



**bikeMN**

BICYCLE ALLIANCE OF MINNESOTA

**2021**  
EDITION

*The Minnesota*  
**BICYCLING HANDBOOK**  
Tips for Riding Legally and Safely

# The Minnesota Bicycling Handbook

This guide is meant to help bicyclists use Minnesota's roads and trails safely and enjoyably. Although it includes information about many Minnesota traffic laws, it is not a legal document or a substitute for the Minnesota Statute 169.222 "Operation of a Bicycle." For the current Minnesota Traffic Regulations, see [www.revisor.leg.state.mn.us/statutes](http://www.revisor.leg.state.mn.us/statutes). A bicyclist should never jeopardize their safety for the convenience of others.

The Minnesota Bicycling Handbook is published by the Bicycle Alliance of Minnesota (BikeMN). An electronic version can be found at [www.bikemn.org/handbook](http://www.bikemn.org/handbook). To order additional copies of the Handbook or to sponsor a printing, email [info@bikemn.org](mailto:info@bikemn.org). Cover photo thanks to Walter Griffin, Photographer, [www.waltergriffin.com](http://www.waltergriffin.com).

Special thanks to our steering groups: Minnesota State Non-Motorized Transportation Advisory Committee (SNTC), BikeMN Education Committee, Minneapolis Department of Public Works, and MnDOT.

© Copyright 2021 Bicycle Alliance of Minnesota. The content of The Minnesota Bicycling Handbook (MBH) may not be reproduced in whole or in part without the express written permission of the Bicycle Alliance of Minnesota. Some of the content of this publication is subject to a copyright of the League of Michigan Bicyclists (LMB), [www.LMB.org](http://www.LMB.org), whose content is used by BikeMN with the express written consent of the LMB. The MBH is based upon the LMB's "What Every Michigan Bicyclist Must Know" publication.

## SUPPORT SAFE CYCLING

Your support of BikeMN is a great investment in making Minnesota a more bicycle friendly state. BikeMN thanks our members for their continued support. Members play a vital role in supporting the production of educational materials like this guide and safety initiatives such as our education and advocacy efforts. Please join the movement by becoming a BikeMN member today at [www.BikeMN.org](http://www.BikeMN.org).

## BECOME A MEMBER!

Please join us in our vision to make Minnesota a place where bicycling is easy, safe, and fun for everyone.

-  We advocate for bicycle friendly laws, policies, projects, and programs.
-  We educate bicyclists and drivers using a national curriculum and awareness campaign focused on motorists.
-  We encourage biking through events and promotions.
-  We help businesses and communities to be more bicycle friendly.

Visit [www.bikemn.org](http://www.bikemn.org) to become a member!

# Sponsors and Supporters

Thank you to the organizations who made statewide distribution of this handbook possible!



Anoka County TMO



**BRAZIL**  
LAW GROUP



QUALITY BICYCLE PRODUCTS



**DERO**  
A PLAYCORE Company



**Hennepin**



# ABOUT BikeMN

The rest of the country looks to Minnesota as an example of forward thinking. They know our state is becoming one of the healthiest, most vibrant, most resilient places in the nation—and that is due in part to the popularity of bicycling. More than two million Minnesotans ride a bike each year for fitness, recreation, or transportation. For nearly a decade, the Bicycle Alliance of Minnesota (BikeMN) has been working in small towns and big cities, in suburbs and state parks, in boardrooms and school gymnasiums to transform the North Star state into the most bike friendly place in America. Here's how we do it.

## Education

Knowledge is power. That's why we're committed to ensuring every Minnesotan has access to quality bike education. It takes many forms, and BikeMN tries to increase the reach of all of them. We ensure that elementary school kids learn the rules of the road in their gym classes and afterschool programs, that commercial drivers understand their blind spots, that adult cyclists know how to travel safely and respectfully from point A to point B, and that new immigrants can learn to ride in constructive environments. We believe that making bicycle education accessible to every person of every age, of every skill level, and hailing from every part of Minnesota is a crucial step in making bicycling better for everyone.

