most of these head injuries can be prevented with bike helmets.**

You say a helmet's too much of a hassle? It would make your head sweat? Give you "hat head?" It's too expensive? You'd look like a geek? **4** Think how good these sayings would look on your gravestone.

HELMET BASICS

Helmets consist of a foam core, usually white or black in color, and most have a thin plastic shell (sometimes called a "micro-shell") that covers the core. **5** A plastic shell keeps the helmet's base from getting scratched and nicked.

If you have a crash and your helmet takes an impact, replace it right away. An impact usually damages a helmet's foam core, meaning it won't protect you again. You should also replace your helmet at least every five years, because its foam core becomes brittle.

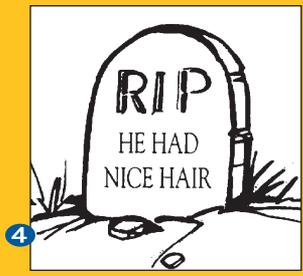
WHY KIDS NEED HELMETS

Kids need helmets as much as adults do. Kids generally aren't as careful, they don't know how to protect themselves, and when riding in a child seat they're especially vulnerable. Make sure kids wear their helmets snugly—and set an example by wearing yours!

HOW TO CHOOSE A HELMET

Rating: Look at the inside of the helmet. It should have a compliance label from the U.S. Consumer Products Safety Commission (CPSC).

6 Older helmets might instead have a green or blue Snell sticker, **7** meaning the helmet passed the Snell Foundation's tests for safety; or an F1447 certification label **8** by the American Society for Testing and Materials (ASTM).



THIS HELMET COMPLIES WITH U.S. CPSC SAFETY STANDARD FOR BICYCLE HELMETS FOR PERSONS AGE 5 AND OLDER.

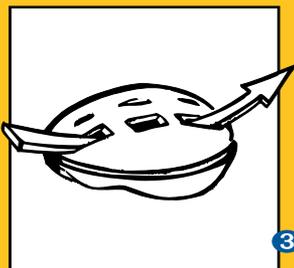




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- Size:** Helmets come in different sizes. Find yours:
- ▶ Put the helmet on your head.
 - ▶ If the helmet seems to sit too high off of your head, or it won't cover half your forehead when it sits level, try a larger size.
 - ▶ If you see a gap between the helmet's rim and your head, try a smaller size.
 - ▶ If a smaller size seems too small, take the larger size and insert the thicker foam pads that come with the helmet.

How To Check For A Good Fit

Eyes: When you look up you should see the helmet's front rim (not just the visor, if it has one). If you can't see the rim, tilt the helmet forward until you can. The front of the helmet should cover your forehead. **1 Right 2 Wrong**

Ears: Snap the chin buckle closed. On each side of your head, the helmet's two straps should meet under your ear to form a V. If they don't, move the straps up or down through the junction.

Mouth: With the chin buckle closed, open your mouth wide. You should feel the helmet push down on your head. If it doesn't, take the helmet off and make the chin buckle's strap shorter by sliding the strap through the buckle.

COMFORT AND COST

Cost: You can get a good CPSC-rated bike helmet for about \$25—cheaper than a visit to the emergency room. More costly helmets usually aren't much safer, but they have better ventilation, weigh less, and look cool. If you order a helmet from a discount catalog, first find a friend who has it and try it on—because **a good fit is important to protect your head.**

Ventilation: A helmet's ventilation depends on front-to-back air flow. **3** Good air flow comes from long, wide air vents and air passages (or troughs) between the vents. (Bald, light-skinned cyclists beware: Big vents can cause weird tan lines!)

Look: You can pay a lot for style—but no matter how aerodynamic a helmet looks, it won't help you go faster unless you're moving at warp speed. **4** For a cool look, you can dress up a low-cost, CPSC-rated helmet (see p. 9) with an elastic cover.



5: TRAFFIC BASICS

RIDING PREDICTABLY

On the street, most motorists follow the same traffic rules. Traffic flows smoothly because all the drivers can predict what each other will do. A collision happens only when someone does something abnormal.

When you're on a bike in the middle of all those cars, it's easy to defy traffic rules; you can maneuver better, and almost no one will stop you. **This is how most bicyclists get into collisions.** When you break traffic laws motorists never know what you'll do next, so they're not sure how to avoid you. But if you *act like the operator of a vehicle*—signaling turns, turning from the correct lanes, and stopping at red lights—*drivers can predict what you'll do.*

Being predictable is the key to safe bicycling in traffic. And if you follow traffic rules, motorists will come to respect bicyclists as drivers of vehicles—which is how Indiana laws say bicyclists should act. **5** (See the back cover for details.)

Here are the basic rules for riding predictably:

Get Smart: Know the traffic rules you should follow and when others should yield to you. See “Traffic Rules for Cyclists,” below.

Be Confident: Learn riding skills so you don't hesitate in traffic, and always be courteous. See “How to Learn Traffic Skills,” page 12.

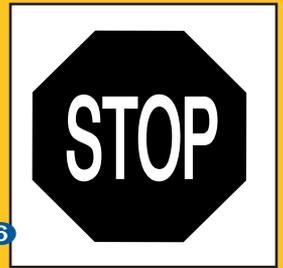
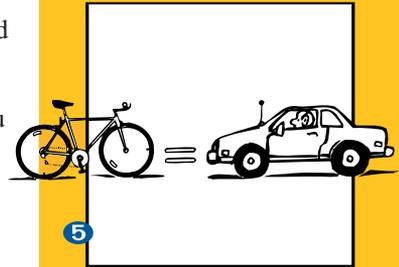
Communicate: Make eye contact and signal your moves. See “Communicating,” page 13.

TRAFFIC RULES FOR CYCLISTS

Indiana requires you, as a bicyclist, to know and obey **all** of the state's traffic signals **6** and pavement markings. To learn these, read Chapter 3 of the Indiana Driver Manual (find “Bicycle Safety” tips on pp. 50-51), or view it at the Indiana Bureau of Motor Vehicles Web site: www.in.gov/bmv/driver-license/manual. For a free copy of “Indiana Bicycle Laws,” a wallet-size excerpt from the Indiana Vehicle Code, contact the Indiana Bicycle Coalition.

Messengers: Some areas have other rules that apply only to bike messengers (e.g., messengers must wear helmets or display identification). Contact local officials to find out.

Right of Way: “Right of way” means permission to go ahead of somebody else. You must give right of way just as motorists do. If you don't know when to yield to pedestrians and other vehicles, read the Indiana Driver Manual.





Sidewalks: If you ride on a sidewalk, always yield to pedestrians; where there are lots of people, walk your bike. **1** When you approach corners, alleys, and driveways, slow down and make noise. Also, some communities don't allow bikes on sidewalks. Check your local laws.

Roads to Avoid: Bikes are banned on some roads; know these and stay off of them. **2** Also, it's illegal to ride the wrong way on a one-way street, against traffic on a two-way street, and on limited-access expressways that don't allow bikes.

What Police Will Do: **3** If you break a traffic law, an officer can stop and ticket you. If you don't have I.D. or bond money, you can end up in a police station, calling someone to post your bond.

What can you do when police stop you for the wrong reason? If gentle persuasion doesn't work, plead your case in court. Bring this book, along with copies of local and state traffic laws, to prove your point.

HOW TO LEARN TRAFFIC SKILLS

With practice, every adult can bicycle comfortably in traffic. Start honing your skills in quiet parking lots, on side streets, or on farm roads. **4** Then practice on major streets early on Saturday and Sunday mornings. Below, we've listed a few skills that'll help you ride in traffic safely.

