From A to Z by Bike
The comprehensive guide to safe bicycling for kids and adults
A helmet protects your head if you fall.

Burglar alarms help scare away intruders.

Driving on the left side of the road is left.

Fire hydrants can be seen on the right.

Flashing lights can be seen from a distance.

Front seat belt is worn properly.

Gloves protect your hands from painful scrapes if you fall.

Hold your hands as you ride to keep balance.

Children should always be supervised while riding.

CLOTHING
It is important to wear the right clothing when you ride. See and be seen!

When you wear brightly colored clothing, drivers can see you better.

Fluorescent colors can be seen in the daytime but not at night. Reflective clothing or strips can be seen best at night.

Before you go riding in cold or wet weather, be sure to wear clothing that will keep you warm and dry.

Gloves protect your hands from painful scrapes if you fall.

Tie your shoelaces and tuck the ends into your shoes so they don’t get caught in your chain.

CROSSWALK
A crosswalk is a place marked off for pedestrians to cross the street. In a crosswalk, pedestrians have the right of way and bicycles must stop for them.

A crosswalk is a good place to walk your bike across a busy street. Remember, you must walk, not ride, your bike in a crosswalk.

DRIVEWAYS
A driveway is an accessway where a road from a home, building or garage meets a street. Often, people driving cars don’t see kids coming out of driveways on bikes. Sometimes kids riding bikes don’t see cars coming out of driveways. Be extra careful around driveways. They are very dangerous places.

Come to a complete stop at the end of your driveway. Look left, right and left again for passing traffic. Go only when it is safe.

Bikes and parked cars near driveways make it very difficult to see moving traffic on the street. Move out carefully and get a clear view before you go.
ENERGY
Energy is what makes things work and move. Your body gets its energy from the food you eat. Your bicycle gets its energy from you.

F
FAST
Riding fast can be fun, but it can also be dangerous. When you go fast it's easy to get out of control, it's harder to estimate distances and it takes much longer to stop.

FIT
Buy a bicycle that fits you. Never buy one you must grow into. If your bike is too small or too large, it will be hard to handle and dangerous to ride.

It takes the same amount of energy to walk a mile (or one kilometer) as it does to cycle five miles (or five kilometers)

Riding a bicycle in the city is sometimes faster than driving a car. Bicycles are almost always easier to park than cars.

Riding a bicycle keeps you fit and burns calories.
GEARS

Gears are a set of mechanical wheels with teeth. The gears and the chain on your bicycle help you to pedal more efficiently up and down hills. Gears are shifted by levers that are usually fixed on the handlebars or down tube. Some bicycles have only one gear; others have 3, 5, 10, 12, 15, 18 and even 21.

When you are in high gear, it’s harder to pedal and it takes more energy. High gear is used for going downhill and for going fast on flat ground.

When you are in low gear, it’s easier to pedal and it takes less energy. Low gear is used for going up hills. Your first gear is your lowest gear.

Start riding in a low speed gear. As you go faster, gradually shift into a higher speed gear. As you slow down, shift from a higher gear to a lower gear.

HELMET

A bicycle helmet is headgear that is especially made to protect your head in a crash or an accident. Wearing a helmet can prevent serious injury. Wearing a helmet can save your life.

A crash or an accident can happen even to the most careful rider! Bicycle crashes or accidents don’t happen only in the street; they happen in driveways, on bike paths and on sidewalks. Crashes can also occur when someone else is careless. That’s why it is so important to wear a helmet as it is to buckle-up in a car!

• Wear a helmet every time you ride a bike. You might skid, crash into a wall or even get your bicycle tangled in your chain. Your helmet is important; it contains your head. Your head is important; it contains your brain.

• Be sure your helmet fits well, is adjustable to your head, and covers your forehead.

• You should always wear a helmet, no matter how slowly you are riding because a fall at any speed can cause severe head injury.

• Wear a helmet that is made specifically for bicycling and is approved by CPSC, ASTMF, CE or Snell. Never substitute a hockey or baseball helmet for a cycling helmet.

• A cycling helmet is made to absorb a crush differently. It is designed to absorb an impact and then to break away from your head.

• If you have been in a crash or an accident and your helmet has been hit, don’t use it again. Once your helmet has been in a crash or an accident, small, invisible cracks can weaken its shell and the shell can get crushed. Buy a new helmet.

• Be sure the chin strap is tight enough to keep your helmet from slipping forward over your face or becoming off your forehead. If you wear your helmet too far back, it won’t provide enough protection for your forehead. Your forehead usually hits the ground first in a fall. You should be able to slip only two fingers under your chin strap. Always buckle your chin strap!