## Advocacy

The law doesn't change itself, so BikeMN has stepped up as the impassioned voice for cyclists of all stripes at the Minnesota State Capitol. Whether it involves writing statutes that make bicycling on county highways more safe or encouraging our legislature to invest in active transportation funding, we are there for you. On the city-level, BikeMN is helping dozens of communities catch up after decades planning their streets and neighborhoods around the needs of automobiles. We're assisting more and more local leaders and business owners who realize bicycle friendliness this will help attract families, young talent, and loyal customers—which in turn keeps Minnesota's communities and businesses strong.

## Encouragement

Why do you ride your bike? Is it how you commute to work? Or a fun way to bring your kids to school? Does it help you feel healthy and active? Or maybe it saves you money on fuel? Do you want to do your part to protect our environment? And does riding your bike connect you to this beautiful state we live in? Could it be that you ride your bicycle because it's just plain fun? No matter the reason and never mind the season, we encourage you to do more of it! By putting together fun bike rides, encouraging tourism and trail development, incentivizing daily bike commuting and errand-running, and many other activities, BikeMN helps thousands of Minnesotans spend as much quality time as possible on two wheels.

We hope you'll get involved in this exciting and momentous work. Learn more by visiting [www.bikemn.org](http://www.bikemn.org).

# TABLE OF CONTENTS

🚲 SAFETY EQUIPMENT . . . . .	1
🚲 ANATOMY OF A BIKE . . . . .	2
🚲 BEFORE YOU RIDE — ABC QUICK CHECK . . . . .	3
🚲 HAND SIGNALS . . . . .	4
🚲 DANGEROUS BEHAVIOR . . . . .	4
🚲 RULES OF THE ROAD . . . . .	5
🚲 DANGERS OF SIDEWALK RIDING . . . . .	8
🚲 COMMERCIAL VEHICLES . . . . .	8
🚲 BICYCLE ROAD MARKINGS & SIGNS. . . . .	9
🚲 STATE PARKS & BIKE ROUTES . . . . .	13
🚲 NIGHT RIDING . . . . .	14
🚲 WEATHER CONSIDERATIONS . . . . .	14
🚲 RULES FOR PATHS & TRAILS . . . . .	15
🚲 DEALING WITH DOGS . . . . .	16
🚲 THEFT PREVENTION . . . . .	16
🚲 DEALING WITH ROAD RAGE . . . . .	18
🚲 WHAT IF THERE'S A CRASH? . . . . .	19
🚲 GUIDE TO BUYING A BICYCLE . . . . .	20
🚲 PROPER BIKE FIT . . . . .	22
🚲 TIPS FOR FITTING A BIKE HELMET . . . . .	23
🚲 MINNESOTA BICYCLE LAWS—FAQ . . . . .	24
🚲 FIXING A FLAT . . . . .	32



## Also Available from BikeMN: *Walk! Bike! Fun!*

This two-part curriculum helps children ages five to thirteen learn traffic rules and regulations; the potential hazards to traveling; and the handling skills needed to bike and walk effectively, appropriately, and safely through their community. It is designed and structured to meet Minnesota education standards. There are also distance learning materials for educators, students, and families, as well as opportunities for educators to earn continuing education credits. For more *Walk! Bike! Fun!* information or for a free download of this curriculum, visit [www.walkbikefun.org](http://www.walkbikefun.org).