Look Behind You! To bike in traffic you must know how to look back over your shoulder while riding. This simple act helps you move left or right quickly—to avoid hazards, change lanes, or make a turn. And looking over your shoulder helps drivers pay attention to you. Even if you have a mirror, you should always turn your head to look before you move left or right—just as you'd do in a car.

How to Practice Looking Back: Here's how to learn to look back without swerving or slowing down.

- a.** Find a parking lot or wide, quiet street with some kind of lane stripe.
- b.** Ride along the lane stripe in a straight line.
- c.** Keeping your left shoulder steady, turn your head down and around to the left. Try to keep your arms steady so your bike moves straight. Then turn your head forward.

- d. Turn your head back again, but this time pick out something to look at. 5 Try to keep moving straight. Then turn your head forward.
- e. If you can't turn your head without turning your handlebar, it should help to drop your left hand to your thigh while you turn your head.
- f. Next, practice turning your head right. Then practice turning your head while moving faster.

Where to Look: As you ride you have to avoid two kinds of things: hazards on the ground right in front of you, and cars and pedestrians ahead and on either side. You should always know how both the ground and the traffic around you look. To do this, get into the habit of looking first at the ground 20 to 30 feet in front of you, then up at traffic, then back down at the ground. 6 At first this'll seem hard—maybe even strange—but with practice you'll do it without thinking.

Ready for a Brake: Always keep your hands near or over your brake levers—so you can stop fast in a pinch. When you brake, squeeze the front and back brakes at the same time. (To learn more, see “The Quick Slow-Down” on page 22.)

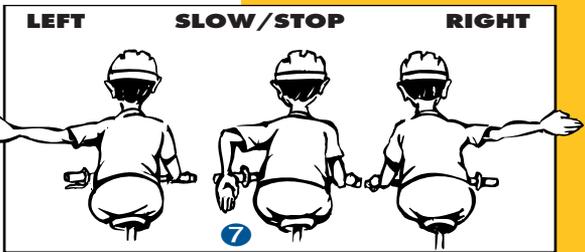
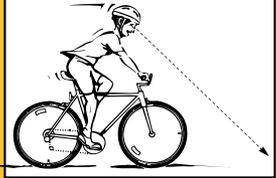
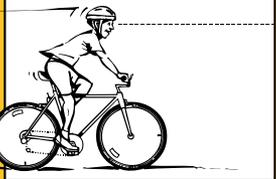
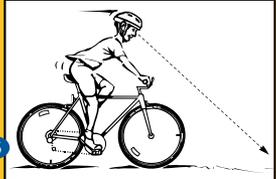
Shifting Gears: If your bicycle has a gear system, know how to shift without looking down. Always pedal when shifting, no matter how slowly. Learn shifting from a friend or a bike shop.

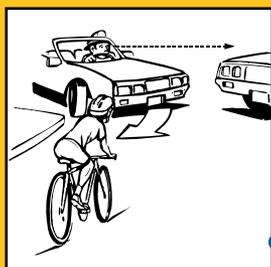
COMMUNICATING

Bikes are slower, quieter, and less visible than most other vehicles. So you should make drivers notice you, and try to communicate with them. And because a lot of bicyclists don't follow traffic laws, drivers don't always know what you'll do—even if you think it's obvious. Here are some ways to communicate.

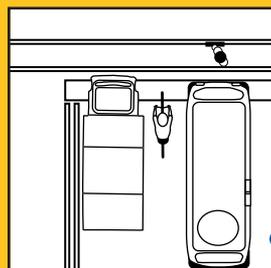
Use Hand Signals:

Whenever you change lanes or turn, signal with your arm. 7 (Though the law requires a right-turn signal with your left arm, many cyclists use the right-arm signal shown.) If you're about to move in an unexpected way—like around a bunch of glass—point to the part of the road you're moving to. Also signal when slowing down—you don't have brake lights! The law says you must signal 200 feet before making a turn, so you might have to signal while shifting and braking—but don't do it if you'll lose control. You can yell your intentions, but remember that noisy traffic might prevent others from hearing you.





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Yielding: When you're waiting for a car to pass you before you cross an intersection or change lanes, the driver might not realize you're yielding. Wave at the driver to go ahead. Also, when drivers correctly yield the right of way, it's a good idea to thank them by waving or nodding.

Pretend You're Invisible: In some situations—like a car turning in front of you—it's a good idea to pretend the driver doesn't see you. Know in advance how you'll avoid that driver. Can you stop in time? If not, slow down or plan how you'd steer out of the way.

How to decide whether a driver sees you:

- ▶ Watch for the car to move slower than it would if you weren't there.
- ▶ Look at where the driver's eyes are. ① If they're not looking at you, slow down and be ready to get out of the way.

Make Noise: Just as a car honks its horn when it comes out of an alley, you should make noise when you emerge from places where people can't see you—like when you emerge from between two vehicles to get into an intersection. ② Use a horn, bell, or whistle, or yell if you have to.

Headphones: Don't wear them! As a bicyclist in traffic, you can hear more of what's going on around you than motorists can. In fact, people with whom you share the road expect you to hear their engines, horns, or shouted warnings. If you wear headphones you might not hear something that can help you avoid a crash.

PICKING YOUR ROUTE

Before you ride, decide which streets to take to your destination. Think about areas with road construction and bad pavement. If a road has lots of traffic or lacks wide shoulders, consider taking a better road—even if it's less direct.

Two good sources of route information: bike clubs and county bike maps. The Indiana Bicycle Coalition has lists of both. The Coalition and WTH Technology are working to map bicycling routes statewide. ③ Also, the bicycling Web page of the Indiana Department of Natural Resources shows lists of on- and off-road bicycling routes. (For contact info see the inside back cover.)

If you use bike maps to pick your route, remember: Some maps show streets designated for cycling, but these streets still might have rough spots.

6: LANE POSITIONS, TURNING, & PASSING

BASIC LANE POSITIONS

Traffic law says that slower vehicles should stay to the right. But where exactly should bicycles ride? Here are some basics.

Never Ride Against Traffic: If you *feel* safer riding against traffic because you can see cars coming, you are *wrong*: **Twenty percent of all car-bike collisions result from cyclists going the wrong way.** Drivers moving down a street—and drivers turning onto the street—don’t look for vehicles coming at them in their lane. And if they hit you, it’ll be much harder head-on than from behind.

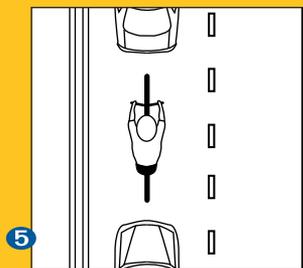
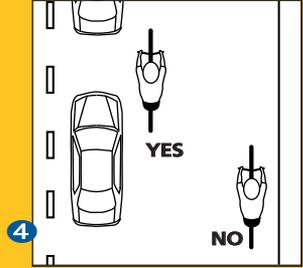
When to Stay Right: Stay right if you’re moving slow compared to traffic, but remember: The farther from the curb you ride, the better motorists can see you—whether they’re in your lane, oncoming, or on cross streets. **4** Riding farther from the curb keeps cars from passing you on the left and then turning right immediately in front of you—and gives you more room to avoid car doors, debris, and potholes.