• A lightly colored helmet can be seen better than a dark one.

• Put your name and phone number inside your helmet; in case you last or you get into an accident.

• Set an example by wearing a helmet, and encourage your friends to wear them! Remember, a helmet only works when you wear it!

Professional bicycle racers wear helmets.
LEFT TURNS

Turning left at an intersection can be a very difficult and dangerous thing to do on a bike.

There are two ways to turn left safely:

1. Like a pedestrian
   - Pull over to the right curb and get off your bike.
   - Walk your bike across the street in the crosswalk when the green and the walk signal appear.
   - Then, walk your bike across the other street in the crosswalk when the green and the walk signal appear.
   - Get back on your bike.
   - Check the traffic.
   - Go when it is safe.

2. Like a vehicle
   - Shoulder check before the intersection.
   - Signal that you are turning left.
   - Shoulder check again, and if safe, move into the bike lane way for turning left.
   - Signal again at the intersection.
   - When it is safe, make the turn.

LOCKING your bike:

Many bicycles are stolen every day. Lock your bike even if you are going to leave it for just a minute. Look your bike even if you can see it from where you are going.

Lock your bike to something solid like a pole or a bicycle rack that can’t be moved. Be sure you lock the bicycle’s frame, not just the wheels.
MAINTENANCE

Maintenance means keeping your bike in good condition. Check your bike regularly to be sure it is safe to ride.

- **Brakes** - If the brake pads are worn, replace them. Check to see that they fit against the rim. Be sure the cables are not kinked or frayed and that one end of the brake lever is at least 1 inch from the brake. Brake levers should be at least 1 inch from the brake shoes. When you squeeze the brake lever, there should be at least one inch of clearance between the lever and the handlebars. Hand brake work best when the wheel rim is clean and rust-free. Keep them clean!

- **Chain** - Keep the chain clean and oiled, especially after riding in wet weather. Pour chain cleaner into a small container and use an old toothbrush to clean the chain. Wipe it dry with a cloth. Apply oil and wipe off the excess.

- **Gears** - Be sure the gears work properly. You must be able to shift your gears easily while riding. If they stick or slip, or if the chain falls off while you shift, have a bike mechanic adjust them.

- **Handlebars** - Be sure the handlebars are not crooked or loose. You shouldn't be able to twist them back and forth when you hold the front wheel between your legs. At least two inches (5 centimeters) of handlebar stem should be inside the handlebar. The maximum extension line should be hidden.

- **Headset** - The bicycle headset must be properly adjusted. Squeeze both brake levers and push the bike forward with the brakes on. You shouldn't feel any movement in the handlebar stem.

- **Lights** - Check the front and rear lights to see if they work properly. If they don't, check the bulbs and batteries in the generator.

- **Pedals** - See that the pedals are tight and spin smoothly.

- **Reflectors** - Keep all reflectors clean. Replace them if they break.

- **Seat** - Be sure the seat is level, doesn't wobble, and is fastened tightly. Be sure that it is the right height for you. At least two inches (5 centimeters) of the seat post should be inside the seat tube, holding the maximum extension line.

- **Spokes** - Check to see that none of the spokes are loose, missing, or broken.

- **Tires** - Check the tires often. Look for bruises, cuts, cracks, or worn spots. Check to see if the tread is good. Be sure the valve stem is sticking straight up.

The right amount of air pressure for the tire is printed on the side of the tire. Put this amount of air in both tires by using a hand pump and a pressure gauge. Too much air can cause a flat tire. Too little air can weaken the sides of the tire and cause damage when you hit a bump. You have more control when you fill your tires with a hand pump. A gas station air pump won't hurt them.

- **Wheels** - Spin the wheels. If they are bent, they will wobble back and forth. If the wheels wobble, you won't be able to ride in a straight line, and the brakes won't work well. Be sure the nuts and quick-release levers are tight and secure.

Have a bicycle mechanic check and adjust your bicycle at least once a year.
NIGHT
Bicycling after dark can be dangerous because it's hard for drivers to see bikes. Avoid riding at night if you can. If you must ride after dark, be sure to wear light-colored clothing and a reflective vest.

Be sure your bike has a bright, white light in front and a bright red light in the back. Be visible on your pedals, wheels, frame and this helps you to be more visible at night. Never ride at night without being very visible!