# SAFETY EQUIPMENT



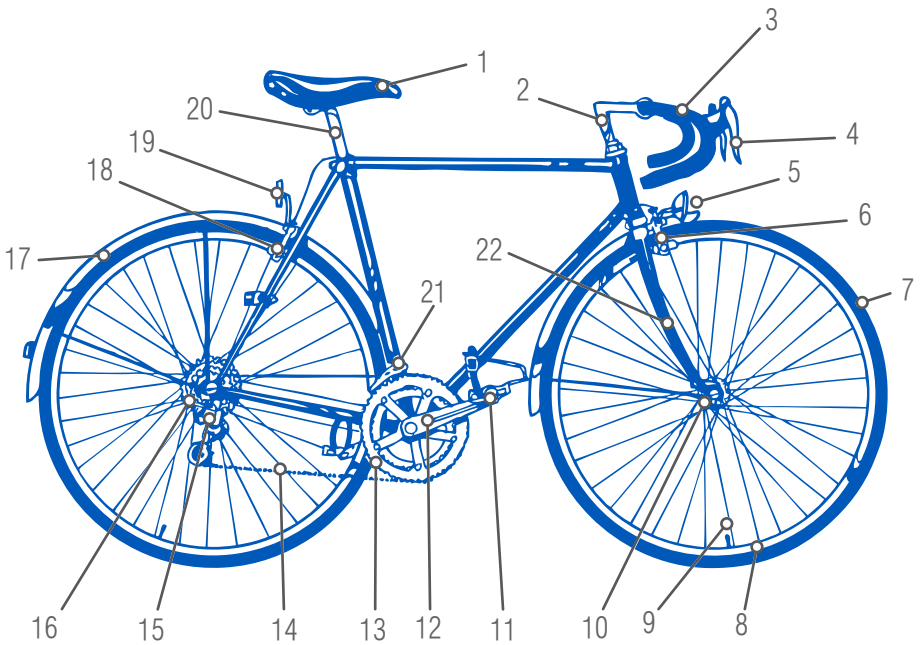
## BASIC EQUIPMENT

1. Wear a properly fitted helmet every time you ride. Wearing a helmet can reduce the severity of head and brain injuries. (*See Tips For Fitting a Bike Helmet, page 23*)
2. Use reflective tape, gear, or accessories to be as visible as possible.
3. Carry a tire pump, tire levers, patch kit, and spare tube.
4. Carry water or a sports drink using a water bottle holder (often called a cage).
5. Equip your bike with a white front headlight as well as a red rear reflector and/or light for riding in twilight, darkness, and poor weather conditions. (Legally required.)
6. Carry identification and pertinent medical information.
7. Carry a cell phone in case of an emergency and to document issues.
8. Use shatter-resistant protective eye wear.

## HELPFUL EQUIPMENT

9. Wear bicycling gloves to protect your hands in the event of a crash.
10. Install a mirror on your handlebar, helmet, or glasses to improve your overall awareness and to see trailing vehicles and riding companions.
11. Carry a lock to secure your bike. (*See Theft Prevention, page 16*)
12. Wear reflective leg bands to keep long pants away from your chain.
13. Carry a bag under your saddle, on your rack (panniers), or on your back.
14. Install a bell or horn to warn others of your approach, especially on trails.
15. Carry a multi-tool to help with basic repairs. A crescent wrench is helpful with certain bikes. (*See Fixing a Flat, page 31*)

# ANATOMY OF A BIKE



- |                        |   |
|------------------------|---|
| 1. Saddle              | 13. Chain Ring                            |
| 2. Stem                | 14. Chain                                 |
| 3. Handlebars          | 15. Rear Derailleur                       |
| 4. Brake/Shift Levers  | 16. Cassette/Freewheel and Rear Wheel Hub |
| 5. Headlight/Reflector | 17. Fender                                |
| 6. Front Brake         | 18. Rear Brake                            |
| 7. Tire                | 19. Reflector/Rear Light                  |
| 8. Rim                 | 20. Seat Post                             |
| 9. Spokes              | 21. Front Derailleur                      |
| 10. Front Wheel Hub    | 22. Fork                                  |
| 11. Pedals             |   |
| 12. Crank Arm          |   |

# BEFORE YOU RIDE—ABC QUICK CHECK

## A is for Air

- 🚲 Inflate tires to pressure listed on tire sidewall.
- 🚲 Use tire gauge to ensure proper tire pressure.
- 🚲 Check for damage to tire tread and sidewall; always replace damaged tires.

## B is for Brakes

- 🚲 Inspect brake pads and the braking surface of the rim for wear; replace pads or rims if worn past wear indicators.
- 🚲 Check pad adjustment; make sure they do not rub on tire or sit over the edge of the rim.
- 🚲 Check brake-lever adjustments. With brakes applied, there should be at least 1 inch between the lever and handlebar.