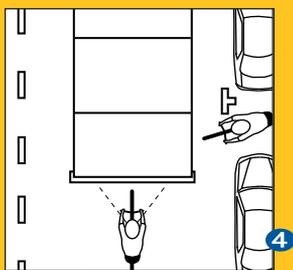
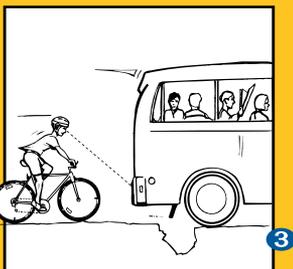
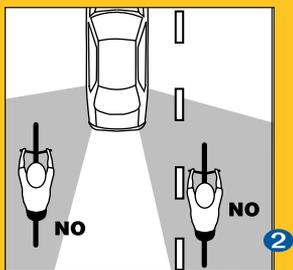
When to Ride In the Middle: **5** It’s safest to ride in the middle of the lane when: (a) You’re moving at the speed of traffic; (b) the lane’s too small for cars to pass you safely; (c) you’re avoiding potholes or the doors of parked cars. If you’re riding in the middle and traffic starts to move faster than you can, move toward the curb if there’s room. Some special cases:

►Bike Lanes: You can ride in the middle of marked bike lanes. **6** But when you find parked or moving vehicles in these lanes, follow the lane practices described above.

►Dangerous Areas: If you come to a dangerous area—like a bend in the road that you can’t see beyond—ride in the middle of the lane to be more visible.

Underpasses: Ride in the middle on roads where they pass under other roads or train tracks, where there’s no shoulder. **7** If you approach an underpass while riding on the right side of the road, always check traffic behind you before moving into the middle of the lane. Also, motorists behind you might get impatient, so communicate with them by using the “slow” arm signal (see page 13).





Parked Cars: Don't weave in and out of parked cars, because you'll confuse drivers; ride in a straight line. ① Ride at least four feet away so you don't get hit if someone opens their door. And if a car door starts to open into you, yell and brake; swerve out of the way only if you have enough room.

Riding with Others:

- ▶ Indiana law states that bicyclists may ride no more than two abreast.
- ▶ When another cyclist turns or changes lanes, don't assume it's safe for you to do the same. Always look behind you before you make a move.
- ▶ When you're with a group stopped at a light, line up single file so you don't block or slow other vehicles.

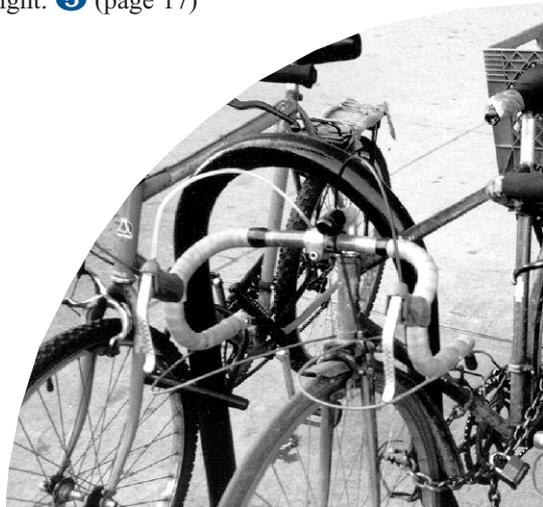
Blind Spots: To be safe, know where a driver's blind spots are—and stay out of them! ②

Don't follow a vehicle so closely that you can't see potholes or other pavement problems until you're on top of them. ③

If you're following a large vehicle—like a van, truck, or bus—don't follow so closely that it blocks your field of vision. ④

When you go over the crest of a hill, motorists behind you can't see you. Stay on the shoulder to the far right. If there's no shoulder, consider walking your bike until you've gotten well past the top of the hill.

Big vehicles coming at you can hide other cars. Slow down or don't proceed until they get out of your line of sight. ⑤ (page 17)



INTERSECTIONS AND TURNS

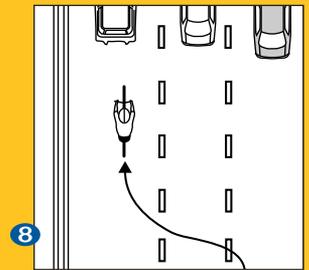
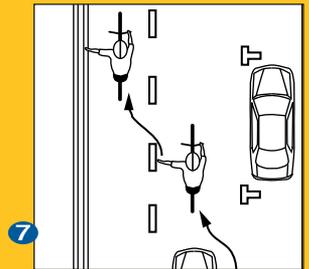
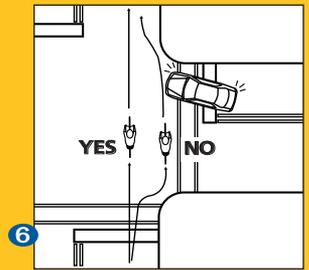
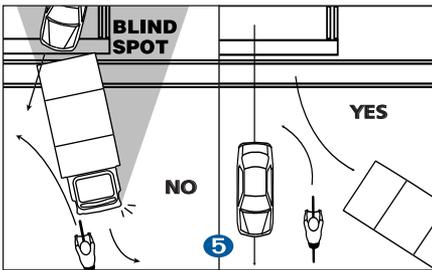
Almost half of car-bike collisions happen at intersections. This section tells you the safest places to put yourself when you reach an intersection, whether you're turning or going straight.

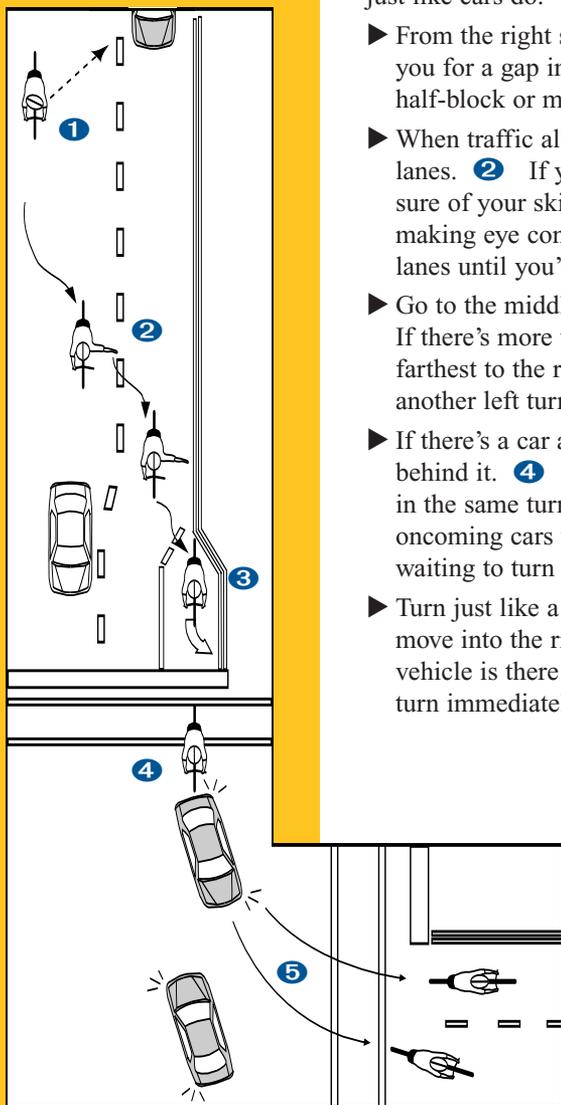
Things to Remember at Intersections:

- ▶ When you're about to cross an intersection, don't veer to the left or right. Try to move in the straightest possible line to where you'll ride on the other side. **6**
- ▶ Don't block crosswalks. It's dangerous to make pedestrians cross farther into the intersection.

Changing Lanes Before a Turn:

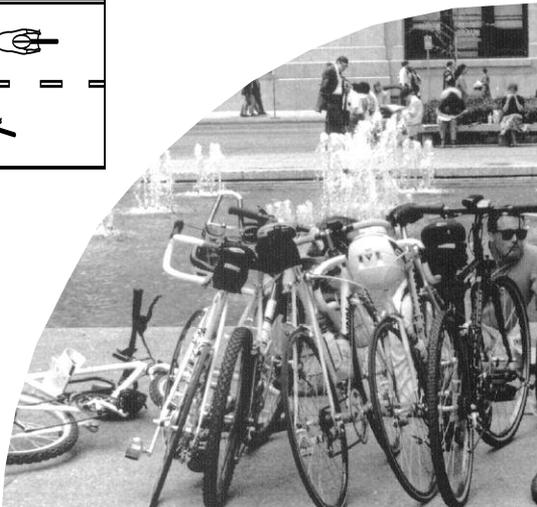
- ▶ When you're turning left on a multi-lane street where traffic isn't much faster than you, merge left one lane at a time. **7**
- ▶ Where traffic moves much faster, drivers won't have time to react to you—so it's safest to wait for a gap in traffic and move across all the lanes at once. **8**
- ▶ Before changing lanes, always signal and check behind you.





