



# BIKE BASICS

The AAA Guide to a Great Ride



## STAY SAFE AND RIDE FREELY

Bicycles can be considered symbols of independence and freedom. They are also fun, providing riders a “greener,” healthier form of transportation. Bicycles are also considered vehicles, and riders have a responsibility each time they take to the road.

Every year, hundreds of cyclists are killed and tens of thousands more are injured in preventable crashes. The majority of severe injury and fatal crashes involve cars, but crashes also occur on driveways, sidewalks and bike paths. Most bicycle crashes happen near the home.

You can minimize risk, maximize fun and enjoy the freedom of bicycling by understanding the importance of:

- ▶ Wearing proper safety gear
- ▶ Bike maintenance
- ▶ Operating a bike safely



## SELECTING THE RIGHT BIKE

Bikes come in all shapes and sizes. Like a shoe, if a bike is too small or too large, it won't be comfortable and could result in injuries.

Buy a bike that fits you. Some styles require more balance or a larger physique. If your bike is too big, it could be hard to control and dangerous to ride. If it's too small, it could cause discomfort or injury.

Your bike should also be the right style for the right terrain. Bicycles with narrow tires, or road bikes, have small tread and are intended for use on paved roads. Mountain bikes have wide tires with large tread patterns, a bigger gear selection, and front and rear suspension designed for dirt or off-road trails. Do not modify a road bike for more rugged terrain; use a model intended for that purpose.

## THREE STEPS TO A GOOD FIT

For comfort and safety, focus on three elements: size, seat and steering.

### 1 SIZE

Stand over the bike and make sure there is clearance between you and the top tube . . . an inch or so for a road bike, or three to five inches for a mountain bike. When sitting on the seat, your feet should just be able to touch the ground without the bike leaning to either side.

### 2 SEAT

While you are seated, your leg should be slightly bent when the pedal is at its lowest rotation—not too cramped, not too stretched. Seats that are adjusted *too low can cause knee pain*; and seats set *too high can cause hamstring pain*. Make sure the seat is tightly secured and does not move from side to side or up and down.

### 3 STEERING

Position standard handlebars above the center bar, with grips at or above seat level. Position dropped handlebars (below the center bar) so the upper part of the bar is level with, or slightly below, the seat and tilted down. Adjust your handlebars so that 70 percent of your weight is on the seat and 30 percent is on the handlebars. Make sure your grips are not missing or loose.

## PICKING THE RIGHT HELMET

Wear a helmet on every ride, no matter how short the ride or how close to home. In the event of a fall or crash, bicycle helmets reduce the risk of brain injury by up to 85 percent. In 2009, 91 percent of bicyclists killed (all ages) were not wearing a helmet.

Wear a helmet specifically designed for bicycle riding. The helmet should meet the safety standards established by the Consumer Product Safety Commission (CPSC).

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**If all bicyclists wore helmets,  
one life could be saved every day;  
one head injury could be  
prevented every 4 minutes.**

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The helmet should fit comfortably and snug, but not too tight. It should sit on your head so that the front rim is just above your eyebrows. If the helmet rests farther back, your forehead will be exposed, providing less protection from head injury.

Before buckling the chin strap, shake your head from side to side. If the helmet turns or slides, it's too big and won't protect your head no matter how tight you pull the strap. Adjust the size with the straps, dials and pads supplied by the manufacturer. When your chinstrap is buckled, open your mouth and feel the helmet press firmly against the top of your head.



## PROPER ATTIRE

Wear comfortable clothing, but ensure no fabric can get caught in the chain, wheels or other bicycle mechanisms. Wear fairly stiff shoes while riding, because flexible sneakers can cause arch pain when riding long distances. Tie back or tuck in loose laces and don't wear sandals when riding a bike.

## CYCLING SKILLS

Whether you are a new rider or just plan to ride an unfamiliar bike, the key is to practice riding before you get into a real-life traffic situation.

Check with local organizations for training programs designed for new riders. Always wear your helmet on every ride.

Begin on a dry, clean and level area away from traffic and free from obstructions. Practice your balance, circling, braking and control skills. Also practice turning your head without swerving to simulate looking behind for approaching traffic. Continue to improve your handling skills by riding on gravel or wet surfaces.

If you're already an experienced rider, it's still a good idea to take a refresher course every few years to ensure you are observing the latest rules and regulations.





## MAINTENANCE = A SMOOTH RIDE

Like automobiles, bicycles require routine maintenance to keep them operating properly. Get into the habit of cleaning and inspecting your bike on a regular basis. You can make minor adjustments on your own, but it may be a good idea to use a local repair shop for more complex problems.

**Brakes** Keep coaster brakes—the kind you operate from the pedals—lightly oiled. Hand-brakes have brake calipers that contract to apply the pads to the rims. For optimum performance, keep your rims clean. When not in use, the pads should just clear the rim. Brake levers that touch the handlebars are in need of adjustment.

**Frame** Ensure the bicycle frame is intact and that no braces, screws, bolts or brackets are loose or missing. Rusted, bent or broken metal could result in a puncture wound or other injury.