## C is for Cranks, Chain, and Cassette

- 🚲 Ensure crank bolts are tight.
- 🚲 Check chain for wear and proper lubrication. Chain should not be oily, but not completely dry.
- 🚲 If chain skips on the freewheel or cassette, you may need an adjustment or new part.

## Q is for Quick Releases

- 🚲 Wheel hubs need to be tight in the bike frame. If tight enough, your hub quick release lever should leave a slight indent in your palm when closing.
- 🚲 Hub quick releases should point to the back of the bike to ensure they don't catch on anything, thereby releasing the wheel.
- 🚲 Ensure quick releases are completely closed without being obstructed by the frame or fork.
- 🚲 Inspect brake quick releases to ensure that brake cables are re-engaged.
- 🚲 Inspect quick release at seat post (if applicable).

## ✓ is for “Check it Over”

- 🚲 Inspect the bike for loose or broken parts. Tighten, fix, or replace them before you ride.
- 🚲 Take a quick ride to ensure everything is working properly.
- 🚲 Pay extra attention to your bike during the first few blocks.

*If you are not comfortable making any of these adjustments, take your bike to a local shop for a basic tune up or refer to this DIY resource: [www.parktool.com/blog/repair-help](http://www.parktool.com/blog/repair-help).*



# HAND SIGNALS

- 🚲 Obey all traffic signs and signals. Cyclists are not exempt from traffic laws. Signal your intentions clearly and early.
- 🚲 Signal right turns by extending your right arm or upturning your left arm.
- 🚲 Signal left turns by extending your left arm straight out to the left.
- 🚲 Signal stopping or slowing by extending your left arm straight down with your palm facing rearward.
- 🚲 If riding in a group, point to and call out hazards to other bicyclists.



**NOTE:** Bicyclists may use either method in Minnesota.

# DANGEROUS BEHAVIOR

## Bicyclists' Rights and Responsibilities

When riding a bicycle on Minnesota roads follow the same rules as motorists. Bicyclists can be ticketed for violating traffic laws (see *Minnesota Vehicle Laws*, page 24). All road users will be safer and happier if they show respect and consideration for one another on roads.

### Dangerous Behavior for Bicyclists

- 🚲 Bicycling against the direction of traffic
- 🚲 Failing to yield when required
- 🚲 Running stop signs or red lights
- 🚲 Riding at night in dark clothing and/or without lighting
- 🚲 Riding unpredictably (such as weaving in and out of travel lanes)
- 🚲 "Hugging" the curb
- 🚲 Riding on sidewalks
- 🚲 Bicycling in motor vehicle blind spots, especially around commercial vehicles
- 🚲 Distracted or impaired bicycling



### Dangerous Behavior for Motorists

- 🚲 Not looking for bicyclists using facilities or on the road
- 🚲 Failure to yield to a bicyclist when required
- 🚲 "Squeezing" a cyclist by passing too close (3-foot minimum)
- 🚲 Turning directly in front of a bicyclist
- 🚲 Driving too fast for conditions
- 🚲 Opening vehicle door into a bicyclist's path
- 🚲 Driving while distracted (such as texting) or while intoxicated
- 🚲 Blasting your horn or harassing bicyclists in other ways

# RULES OF THE ROAD

Motorists who don't follow the rules of the road endanger bicyclists. They often "don't see" cyclists, or don't understand the road hazards and conditions that bicyclists face. Motorists also often misjudge the speed of bicyclists. Help protect yourself by riding smart, following all traffic laws, and riding predictably, consistently, and attentively.

## First Come, First Served

Just like other vehicles, bikes have a right to space on the road. Other vehicles must yield space to bikes that occupy a space first just as bicycles must yield space to motor vehicles that occupy space first. This rule applies both between intersections and at intersections. Like motor vehicles, bicyclists must also yield when changing lanes.