Turning Left from a Left-turn Lane: Follow these steps for making left turns just like cars do.

- ▶ From the right side of the street, look behind you for a gap in traffic. **1** Start looking a half-block or more before the intersection.
- ▶ When traffic allows, signal left and change lanes. **2** If you can't find a gap and you're sure of your skills, get a driver to let you in by making eye contact and pointing. Don't change lanes until you're sure the driver will yield!
- ▶ Go to the middle of the left-turn lane. **3** If there's more than one turn lane, use the one farthest to the right—unless you're making another left turn immediately.
- ▶ If there's a car already waiting to turn left, get behind it. **4** (Never put yourself next to a car in the same turn lane!) Don't be afraid of oncoming cars that are stopped facing you, waiting to turn left.
- ▶ Turn just like a car does. **5** After the turn, move into the right lane—unless another vehicle is there or you're making another left turn immediately.





Turning Left with No Left-turn Lane:

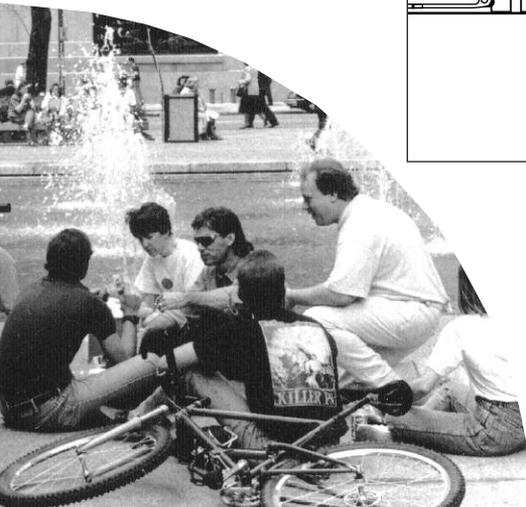
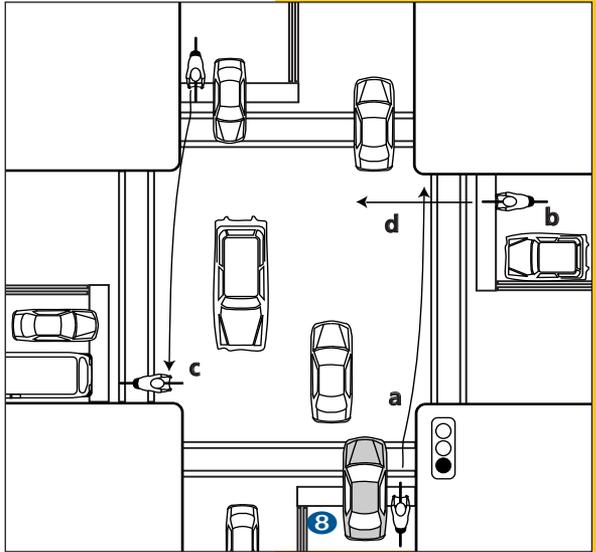
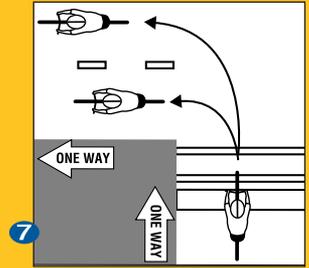
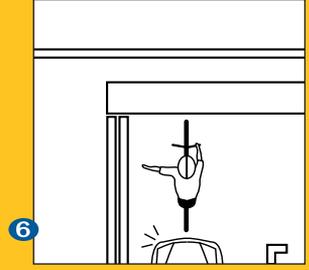
Lane: With no turn lane, ride about four feet from the center stripe—far enough out so a left-turning car behind you can't pass until you've finished the turn. **6**

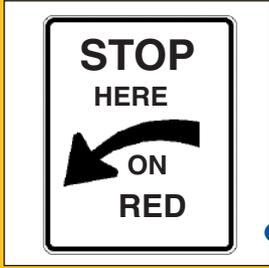
If a car's stopped at the intersection and you can't tell whether it's going to turn left, don't try to pass it on the left. Stay behind it until it gets through the intersection.

When turning left from one one-way street to another, you can turn into the left or right side of the one-way street. **7** Unless prohibited locally, Indiana law allows "left turn on red": You can make a left turn from a one-way street onto another one-way street after stopping at a red light and yielding to vehicles on the cross street.

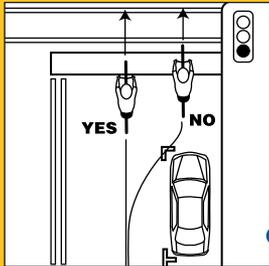
The Box Left Turn: Use the box left turn if you can't merge left before you reach the intersection. **8** Here's how:

- a.** Stay in the right lane and ride across the intersection on the left side of (not in) the crosswalk.
- b.** Just before the opposite corner, check whether there's room for you in the traffic lane to the right of the crosswalk, behind the stop line. If there is, go there and align yourself with traffic.
- c.** If there's no room behind the stop line, stop on the intersection side of the crosswalk and align yourself with traffic.
- d.** When the traffic light changes, move with traffic.

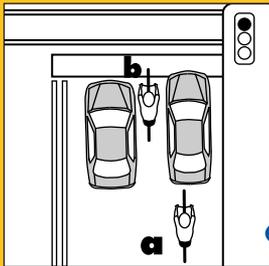




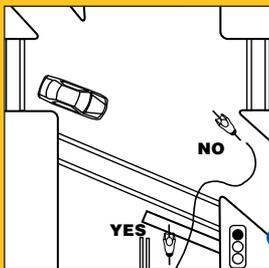
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Stop Signs and Turns on Red:

At a stop sign or right turn on red, the law says you must stop—not just slow down. 1 Remember to behave as a vehicle operator as follows.

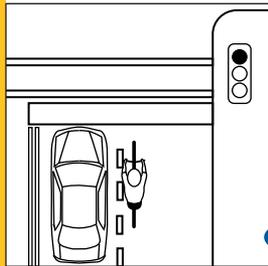
- ▶ If you're at a stop sign and a vehicle on the cross street got there first, let it go through first.
- ▶ If you're turning on red, yield to any vehicles coming at you in your lane.

Don't Veer to the Curb: Don't veer into the right-turn lane as you go through the intersection. 2 You're easier to see if you stay away from the curb. And you won't have to move back over when you get across the intersection.

Cars Stopped in Both Lanes: 3

- a. When cars are stopped in the left and right lanes, it's safest to stop in the middle of the right lane.
- b. But if the right-lane car is turning right and you're sure of your traffic skills, stop on the left side of the right lane. Stop where drivers on both sides can see you.

Right on Red Allowed: At a red light where right turn on red is allowed, stop on the left side of the right lane—leaving enough room for other right-turning cars. 4 If a car's stopped in the left lane, stop where drivers in both lanes can see you.



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Three-way Intersection:

At a red light in a three-way intersection, stop on the street you're traveling on. 5 Don't cross the diagonal street to wait on the next corner, because you'll confuse drivers about which way you're really going.

