

## Sharing the Road

More than a half-million collisions between motor vehicles and bicycles occur in the United States each year. Many of these incidents are the result of the motorists' failure to properly yield to bicyclists. Motorists need to increase their awareness of bicyclists when making turns and remember to look for bicyclists going straight. Checking for bicyclists riding along the edge of the traffic lane before opening car doors also is a way for motorists to help keep bicyclists safe.

Bicyclists also should watch for turning and parked motor vehicles; and clearly communicate their intentions to motorists by using proper signals. Wearing helmets, visible clothing and using bike paths when available are key factors to ensuring a safe, pleasurable biking adventure.



Photo courtesy of AAA Foundation for Traffic Safety



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# BIKE BASICS



**The AAA Guide  
to a**

# Great Ride

# Freedom on Wheels



A bike is a source of pride and a symbol of independence and freedom. It's also fun. But sometimes bicyclists forget it's not a toy. *It's a vehicle.*

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

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

- How to operate and maintain your bike.
- How to wear proper safety gear.
- How to operate your bike safely.

# Bicycle Crash Statistics

- Each year, about 200 bicyclists under the age of 15 die as a result of crashes. Another 350,000 are injured. Almost a third of those injured sustain brain trauma.
- Bicycle crashes are most likely to occur within five blocks of home.
- Almost half of all bicycle crashes occur on driveways and sidewalks.
- Nearly one-fourth of the 7,000 people who die each year in bicycle crashes are school-age youth ranging in age from 5 to 17.
- Head injuries by far are the most serious injury and most common cause of death among bicyclists. In severe cases, the bicyclist may incur permanent brain damage.
- Most bicyclist deaths result from bicycle-motor vehicle collisions. These fatal crashes most commonly occur in summer between the peak time of 3 p.m. to 9 p.m.
- More children ranging from 5 to 14 are treated in hospital emergency rooms with injuries related to biking than any other sport.
- Bicycle deaths per million are highest among 13 and 14 year-olds and are statistically high among 10-12 year-old males.

# Safety and Cycling Tips

- Wear a brightly colored helmet and retro-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 adhere to the 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 practicable to the right-hand curb or edge of roadway.
- 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.
- Cross at marked crosswalks and follow pedestrian crosswalk lights where available.
- When riding on the sidewalk, cross at marked crosswalks and follow pedestrian crosswalk signals where available.
- When you are part of a cycling group, ride single-file, not side-by-side.
- Never ride at sunset or after dark, especially on narrow roads and roads with speed limits that exceed 35 mph.
- Don't wear headphones or listen to music while riding because you need to hear what's going on around you.
- Plan your route before you leave home and 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.



## Selecting a Bike

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

It's important to buy a bike that fits your proper height and capabilities. Some styles require more balance or a larger physique. If your bike is too big, it could be hard to control. If too small, it could create other problems.

Your bike also should be the right one for the right terrain. Narrow tire bikes or road bicycles 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 steep dirt 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:** To check the size of your bike, sit on the seat with your legs straddling the center bar. Grip the handlebars with both hands. Your feet should be flat and you should have one - two inches of clearance. Never buy a bike that is too large with the idea that you'll grow into it.

**2 Seat:** Sit on your bicycle seat to determine if it is properly adjusted. First, ensure your pedal is at a level closest to the ground. While straddling the seat, adjust the height of the seat until you can stand without leaning to one side. *A seat set too low can cause knee pain; a seat set too high can cause hamstring pain.* Ensure the seat is secured tightly and does not move from side to side or up and down. Your seat is the right height when the ball of your foot reaches the pedal in its lowest position, with your knee slightly bent.

**3 Steering:** Handlebars that are positioned above the center bar are "standard" and should have grips at or above seat level. Dropped handlebars (below the center bar) should be positioned so the upper part of the bar is level with or slightly below the seat and tilted down. You should 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.

## Mistakes Cause Mishaps

**Mid-Block Rideout:** 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 the motorist too little time to avoid a collision.

**Wrong-Way Riding:** It is unlawful to ride facing traffic. ***Always ride on the right side of the road with the flow of the traffic.***

**Motorist Overtaking Cyclist:** This crash often occurs due to poor visibility and most frequently at night. Avoid riding your bicycle at night on narrow roads and roads with speed limits that exceed 35 mph. Always use lights and reflectors if you must ride at night to alert motorists of your presence on the road.

**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.



## Keeping Your Bike Buff

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 or your parents can make minor adjustments, but use a 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 personal injury.

**Reflectors:** Reflectors are essential for increasing visibility and should be located on the 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.



## Choosing a Helmet

You should wear a helmet on every bike ride, no matter how short or how close to home. In the event of a fall or crash, bicycle helmets reduce the risk of brain injury by almost 90 percent. Nearly 75 percent of bicycle-related fatalities among children could be prevented if they wore helmets.



Wear a helmet specifically designed for bicycle riding. The helmet should be certified by the Consumer Product Safety Commission (CPSC).

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**If all bicyclists wore helmets, one life would be saved every day; one head injury would be prevented every 5 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 further back, your forehead, nose and chin will be exposed.

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



## Gear to Go

Wear comfortable clothing, but ensure no fabric can get caught in the chain, wheels or other bicycle mechanisms. Riding a bike in flexible sneakers can cause arch pain, so wear fairly stiff shoes. Tie back loose laces and never wear sandals when riding a bike.



## Cycling Skills

If you are a new rider or 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. As a general rule of thumb, always wear your helmet on every ride.

Begin on a dry, clean 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. Later continue to improve your handling skills by riding on gravel or wet surfaces.

If you're already an accomplished rider, it's always a good idea to take a refresher course to ensure you are observing safe bicycling rules and current regulations.