## Yield to Crossing Traffic

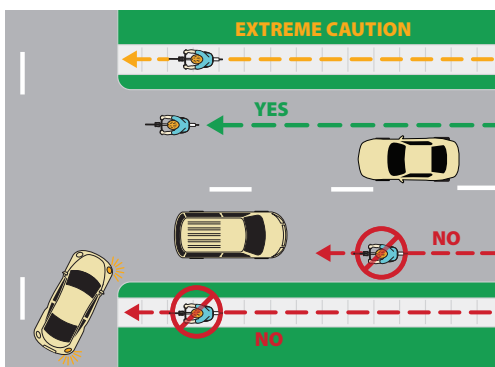
Drivers entering the roadway from driveways and alleys, must yield to traffic on the roadway to be entered or crossed. Yielding means looking until you see that no traffic is so close as to be a danger. Before changing lanes, bikes must check to see that a space is clear. If it is not clear, a bicycle must yield to a car in that space before making the change.

## Direction of Travel

Always ride in the direction of traffic. Never ride against traffic (on the left side of the road). You may, however, ride with traffic in the far left lane on one-way streets when preparing to make a left turn.

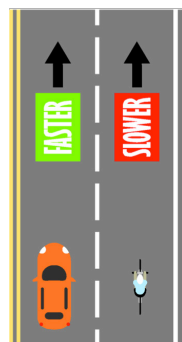
## Sidewalk Riding

Sidewalk riding is more than twice as dangerous (and in some cases illegal) as riding on the road. Drivers often don't notice you. If you do ride on sidewalks, be extra alert when crossing driveways and intersections, and always yield to pedestrians. *(More on page 8.)*



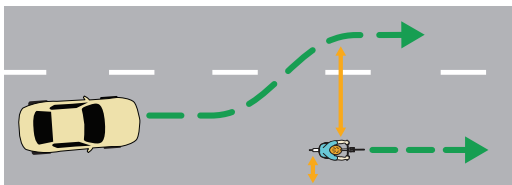
## Speed Positioning and Passing

The slowest vehicle should be in the right-most position and the fastest on the left. That puts parked drivers at the curb, slower drivers next to them, and fast drivers next to them. Passing should take place on the left. There are a few exceptions, such as a vehicle ahead turning left, when passing happens on the right. This is why caution should ALWAYS be used when passing slow or stopped traffic on the right, such as in a bike lane or on a shoulder. Motorists are not expecting to be passed on the right. Also, passing on the right means passing in a blind spot. Always watch a vehicle's front right wheel to see if it may make a sudden move to the right.



## Lane Positioning to Avoid Hazards & “Squeezing”

Stay to the right, but don’t hug the curb. By riding away from the curb in the right wheel track of vehicles, usually a minimum of 24 inches away from the road edge, you discourage drivers from “squeezing” you by passing too closely in the same travel lane.



## When to Share the Lane

Bikes can share the same lane with other drivers under certain conditions. If a lane is wide enough to share with another vehicle (at least 14 feet), ride at least two feet from the road edge to avoid debris and hazards.

Frequently, travel lanes are not wide enough to share (usually less than 14 feet). If you deem a vehicle cannot safely pass you (with a minimum of 3 feet) in the lane, you can “take the lane” to signal to traffic that they must pass you in the other lane. This protects you from drivers passing too closely. Position yourself as if you were a car by riding in the right wheel track of motorized traffic or the center of the lane in a narrow lane. This places you within motorists’ fields of vision sooner and allows them more time to prepare to pass. This positioning also allows you space to move away from traffic to avoid debris, hazards such as car doors opening when parallel parking is present, and “crowding” by other vehicles. Riding here also properly prepares you to make left turns or to pass other road users.

## Intersection Positioning

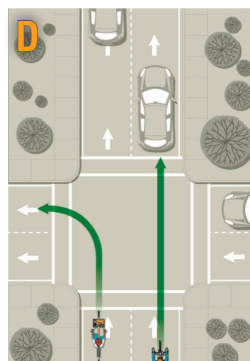
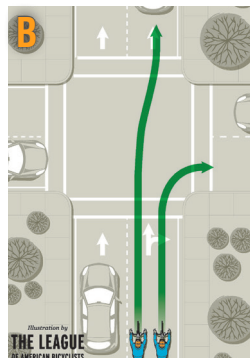
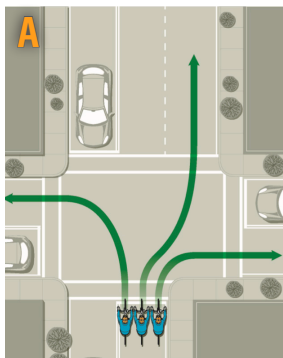
At intersections, follow the rules of the road as any other driver would. At intersections, there is a certain position bicycle drivers need to place themselves:

**One Lane:** When approaching an intersection with one lane, position yourself in the lane with respect to your destination direction. (Diagram A)

**Multi-Lane:** When coming up to an intersection with multiple lanes, place yourself in the rightmost lane that is traveling in the direction you’re going. (Diagram B)

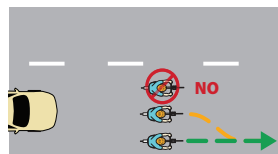
**Multiple Left Turn Lanes:** When turning left on a road with multiple left turn lanes, select the rightmost lane that serves your destination. (Diagram C)

**One-Way Streets with Two or More Lanes:** When you make a left turn from a one-way street onto another one-way street, it’s easiest to turn from the left-most lane. (Diagram D)



## Two Abreast Rules & Etiquette

Riding two abreast is legal in Minnesota. Bicyclists, however, can receive citations for riding more than two abreast. Bicyclists often ride next to one another when dangerous road conditions exist that make it unsafe for drivers to pass in the same travel lane. BikeMN encourages bicyclists to be courteous and “single up” when other road users are present and it is safe to do so. You may never ride more than two abreast.



## Crossing Railroad Tracks

Many railroad tracks cross roads diagonally. To prevent catching a tire in the track, slow down and cross at a right angle. It's especially important to do this in wet weather conditions.



## Stopping

When stopping for a rest or emergency, move completely off the road into the shoulder.

## Where to Ride: Bike Lanes, Travel Lanes

While you are not required to use them, bike lanes and paved shoulders are often the safest place to ride, especially where motor vehicle speeds exceed 45 MPH or heavy traffic is present. When facilities are not available, maintained, or the traffic conditions warrant, bicyclists must use standard travel lanes. The safest way to do so is by identifying conditions and assessing the usable space.

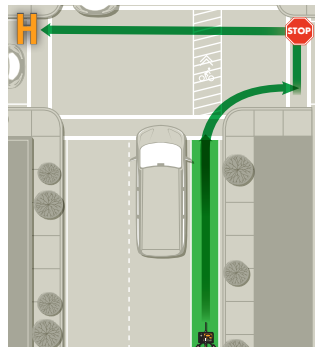
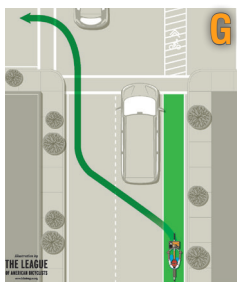
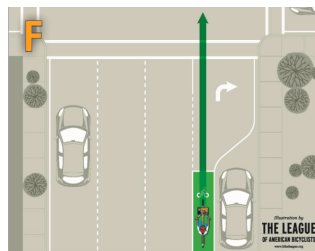
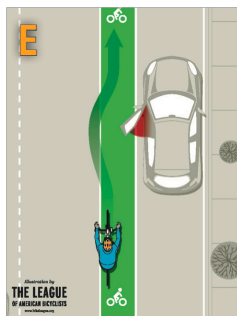
## Bike Lane Considerations

Bike lanes are not always designed to give cyclists enough room to stay in the bike lanes and outside of the “door zone” (where driver’s side doors of parked cars open). Remember, the door zone is at least 3 feet so give parked cars at least 4 feet. (Diagram E)

Be sure to scan and signal to other traffic when moving out of the bike lane and into the travel lane. When in a bike facility that ends at an intersection, use caution and position yourself to avoid conflict with right turning motorists. (Diagram F)

NOTE: It is NOT legal in Minnesota to continue straight in the right-turn-only lane as shown in diagram F.

Technically, in the shown situation, the bicyclist should scan, yield, and move left into the travel lane. However, there may be times when it is dangerous to move into the adjacent lane, such as high speed rural roads where shoulders end or there is lots of faster moving traffic on the left. Use good judgment and extreme caution in these situations.