See and be seen:
- reflectors
- lights: front and back
- light-colored helmet
- light-colored clothing
- reflective vest

O
OTHER bike activities:
- Bicycle Polo
- BMX Freestyle
- BMX Racing
- Cycle Touring
- Off Road Racing
- Off Road Racing
- Road Racing
- Track Racing
- Unicycle Racing

Many of these bike activities can be very dangerous without the proper training and special equipment. Ask your local bicycle shop or bicycle association where to find organizations that will provide you with the equipment and training to do these activities safely.
PARENTS, a special message

- Be sure your child's bicycle is the right size. If the bicycle is too small or too large, it will be hard to handle and dangerous to ride.
- Buy approved bicycle for yourself and your children.
- Always wear your helmet when riding a bicycle.
- Practice regular bicycle maintenance.
- Identify a safe route for bicycling between home and school by first traveling or walking the route with your child.
- Ask questions: “When you come to a four-way stop, who goes first?”
- Ride regularly with young children.

- Point out road and visibility hazards while riding or driving. When it’s dark or rainy, point out how hard it is to see people riding bikes.
- Explain the importance of the rules of the road. When you see someone doing something wrong, point it out.
- Write down the make, model and the frame number of your child’s bike. If the bicycle is lost or stolen, having that information might make it easier to get it back.
- Set a good example. Obey the rules of the road when you ride a bike or drive a car.

PEDESTRIANS
People walking are called pedestrians. You become a pedestrian when you walk your bicycle. When pedestrians and people in vehicles are in crosswalks they have the right-of-way. Pedestrians also have the right-of-way on paths that include them.

Watch out for pedestrians who step out from between parked cars.
**Quiz Level 1**

1. Always ride on the left side of the street so you can see the cars coming toward you. **T/F**
2. Turning left at an intersection can be one of the most dangerous things you can do at an intersection. **T/F**
3. You don’t need to look both ways if you can see it at all times. **T/F**
4. Your right hand breaks stop the rear wheels. **T/F**
5. Your left hand breaks stop the front wheels. **T/F**
6. Your right hand turns the front wheels. **T/F**
7. If you must stop quickly, squeeze both brakes at the same time. **T/F**
8. High gear is used for going uphill. **T/F**
9. You should never ride a bicycle without riding a helmet. **T/F**
10. The law says you must ride your bicycle on the same side of the street as the other side. **T/F**
11. When riding your bike, you must stop at an intersection even if there is no traffic around. **T/F**
12. You should signal that you are going to stop before you come to a stop sign. **T/F**
13. It’s safer if you drive at a slower speed than it is for a car to overtake you. **T/F**
14. If another rider looks down at his watch, then it’s always one place. **T/F**
15. You need to wear a helmet only when you know you are going to ride in heavy traffic. **T/F**
16. It’s a good idea to ride slow while riding on two pavement. **T/F**
17. Avoiding a bicycle lane is a little bit easy for you as you can go around. **T/F**
18. When you are cycling, try to keep the right side of your bicycle because you never like to go the road. **T/F**
19. Your bicycle is a vehicle. **T/F**

**Quiz Level 2**

1. When two vehicles come to an intersection at the same time, which one has the right of way? **T/F**
2. Approximately how many feet can a bicycle go before it should stop for a bicycle? **T/F**
3. At what speed does a bicycle lose control? **T/F**
4. What type of clothing is better to wear at night? **T/F**
5. With the amount of energy it takes to walk a mile or a kilometer, how many miles or kilometers can you ride? **T/F**
6. When following another on a bike, always do exactly what they do so you will match the slower person. **T/F**
7. You see the other person is yellow, you should speed up to make sure you get through the intersection before it turns red. **T/F**
8. Most accidents usually happen at intersections. **T/F**
9. A accident doesn’t happen to a careful rider who obeys all the rules of the road. **T/F**
10. A car whose left turn signal is flashing will always have left. **T/F**

**Quiz Level 3**

1. My favorite animal is a ____. **T/F**
2. My best pet is a ____. **T/F**
3. If you have a pet you must always keep it on a leash. **T/F**
4. You should sit in the middle of the traffic lane when the road is very narrow. **T/F**
5. If you have been involved in an accident, the cyclist’s helmet will always be visible. **T/F**
6. If you are stopped for a traffic stop signal, your bicycle has been seen, and your headlight doesn’t work, the first thing to do is _____. **T/F**
7. If you are not wearing a helmet, and your bike has been, rear wheel reflection at night? **T/F**
8. Put up your hand, the elderly person who doesn’t have a white flasher to get it right away. **T/F**
9. Remove a helmet, a reflector is a _____ that _____. **T/F**
10. A bicycle rider’s helmet is a _____. **T/F**

**Answers:**

[Answers provided in the image]
RIGHT-OF-WAY

Right-of-way is the set of rules that states which vehicle should go first. Emergency vehicles using sirens or flashing lights always have the right-of-way.