PASSING

In most cases you should pass cars in your lane as you would if driving a car: Look behind you, signal left, get into the left lane, and pass. Here are some things to remember about passing:

Pass Left: Pass moving cars on the left when you can. That's where motorists expect you to pass, so that's where they look.

Don't Pass on Turn Side: If a vehicle is about to turn, don't pass it on the side it's turning toward.

Opening Doors: When you pass a stopped car, watch out for the driver or a passenger opening their door. Pass three feet from the car, or pass on the side with no passengers.

Cars Speeding Up: If you're passing a car and it speeds up, stay in your lane and slow down. After the car passes you, look back, signal, then merge back behind the car.

Squeezing between Cars: 6 Say you're in a traffic jam with cars backed up for at least a block. It's safest (and most legal) to get into line with the cars and wait it out. But if you do squeeze between the cars to get through, here's what to watch out for:

- ▶ A car door can open in front of you, on the left or right, at any time. Look inside cars for passengers who might get out. Keep your hands on your brake levers.
- ▶ When pedestrians cross the street in the middle of a traffic jam, the last thing they expect is you zooming down on them between the cars. Watch out for pedestrians, especially when passing trucks or buses that you can't see in front of.
- ▶ If a space opens up in the traffic jam—and you're near a driveway or cross street—watch for a car from the opposite direction turning into your path.

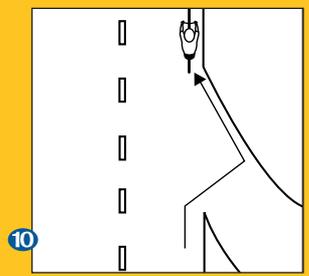
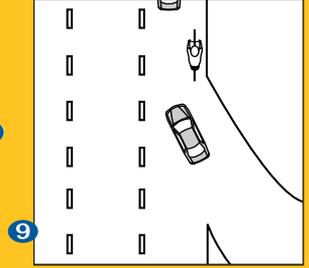
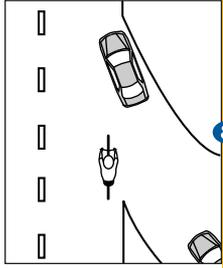
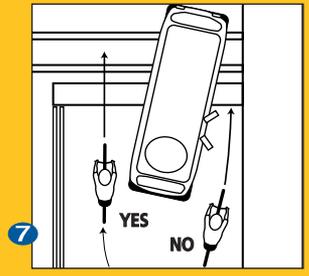
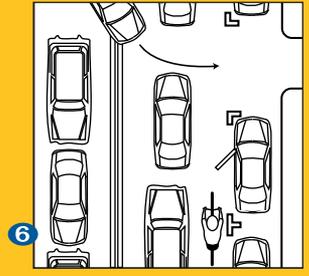
Passing Buses:

Here are a few tips for passing buses at intersections or bus stops:

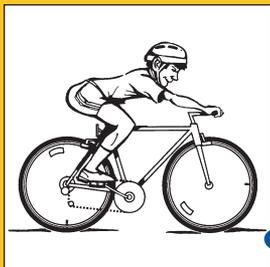
- ▶ When you come to a bus that's nearing or stopped at a bus stop, don't pass on the right. 7 You might get squeezed into the curb or hit a passenger.
- ▶ When you pass on the left of a bus with its rear stuck out in traffic, look around carefully. And pass the front of the bus with plenty of room in case it pulls out suddenly or pedestrians appear.
- ▶ Don't pass a bus to turn right immediately in front of it. Buses sometimes speed up suddenly or start moving before the traffic light turns green.

Highway Ramps: When an exit ramp merges from the right, first look over your right shoulder to see what's coming. If a lot of cars are merging, stay straight so they pass before you on the right. 8 As you move farther, they'll pass behind you on the left. 9 If there's a break in the merging traffic, move over to the right as soon as you can. 10

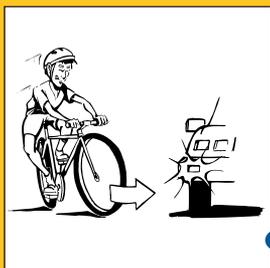
Passing Cyclists: Cyclists can swerve faster than cars—so when you pass a bicycle, pass at least three feet away on the bicycle's left (not the right). Before you pass, always ring your bell or shout "Passing on your left!" so nobody's surprised.



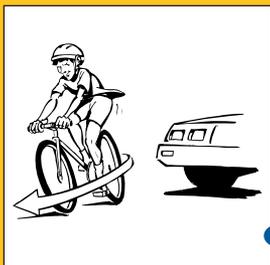
7: TROUBLE SITUATIONS



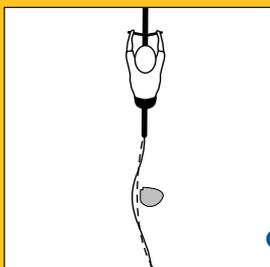
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EMERGENCY MOVES

When you're moving fast and something gets in your way, slamming on the brakes doesn't always work. This section describes some emergency moves—such as the Quick Slow-Down, Instant Turn, and Rock Dodge—that you can practice in a quiet parking lot. Start slowly, then work your speed up, and practice, so when you need an emergency move, you make it automatically. This section also tells you why knowing how to fall might keep you from serious injury.

The Quick Slow-Down: When you stop fast, your weight shifts from your back wheel to the front. Even if you use both your front and back brakes your back tire can skid and start to lift. To slow down quickly: ①

- a. Push yourself as far back on the bike as you can. This keeps weight on the back tire.
- b. Put your head and torso as low as you can so you don't flip.
- c. Squeeze both brakes. If the back tire starts to slide or lift, ease up on the front brake.

The Instant Turn: Use the Instant Turn when a car turns in front of you while you're going straight. To make a very sudden right turn, you steer sharply left—towards the car—which makes you lean right. ② Then you turn right hard, steering into the lean. ③

The Rock Dodge: The Rock Dodge is just a quick turn of the front wheel to miss a rock or hole right in front of you. ④ At the last second, turn the front wheel sharply left and back right again. Both your wheels should miss the hazard.

How to Fall: Most serious bicycle injuries involve brain damage, so the best way to protect yourself in a fall is by wearing a helmet. Otherwise, it's not easy to prepare for a fall. But if you have time to think:

- ▶ When you're about to hit a car, don't try to wipe out first; instead, stay upright as long as you can. If you get low you risk going under the wheels or hitting the sharpest parts of the car.
- ▶ If you go flying, tuck your head, arms, and legs into a tight ball and try to roll when you hit the ground. If you stick your arms out you're likely to break them, or your collarbone, or both.

DOGS, PEDS, TRACKS, & ATTACKS

Dogs: ⑤ Options when a dog chases you:

- ▶ **Just stop.** Some dogs just want a good chase and will give up when you're not moving.
- ▶ **Stop and get off your bike, quick.** If the beast looks like it wants to attack, try to keep the bike between you and it. Shout something commanding, like "Go home!"
- ▶ **Try to outrun it.** This might be a good idea if there's more than one dog. *Don't* try to outrun it if you're not sure you can; too many cyclists have wiped out when running dogs jam their front wheels. If you go for it, try a squirt with your water bottle to slow Fido down. *Don't* try to hit the dog; you could lose your balance.
- ▶ **Use a dog-repellent spray.** But be careful: wind could blow the stuff back into your face. If a dog bites you, get to a doctor or hospital right away. Report the attack to police. If you can identify the dog, you might avoid a rabies test.