## Turning from a Bikeway

When making a left turn from a right side bikeway, scan, signal, and exit the bikeway early. Turn left from the proper road lane (Diagram G). An alternative is to make a box turn by stopping in the intersection, turning your bike with traffic, and proceeding when the traffic signal changes. (Diagram H)

# DANGERS OF SIDEWALK RIDING

## Sidewalk riding is very dangerous — you are invisible when on sidewalks!

Motorists are looking in the road and not for sidewalk traffic moving at high speeds, such as bicyclists. They often don't see bicyclists there, especially at driveways and intersections. Sidewalks themselves pose dangers to bicyclists. Poor maintenance, uneven surfaces, gaps, and pedestrians make sidewalks difficult and dangerous for bicycles to navigate.

Bicyclists are never required to use sidewalks or side paths. A person lawfully operating a bicycle on a sidewalk or in a crosswalk has all the rights and duties applicable to a pedestrian under the same circumstances. If you must ride on a sidewalk (and local ordinance does not prohibit it) do the following:

- 🚲 Yield to pedestrians and walk bikes in crowded areas.
- 🚲 Provide an audible approach warning by ringing your bell or calling out “passing on your left.”
- 🚲 Watch for inattentive motorists or bicyclists; **never assume they see you.**
- 🚲 Ride with the direction of traffic (on the right side of the road).
- 🚲 Ride at walking speed. Stop and yield at intersections when a pedestrian would.

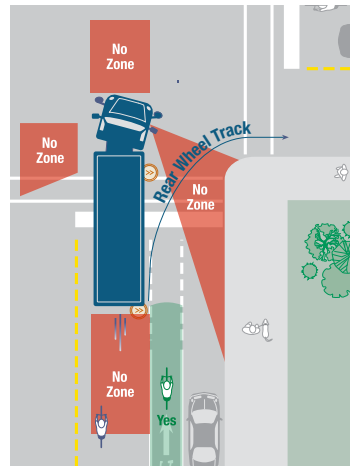
For further detail, see number 19 in the MN Bicycle Laws FAQ found on page 28 of this handbook.

*BikeMN recommends children under age 10 ride on sidewalks and under the leadership of an adult, as they may not have the cognitive development to make the decisions necessary to safely ride in the street. Extra caution should be used at driveways and intersections, following the same rules as if on the road.*

# COMMERCIAL VEHICLES

With large vehicles like trucks and buses, bicyclists should assume, if you're on their side of the road, that you are in a blind spot. Blind spots are often alongside, close behind, or in front of large vehicles where the driver may not see you. To avoid blind spots, stay out of the “No Zone” (pictured right), use extra caution, watch for their turn signals, and remember that if you can't see the driver in the mirrors they can't see you.

**Never pass a truck or bus on the right side, even if there is a bike lane and even if the vehicle is stopped.**



Graphic provided by City of Chicago and Active Transportation Alliance.

# BICYCLE ROAD MARKINGS & SIGNS

Bike lanes and bike-related road markings continue to spring up across the state. Each city must comply with Minnesota MUTCD (Manual on Uniform Traffic Control Devices) standards for facilities. However, not all communities will choose to use all of these markings and signs.

## Quick Guide



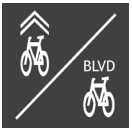
### Bike lanes with solid lines

These are for bikes only. Drivers should not cross into them unless you're turning or parking, and be sure to yield to bikes first.



### Buffered Bike Lanes

Similar to a regular bike lane, but also includes a marked buffer between the bike lane and adjacent travel lanes. A buffered bike lane is restricted to bicycle traffic, except in instances when motorists need to turn, enter, or leave the roadway.



### Bike symbols

A bike symbol that is not in a bike lane highlights a designated bike route. Drivers can drive on them as normal, but the bike symbols are a reminder to expect and look for bikes.

## Bike-Related Road Markings

### Bike Lanes

A bicycle lane is a portion of a street adjacent to the travel lane that is reserved for bicyclists. Bicycle lanes are typically on the right side of the road and are designated with pavement markings with arrows that direct bicyclists in the direction of travel. Bike lane signs are typically also placed alongside the road. A bicyclist should always travel in the same direction as other traffic when using a bike lane, unless the pavement markings in a bike lane indicate you may travel against traffic.