• Traffic on a main street has the right-of-way if traffic on a side street yields the right-of-way by stopping.

RULES-OF-THE-ROAD

The rules-of-the-road are traffic laws that everyone who drives on the road must follow. If you follow them, you will be safe.

• Some roads don't have stop signs. The rule at a road intersection is that all vehicles must slow down. The vehicle that gets to the intersection first has the right-of-way and goes first. Left-turning vehicles must yield to oncoming vehicles.

• Suppose you get to an intersection at the same time as another vehicle. If the vehicle is on your right, it has the right-of-way. If it is on your left, you have the right-of-way. When two or more vehicles arrive at the same time, all vehicles must come to a complete stop before they go.

• At intersections with four-way stop signs, all vehicles must stop. The first vehicle to come to a complete stop has the right-of-way and goes first.

• If you see someone running, you have the right-of-way. If you see someone walking, you have the right-of-way. If you see someone riding a bicycle, you have the right-of-way.

• When you come to an intersection, check in all directions before going ahead. Check for cars, buses, trucks, and other vehicles.

• Stop at stop signs and be sure that the traffic is clear before you go. Watch out for cars coming out of driveways, intersections, and parking spaces.

• Shoulder check before riding around a parked car. Always yield the right-of-way to pedestrians.

• Don't pass cars on the right side. They could be turning left and cut you off. You would be behind them.

• Use a belt, harness, or seat belt to wear. When you are wearing a seat belt, you are safer.

• Never carry a package on a single-end bike.

• Don't hitch a ride by holding onto another vehicle.

• When you hear a siren coming, stop at the side of the road. Get off your bicycle and wait until the emergency vehicle has passed.

• If you are involved in an accident, report it immediately to the police, your school and your parents.

Check the rules-of-the-road in the community where you ride.
SHOULDER CHECK
Shoulder-checking means looking over your shoulder while you are riding your bike to check the traffic behind you. Always shoulder-check before you make turns and lane changes. When you shoulder-check, keep both hands on the handlebars and look back over your left shoulder for traffic. Always shoulder-check before moving around parked cars or other road hazards.

To make a turn:
• Shoulder check.
• If it is not safe, wait until the way is clear.
• When it is safe, hand signal and go on with the turn.

POSITIVE SHOULDER CHECKING IS A SAFE PRACTICE TO MAKE SURE YOU RIDE IN A STRAIGHT LINE WHILE RIDING.

SIGNAL
A signal is the way bicyclists and drivers let others know what they are going to do. Bicyclists don’t have turning indicators like cars do, so cyclists must use hand signals. Remember, you must signal before starting your turn and before coming to a stop.

Hand Signals to turn right -
left arm out with other arm up (speed decreased)
right arm up (speed increased)

To turn left -
left arm straight
right arm up (speed increased)

To slow down or stop -
left arm out, elbow down, palm facing forward

SIGN OF THE TIMES
Traffic signs tell bicyclists, pedestrians and drivers what to do and what to look for. Your bicycle is a vehicle, therefore, you must obey all traffic signs.

Arrows - Go only in the direction of the arrow.

Flashing red light - Come to a complete stop. Check that it is safe. Go when the way is clear.

Flashing yellow light - Slow down. Check the traffic. Go with caution.

Green - Go if the intersection is clear.

Keep right

No left turns allowed

No U-turns allowed

One-way - All traffic on this road must go in one direction.

Railway crossing - Slow down, look both ways and listen for a train. If you hear a train or see a signal flashing, stop and wait for the train to pass. If there is no train, go with caution.

Red light - Stop. Never cross through a red light.

School zone - Slow down, watch for children.

STOP - Come to a complete stop at all stop signs.

Yellow light - Slow! Do not enter the intersection. The light is about to change.