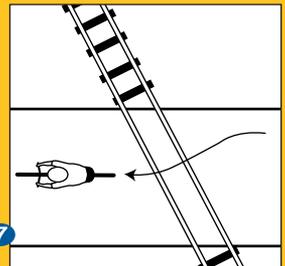
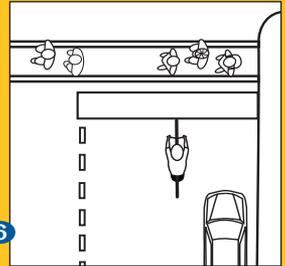
Pedestrians: ⑥ The law says you should yield to pedestrians in crosswalks. This tests your patience in busy commercial areas, where hordes of pedestrians cross against the traffic light when they see no cars coming. So what if you're zooming down a busy avenue, come to a green light, and find a dozen people darting across the street?

- ▶ Warn them using a bell, whistle, horn, or shout. Remember: Pedestrians look for cars, not bikes.
- ▶ If there's still a crowd in the crosswalk, or pedestrians freeze, you should slow down or stop. If you don't stop, when you're close enough for the pedestrians to see you clearly, go carefully between them. Try not to go between parents and their kids.

Railroads: Some railroad tracks cross streets diagonally. If you go over these tracks without changing your direction, your tires might get caught between a track and the road. Instead, try to cross tracks at a right angle ⑦—especially when the street's wet.

Gravel and Sand: Turning or braking suddenly on gravel or sand can make you slide or wipe out. See "Braking" on page 30 to learn how to brake when it's slippery.

Drain Grates: ⑧ Avoid drain grates with long openings that can catch your tires.



Truck Wake: When you're riding on a highway and you're passed by a large truck or bus, keep a firm grip on your handlebar. The suction of the vehicle's wake could pull you suddenly to the left.

Assault: If somebody's determined to attack you, they will—whether you're on foot, bike, or in a car. If you're afraid to bike in a certain neighborhood, don't—or go with friends and stay on busy streets. Here are some other tips:

- ▶ The best defense is to stay alert. If you see someone who looks like they'll hurt you, stay away from them.
- ▶ Don't stop, for any reason, in places where you think you're about to be attacked.
- ▶ Carry a defensive spray, such as pepper spray or dog repellent, where you can grab it quick. Remember that people who use this stuff often get it blown back in their own faces.

If you get knocked off your bike by a mugger, don't fight. Try to notice what they look like, then go to the nearest phone and call police.

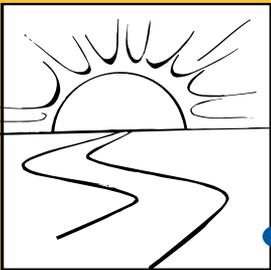
CONFLICTS WITH MOTORISTS

A lot of motorists act mean toward bicyclists. Some will cut you off or curse you because they don't understand you're operating a vehicle, just like them. What should you do?

Rule 1: Don't start a fight. ① As long as you and your bike aren't damaged, don't start a fight—no matter how steamed you get. If you lose your cool, the motorist might decide to nail the next bicyclist that goes by. Or, worse, the motorist might decide to smash **you** with two tons of metal and glass—and speed off before you can even start to say “license plate.”

Rule 2: Report harassment. ② Motorists that touch you or put you in danger might be guilty of assault. Stop and write down everything you can remember: the license plate number, type of car, and where and when it happened. Then call police.

Rule 3: Take the long view. ③ If more cyclists follow traffic laws, more motorists will start to see bicycles as vehicles. You can help: Whenever possible, explain to your motorist friends the importance of sharing the road. Meanwhile, governments and bike advocates are teaching motorists to share the road through driver education, community outreach, and advertising.





WHAT TO DO AFTER A TRAFFIC COLLISION

If you're hurt in a traffic collision, don't ride away or shake off what seems like a minor injury—you might find later that it's worse than you thought. If you're a victim of or a witness to a traffic collision, here are the steps to take:

- ▶ Call the police. If needed, get medical help immediately.
- ▶ Get the following information from every vehicle driver: name, address, phone number, driver's license number, license plate number, make of car, insurance company name and policy number.
- ▶ Get the names and phone numbers of witnesses.
- ▶ Get the police report number from police on the scene.
- ▶ Write down how the crash happened.
- ▶ Keep (or photograph) any damaged clothes or equipment.

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.



8: OFF-STREET BICYCLING

THE BASICS OF USING PATHS

Many areas have bicycle or multi-use paths through parks, forests, railroad rights-of-way, or next to roadways. While they're a welcome relief from autos, remember: *Bicycle collisions happen almost three times as often on paths as on streets.* Here are some tips about safe path riding.

Be Courteous: People on paths don't always know which side to travel on and when to yield. So the most important rule for everyone is: Act courteously. ❶ When in doubt, give the other person a break.

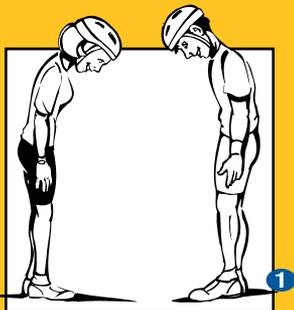
Ride Predictably: Ride straight and at a steady speed so people can stay out of your way. Always look back before passing or turning. And use hand signals (see page 13) and make noise by shouting or using a bell, horn, or whistle.

Where to Pass? Slower path traffic should stay right, except to pass—just like traffic rules for the street. And you usually should pass others on the left. When there's not enough room on the left, pass on the right. Always signal so people behind you know which side you'll pass on.

Calling Out to Others: Yell "passing on your left" or "passing on your right" before you pass another cyclist, a skater, or a runner. ❷ When you yell at people walking, some will freak out and jump in front of you. So if they're walking in a straight, predictable line, you can pass them without saying anything—but do so with as much distance as you can. And you shouldn't wear headphones so you can hear others passing *you*.

When to Yield: Here's when to yield on a path: ❸

- ▶ When you enter a path, or you're on a path that crosses a street or another path, always be ready to slow down and yield to cross traffic.
- ▶ If cross traffic has a stop or yield sign, they should yield to you.
- ▶ If there are no signs, you should yield to the person who reaches the intersection first.
- ▶ Yield to anyone who looks like they won't slow down for you. And if there's no room to pass, yield to people in front of you who are moving slower than you.



Do No Damage: Don't ride off designated trails into mud, dirt, or grass, or over seedlings, or lock your bike to small trees. You'll compact the soil and kill trees.

Problem Areas:

- ▶ **Sharp turns.** Paths often have blind turns where you can't see oncoming pedestrians or other traffic. **4** Slow down!
- ▶ **Crowds.** Where they run along beaches and other gathering places, paths are often filled with pedestrians. In crowds, go slow and make noise.
- ▶ **Sand, ice, and snow.** Paths covered with snow, ice, sand, wet leaves, or gravel will make you slide. **5** Avoid sharp turns and sudden braking.

DIRT TRAIL BICYCLING

Cycling on dirt trails and other rough terrain requires special tactics to keep you from wiping out.

Position: On rough terrain, here's how you can absorb shocks better. **6**

- ▶ Take most of your weight off your seat, letting your legs and arms absorb the jolts. For really bumpy or steep terrain, lift higher off your seat.
- ▶ Keep your knees and elbows slightly bent.
- ▶ Move your butt forward on ascents and backward on descents to keep your weight centered over your pedals.

Turning: 7

- ▶ When turning, put the outside pedal down (close to the ground) and put most of your weight on it. If your inside pedal's down, it might scrape the dirt and cause you to wipe out.
- ▶ When you're leaning your bike into a turn on loose dirt or gravel, keep your body straight with respect to the ground. This reduces the chance that the bike will slide out from under you.

Braking:

- ▶ Keep your hands over your brake levers.
- ▶ When braking, apply the back and front brakes at the same time. On descents, apply slightly more pressure to the back brake. Too much front braking can flip you.
- ▶ Don't force your bike into a skid by locking up the wheels with your brakes. Instead, apply your brakes periodically to stay at a controlled speed.
- ▶ Don't brake in the middle of a sharp turn. Slow down enough before the turn to stay in control.
- ▶ Trail riding is rough on brakes. Inspect, clean, and adjust your brakes often.