**Reflectors** Reflectors are essential for increasing visibility and should be located on the bike's front, rear, sides and pedals. Replace any cracked or worn reflectors as soon as possible.

**Tires** Keep tires inflated to the correct pressure marked on the tire wall. To locate a leak in a flat tire, fill the inner tube with air, place the tube in water and watch for any air bubbles. Replace worn or damaged tires.

**Wheels** Turn your bike upside down and spin the wheels. They should spin evenly without rubbing the forks or the frame. Replace broken spokes to avoid any safety hazard. Tighten spokes evenly to prevent wheel wobbling.

## COMMON CRASH SCENARIOS

Both cyclists and motorists can cause a crash. Here are some common causes and a few things you can do to prevent them.

### Mid-Block Ride Out

This crash type occurs when a bicyclist enters the roadway from a driveway, alley or curb without slowing, stopping or looking for traffic. This sudden entry leaves a motorist with too little time to avoid a collision. Bicyclists should stop to look left-right-left and make sure it's clear before entering the roadway.

### Riding the Wrong Way

It is unlawful to ride a bicycle facing traffic. *Always ride on the right side of the road with the flow of traffic.*

### Motorist Passing Cyclist

Motorists need to give cyclists *at least 3 feet* of clearance when passing—even more at higher speeds. Do not pass a cyclist until it can be done safely. Cyclists should always signal their intentions and wear bright-colored clothing to increase visibility.

### Left Turn or Sudden Swerve

Swerving left into the path of an oncoming vehicle is the leading cause of bike crashes. When making a left turn, give the appropriate hand signal, look behind you, and make the turn when the intersection is clear. Before riding in the road, practice looking behind you until you can do so without swerving.

### Failing to Obey Signs and Signals

*Both* motorists and bicyclists must always follow the directions of signs and signals, including stopping at all red lights and stop signs.





## TIPS ON THE ROAD

- ▶ Wear bright colors and reflective material on your clothing.
- ▶ Ride with the flow of traffic and obey all traffic laws.
- ▶ Traffic signs, signals and pavement markings apply to bicyclists, too. Bicyclists must also adhere to directions given by police officers and crossing guards.
- ▶ A bicyclist who is not traveling at the same speed of traffic must ride in a designated bike lane or as close as practical to the right-hand curb or edge of roadway. Check your local laws for exceptions.
- ▶ Communicate your intentions to other road users by using appropriate hand signals.
- ▶ Always slow down and yield to pedestrians.
- ▶ Stay alert and remember that drivers or pedestrians may not see you.
- ▶ Always stop and look left-right-left before entering the roadway.
- ▶ If riding on the sidewalk, yield to pedestrians and cross at marked crosswalks following pedestrian crossing signals where available.
- ▶ When you are part of a cycling group, ride single-file, not side-by-side.
- ▶ When possible, avoid riding after dark, especially on narrow roads and roads with speed limits that exceed 35 mph.
- ▶ Always use lights and reflectors if you ride at night, or in any low-light condition, to make yourself more visible to motorists.
- ▶ Do not wear headphones or listen to music while riding, because you need to hear what's going on around you. This is a law in some states!
- ▶ Plan your route before you leave home. Let your family know where you're going, a number where they can reach you and when to expect you back.
- ▶ Sign up for a bicycle safety course to learn about basic traffic laws and master skills needed to share the road with motor vehicles.



## BICYCLE CRASH STATISTICS

- ▶ According to the Centers for Disease Control and Prevention, more than 500,000 people are treated in emergency departments as a result of bicycle-related injuries every year.
- ▶ Not all injuries are the result of a crash; some are caused from simply falling over.
- ▶ Head injuries are the most common cause of death and serious injury among bicyclists. Helmet use is the single most effective way to reduce bicycle-related fatalities.
- ▶ Almost half of all bicycle crashes occur on driveways and sidewalks.
- ▶ Bicycle crashes are most likely to occur close to home.
- ▶ More children ranging from age 5 to 14 are treated in hospital emergency rooms with injuries related to biking than any other sport.
- ▶ In 2013, most cyclist fatalities occurred between 3 and 11 p.m.
- ▶ Among children, boys ages 10 to 15 have the highest rate of bicycle-related injury.

## SHARING THE ROAD

More than half a million collisions between motor vehicles and bicycles occur in the United States each year. Many of these incidents are the result of motorists' failure to properly yield to bicyclists. Motorists need to increase their overall awareness of bicyclists—especially when making turns, and remember to look for bicyclists who are turning or continuing straight. Check for bicyclists riding along the edge of the traffic lane before opening car doors, too. And don't forget to give bicyclists at least three feet of clearance when passing—more at higher speeds!

Bicyclists should be alert and watch for both turning and parked motor vehicles. Bicyclists should also clearly communicate their intentions to motorists by using proper hand signals. Using helmets, visible clothing, lights and designated bike lanes and paths are all key factors for increasing safety and ensuring a pleasurable biking adventure.

Remember—we all have places to go—let's get there safely and respect one another when sharing the road. Contact your local AAA club regarding the availability of bike safety and other traffic safety materials.





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