Yield - Wait for the other vehicle to go first.
TIPS
A tip is a good idea. Here are some bicycle tips that will help you ride safely:

- Don’t ride against traffic. It is done because drivers do not expect a bicycle coming toward them on their side of the road. They expect all traffic to be going in the same direction they are going.
- Watch out for parked vehicles suddenly pulling away from the curb or the car doors that open suddenly.
- Never pass a car on the right while it is being pulled, shoulder checked, or if it is about to pull the door on the left. Remember, at a car has to get out to pull the door at the front of the car stops wide. Shoulder check to be sure you can pass it with five feet of distance. If the car is not done, stop and wait for the door to finish putting.
- Don’t tighten pedestrians and other cyclists when you pass them. Ring your bell to let them know you are coming.
- Tie a quint up to your bike or helmet when you ride down a street. You will be able to use it to make a telephone call if you are late or if you need help.
- When you have things to carry, tie them securely on a bicycle rack or use bike bags. It is easier and safer than carrying them on your body. Don’t let straps get caught in your spokes or chains.

- Watch out for trucks that are backing up. Some trucks beep loudly to let you know that they are backing up. Some trucks don’t.
- Be in control of your bicycle at all times. Don’t weave or wobble. Learn how to ride in a straight line. It’s predictable. Don’t make any sudden moves that drivers near you may not be expecting.
- When you ride with friends, don’t ride side by side. Ride single file and keep at least one bicycle length away from the bicycle in front of you. Don’t depend on them to check the traffic for you! Ride as if you are alone. Be safe. Make your own decisions.
- Never wear headphones when you ride a bicycle. You need to hear all traffic sounds to be safe.
- In an emergency, shout as loudly as you can. Your voice can be much louder than a bell or horn.
- Walk your bike when you feel nervous about traffic or you feel tired.
- Watch out for animals. If you meet an angry dog, yell, “Go Home!” If the dog still follows you, don’t try to pet him. When faced with a dog, keep your bike between you and the dog and walk away slowly.

- Some drivers are careless. Don’t assume that drivers see you or that they always stop at a red light or stop sign.
**UPHILL... and downhill too**

- It takes much longer to stop when you are going downhill.
  - If the hill is wet, it takes even longer.
- On long downhill, squeeze both brakes every few seconds to control your speed.
- Square both brakes equally to slow down or to stop.
- Don't brake while turning a corner.

- If the hill is too steep, get off and walk your bike.
- Try not to change gear just way up a hill. Change to a lower gear before you start the climb.
- Don't weave going uphill.
  - When it is too hard to go in a straight line, get off your bike and walk!

**VEHICLES**

A vehicle is a machine that moves people or things. Your bicycle is a vehicle. Other vehicles include cars, buses, trucks, minivans, motorcycles, motor scooters and other bikes. All vehicles, including bicycles, must obey traffic rules and signs.

**VISIBILITY**

Visibility means how well something can be seen. Sometimes you can't see cars or they can't see you because of poor visibility. When the sun gets in your eyes or when it is raining, snowing, cloudy or foggy, the visibility can be poor. It is extremely dangerous to ride a bicycle when the visibility is poor.

Often drivers can't see you on a bicycle when there is poor visibility. To make yourself more visible to drivers, use a bicycle safety vest and wear a light-colored helmet and light-colored clothing.

When the sun is behind you, late in the afternoon or early in the morning, its rays may blind a driver coming toward you. The driver may not see you even though it is easy for you to see the vehicle.

To be visible at night, wear light-colored clothing, a reflective vest and reflective strips.

**Broken glass and nails - Avoid them!**

They can damage or ruin your tires.

**Wet leaves - Avoid them!**

They can be slippery as ice.
WATCH OUT FOR:

RAILROAD CROSSINGS: Look both ways for a train. Walk your bike near the tracks or cross them straight on, not at an angle.

WEATHER:
Bad weather: rain, snow, hail, wind, dust storms, or frost. Bad weather makes it hard for drivers to see you and for you to see them. When weather conditions are bad, it is safer to leave your bicycle at home and walk or take a bus. If you must ride in bad weather, ride slowly and don't make sudden turns. Remember: when your brakes are wet, it takes a longer time to stop. When the roads are wet and slippery, all vehicles have trouble stopping quickly. Walk your bike when it is slippery or when you can't see very far.

Car doors: Caution! Ride three feet away from parked cars.

Puddles: Avoid them! They may be deeper than you think.

Loose gravel: Avoid it! It's easy to slide if you brake suddenly on gravel.

Drain grates: Avoid them! They can grab your tires and cause you to fall.

Pot holes and cracks in the road: Avoid them! They may be rougher than you think.

ZONE:
A zone is an area that is special. These are some of the areas you should know about:

- No cycling zone
- Parking zone
- Hospital zone
- School zone

YELLOW light means STOP!
Do not ride through a yellow light. It is about to change to red, and traffic on your left and right is about to go with their green light!