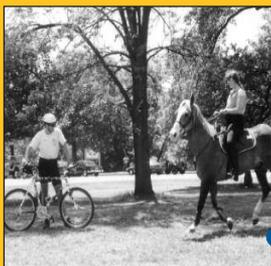




1



2



3



4

Staying in Control:

- ▶ Always control your speed so you can stop suddenly to avoid a collision.
- ▶ If your bike starts to bounce around uncontrollably, stop! If you can't, force yourself to fall where you can avoid hitting objects.
- ▶ When falling, push yourself away from the bike and try to roll. On descents, you can push off backward and let the bike ride out from under you.

- Ruts and Bumps:**
- 1 Roll through ruts or over obstacles by shifting your weight as follows.
 - ▶ After your front wheel's entered a rut, take your weight off of it as it comes up the other side. Keeping your weight on the wheel might cause it to dig in.
 - ▶ When riding over an obstacle like a rock or log, pull up your front wheel to climb over the obstacle. (You can make your front tire spring up by pushing down, then pulling up in one quick move.) When the front wheel starts down the other side, shift your weight to the front wheel so the rear wheel rolls over the obstacle easily.

RESPECTING TRAILS AND THEIR USERS

Taking a fall isn't the only danger that trail cyclists face. Uncaring cyclists whose tires tear up fields and forests have caused governments nationwide to ban *all* cyclists from some trails. To keep Indiana trails open for everyone, show respect for the land and for others you meet. Here's how.

Yield to others:

- ▶ When encountering another person on a trail, make noise far in advance so they know you're there. Show courtesy by asking if it's OK to pass.
- ▶ Always yield to equestrians and hikers. 2

Animals:

- ▶ When approaching an animal, slow down. Coming up suddenly on a critter can spook them and put you or the animal's owner in danger.
- ▶ When a horse is moving toward you, remember that it can't see directly ahead; ride to either side so it spots you well in advance. 3

- Practice soft cycling:** Ride so you don't erode soil, make ruts, or trample vegetation.
- ▶ Don't ride through muddy soil; you'll leave permanent ruts. 4
 - ▶ Don't skid. Walk your bike wherever you can't ride without locking your wheels.
 - ▶ Don't ride off of existing trails, on closed trails, or in areas protected for conservation.





9: RIDING AT NIGHT OR IN BAD WEATHER

HOW TO BE SEEN AT NIGHT

Light up! Here's how:

Reflective orange safety vest:

Good for cycling in dark clothes. Don't wear dark clothes with no other light-colored material.

Rear light:

Not important if you have a good rear reflector. If buying just one light, get a good headlight. Many cyclists like red strobe lights.

Rear reflectors:

Biggest are best; get one at least three inches wide, make sure it's pointed straight back and not up or down.

Only red is legal but newer amber ones can be 8 times brighter. Reflectors work only if they're clean, so remember to wipe them off!

Reflective tape: Use white or yellow in front, yellow or red in back.

Reflective tape: Use white or yellow in front, yellow or red in back.

Strobe light

Jacket: Bright color, reflective piping in back.

Flashlight:

In a pinch, tie on with rubber bands or a bungee cord.

Headlight:

Battery-powered LED or halogen. Get the most powerful one you can afford. (Use white or amber, not red.) The newer LED lights don't cost lots and have long battery lives.

Generator lights can be bright, and you don't have to worry about batteries.

Rechargeable batteries:

If you ride at night a lot, you'll save money and throw away fewer toxic batteries.

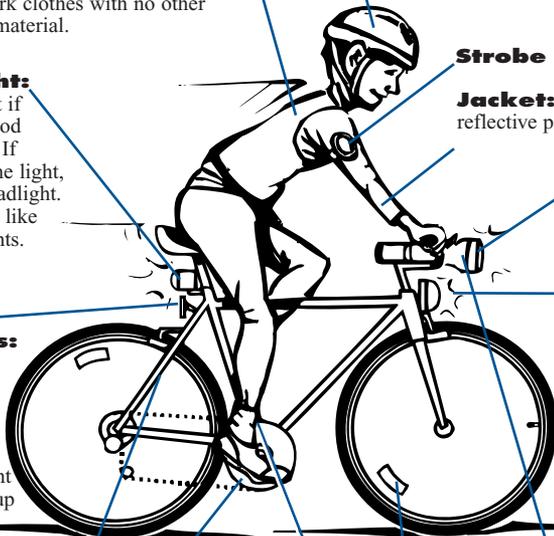
Reflective ankle strap

Pedal reflectors:

Built into front and back.

Spoke reflectors:

Not a substitute for a headlight and rear reflector.



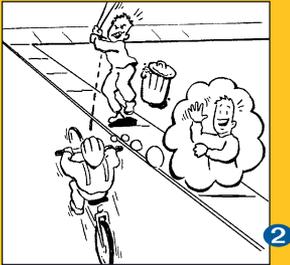
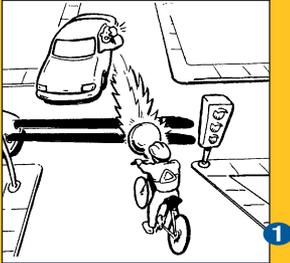
Only three percent of bike rides happen at night—but over half of all cyclists killed get hit while riding at night without lights. At night, Indiana law requires a white front light visible from 500 feet, and a red back light or reflector visible from 500 feet. That's not much; you can see a car's headlights from 3,000 feet—and that's what most motorists look for. (Under bright street lights you need bike lights to be seen, not to see.) And because your upper body's at eye level, it's important to wear bright stuff at night.

RIDING AT NIGHT

Defensive Moves: At night, it's hard to see road hazards, and to anticipate the moves of others: You can't see where they're looking, and some may be drunk. **Slow down** from your daylight speed. To make sure drivers see you when you're stopped, **flash your lights** by twitching your handlebars back and forth. **1** And **watch cars closely**; be ready to get out of their way.

Know Your Route: If you're new at night riding, **take streets where you know the potholes and traffic** so you can focus on riding in the dark. Also, if you're not sure about nighttime crime in a neighborhood, ask someone who knows the area—or don't ride alone.

Night Blindness: **2** Don't bike at night if your visual acuity's worse than 20/40 with glasses or contacts, or you can read a far-away sign or address okay in daylight but not at night. See a doctor to be sure.



RIDING IN RAIN & SNOW

Wet Streets: Wet streets can throw you. Watch out for:

- ▶ **Metal, paint, and leaves.** Metal-grate bridges, sewer and manhole covers, painted pavement, and leaves get slippery when wet. Don't turn or brake on them. On bridges, if you have thin or smooth tires don't ride across; **3** put both feet on the road and "scooter" across, or walk your bike on the sidewalk.
- ▶ **Puddles.** Don't ride through a puddle if you can't see the bottom. It could be a deep pothole that'll sink you.
- ▶ **Start of rain.** Don't race to beat the rain when it starts; it's when streets are slickest, because oil on the road spreads before it washes away. Turn slower and with less lean.

Slow Down: Remember that in rain or snow motorists and cyclists can't see as well as usual. And it takes longer for them to stop. To be safe, go slower than normal.

Braking: When brake pads are wet they take up to ten times longer to work. Dry them by applying your brakes far ahead of where you want to slow down, causing your pads to wipe the rims. To dry them faster, "pump" the brakes by applying them, then letting go, over and over.

Snow: Snow crews usually clear major streets within a day of a major snowfall. Walk your bike to one and get going. Other concerns:

- ▶ **Ice.** Snow hides ice on the pavement, so avoid riding on snow. **4** Walk your bike if you must.
- ▶ **Build-up.** With piles of snow on the right, ride in the middle of the right lane. **5** Let cars pass in heavy traffic; otherwise, if drivers give you the horn give them the “slow” arm signal (see page 13)—or shake your head firmly—and keep going.

DRESSING FOR COLD & WET WEATHER

People who bicycle in the cold and rain aren’t nuts; they’re just dressed right. But how?

Protection for Cold & Wet Weather:

If your clothes keep out rain they might also seal your sweat in. To vent perspiration, wear a jacket or poncho that lets air in from the bottom, back, or sides. And fenders work best to keep your legs, feet, and back dry.

Layers for Cold: You don’t need a whole new set of clothes to bike in the cold. Instead, wear a sweatshirt or jacket and add t-shirts, light sweaters, and tights or long johns in layers as weather gets colder. By wearing light layers you can also remove outer clothes if you warm up while cycling. (Overheating can make you sick.) If you sweat, make the layer closest to your skin a non-absorbing material (synthetic, not cotton) that’ll let sweat evaporate as you ride.

Try different clothing to find what makes you comfortable at different temperatures and in the rain. In extreme cold or wind chill, cover your hands, feet, and ears well. Here are some other ideas:

Temperature	What to Wear
Cool: 50	Light jacket or windbreaker; long pants; light gloves.
Cold: 40	Thicker socks (or a second pair); heavier gloves; hat.
Freezing: 30	Sweater or another torso layer; glove liners under gloves; neck gaiter, turtleneck, or scarf; headband or earmuffs; add knee socks; heavy shoes or shoe covers.
Below Freezing: 10	Another torso and leg layer; mitten shells instead of (or over) gloves.



EQUIPPING YOU & YOUR BIKE FOR RAIN & SNOW

Wear bright colors:

Yellow, orange, or fluorescent pink.

Ears: Wide headbands and even earmuffs fit under your helmet.

Neck: Wool scarf, cotton turtleneck, or neck gaiter keeps icy air from blasting down your shirt.

Hands: Use gardening or fishing gloves with wool or synthetic liners, ski gloves, or thick ragwool hunters' gloves.

Crotch: To prevent unusual frostbite, avoid porous warm-up pants.

Legs: When it's cold but dry, wear loose-fitting, average-weight pants like jeans. When it's colder use long underwear or a second pair of tights. In wet weather wear synthetic underwear with one or two pairs of tights.

Feet: Wear heavy wool socks or two pairs of socks. Knee socks protect shins from cold from below. With socks for warmth and fenders for dryness, wear shoes simply to take road dirt. When it's really cold and wet, wear rubber boots.

Head: Cover it unless you have thick hair. A tight-fitting hood covers your ears and fits under your helmet.

Hoods: Don't use loose-fitting hoods that block peripheral vision.

Neck: High collar or hood keeps water from going down your neck.

Leg gaiters: Often made of nylon; keep your pants legs dry.

Rain gear: Wear a waterproof jacket. If sweat's a problem, wear a **loose or vented jacket**, a **waterproof poncho** that lets in air from below, or a **cyclist's rain cape** that hooks to handlebars to keep it out of your tires.

Rims: When wet, brake pads grip aluminum rims better than they do steel.

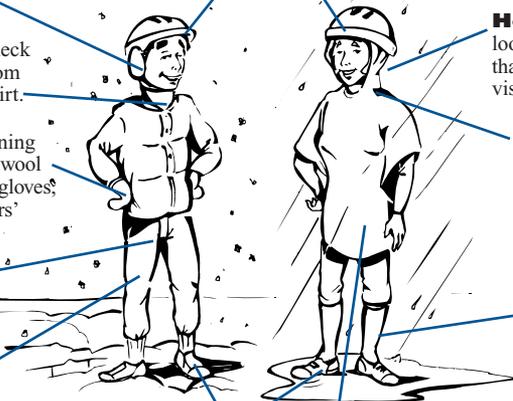
Tires: Fat tires have better traction. Tires less than 1 1/4" wide work better on wet streets when under-inflated. Use tires with a herring-bone tread pattern.

Brakes: Grime builds up on brake pads, making them squeak or scratch your rims. Run a rag between each pad and the rim, like shining a shoe. Occasionally remove the wheel and check pads for wear.

Bearing damage: After biking in wet weather put your bike indoors so bearings can dry.

Fenders: They beat almost anything to keep you dry on wet pavement. The newest plastic ones are cheap and light, but can crack if installed wrong.

Salt damage: With lots of winter riding, occasionally wipe down your frame, rims, spokes, and derailleurs, and lube your chain (see page 5). Use a toothbrush for hard-to-reach parts.



BICYCLISTS' RESOURCES

Bicycling Advocacy

Indiana Bicycle Coalition
PO Box 20243 / 6358 N. College Ave.
Indianapolis IN 46220
317/466-9701 800/BIKE-110
www.bicycleindiana.org
info@bicycleindiana.org

A comprehensive resource for bicycling in Indiana.

Maps

The **Indiana Bicycle Coalition** has a list of bicycle route maps by county. The Coalition also has a list of bicycle clubs, which are great sources of local bicycling information. Additionally, the Coalition and WTH Technology are working to map bicycling routes statewide. (See contact information above.)

Bicycling Information

- ▶ **Indiana Department of Natural Resources**
www.in.gov/dnr/bike
IDNR's bicycling Web page shows lists of on- and off-road bicycling routes.
- ▶ **Indiana Department of Transportation
Bicycle Program Manager**
www.in.gov/dot/modetrans/bicycle
- ▶ **Indiana Bureau of Motor Vehicles
Indiana Driver Manual**
www.in.gov/bmv/driverlicense/manual
Find "Bicycle Safety" tips on pages 50 and 51.
- ▶ **Indiana Bicycle Coalition**
The Coalition provides BikeSmart literature, including "Indiana Bicycle Laws" wallet cards that list bicycling laws from the Indiana Vehicle Code; "Share the Road & Trail" bumper stickers; and "Share the Road" brochures. Also available: *Bicycle Indiana*, an annual resource guide for bicycling in Indiana. (See contact information above.)

To Order This Booklet

To order free copies of *Safe Bicycling in Indiana*, contact the Indiana Bicycle Coalition. (See contact information above.)

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- ▶ Graphic design by Debra Schoeneberg.
- ▶ Illustrations by Eric Masi, Michael Brooks, and Mike Werner.
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Share the Road



Rules for Bicyclists

- ▶ Bicyclists have the same rights and responsibilities as motorists.
- ▶ Wearing a bicycle helmet is strongly recommended.
- ▶ Ride a bicycle on the right side of the road in the same direction as other traffic.
- ▶ Use hand signals to communicate your actions to motor vehicles.
- ▶ Yield to pedestrians in crosswalks.
- ▶ At night, a bicycle must have a white light visible from the front and a red reflector or light visible from the rear.

Rules for Motorists Concerning Bicyclists

- ▶ Share the road with bicyclists.
- ▶ Remember: Bicyclists have the same rights, rules and responsibilities as all other road users.
- ▶ Pass a bicyclist only when it is safe, giving ample room and when there is no danger from oncoming traffic.
- ▶ Look for bicyclists. You must develop your eye-scanning patterns to include cyclists.
- ▶ Before opening the door of your parked car, check behind for cyclists.
- ▶ According to Indiana Vehicle Code Section 9-21-11-2, "A person riding a bicycle upon a roadway has all the rights and duties under this article that are applicable to a person who drives a vehicle."

INDIANA
BICYCLE
COALITION



For more information on making Indiana a better place for bicycling, call

1-800-BIKE-110

www.bicycleindiana.org