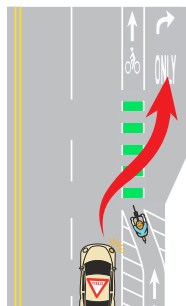
Cars are not permitted to park or drive in a bike lane. However, when making a right turn, they must yield to any bicycle traffic and merge into the bike lane prior to making the turn. A properly designed intersection will always place the straight thru bicycle traffic to the left of a right turn lane. As a bike lane approaches an intersection or bus stop, the white lines may be dashed to indicate a shared space between thru bicyclists and turning motorists.

Bicyclists are not required to ride in the bike lane in Minnesota. Some of the reasons a bicyclist would not ride in the bike lane include that they may be in the "door zone" of parked cars, or they may be blocked by parked cars, debris, or snow and ice. Whenever a bicyclist enters or exits a bike lane, they should be sure to look behind them, signal, and yield to vehicles already in adjacent travel lanes.



## Green Bike Lanes

Green bike lanes are pavement markings often used to highlight locations where motorists merge across or turn across a bike lane. To draw attention and increase safety at these locations, bike lanes are colored green to alert motorists that they must yield to thru bicyclists.



## Advisory Bike Lanes

An advisory bike lane is similar to a regular bike lane, but is used on low volume streets that are narrow. They are marked with a solid white line on the right (next to parked cars) and a dotted line to the left. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic. So that motor vehicle drivers can safely meet an oncoming motorist, they are allowed to merge into the bike lane when it is an advisory bike lane. Because of this bicyclists should be more prepared for a motorist to enter the advisory bike lane than they would a typical bike lane. The three foot passing law still applies.



## Buffered Bike Lane

A buffered bike lane is similar to a regular bike lane, but also includes a marked buffer between the bike lane and adjacent travel lanes. The purpose of a buffered bike lane is to provide extra elbow room for bicyclists and increase safety. The buffer is placed between the bike lane and travel lane. The buffer may be marked with white chevrons to indicate that no vehicles are allowed to travel in the buffered area.



A buffered bike lane is restricted to bicycle traffic, except in instances when motorists need to turn, enter, or leave the roadway. Whenever motorists must cross a bike lane to prepare for a turn, they must yield if a bicyclist is approaching and let them pass. Like all bike lanes, bicyclists should not ride the wrong way in a buffered bike lane, and they should signal and yield to vehicles already in adjacent travel lanes when they enter or exit a buffered bike lane.

## Protected Bikeway (AKA cycletracks and separated bike lanes)

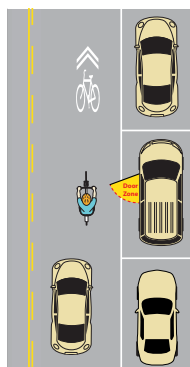
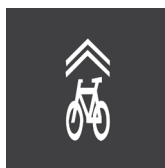
A protected bikeway is an exclusive area for bicyclists that is physically separated from motor vehicle traffic. Protected bikeways may be one-way or two-way and will be marked appropriately. Protected bikeways may be located within street corridors and separated from traffic lanes by parked cars, curbs, medians, bollards or flexible traffic posts, planters, or other vertical features. This design provides a space within the public right of way for bicyclists and provides additional comfort and separation from motor vehicles lanes.



Where protected bikeways are present, it is extremely important for motorists and bicyclists to be cautious at intersections. Motorists should watch for and expect bicycle traffic in front of them and behind them in protected bikeways and yield when appropriate. As bicyclists in a protected bikeway approach an intersection, they should use caution and assume turning or merging vehicles do not see them due to potential obstructions and their position in the public right of way. Bicyclists using protected bikeways with parked cars between the protected bikeway and the motor vehicle lanes should watch for passenger car doors and pedestrians crossing the bike lane.

## Shared Lane Markings

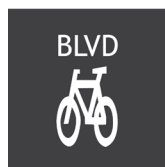
Shared lane markings or “sharrows” (derived from “shared” and “arrows”) are pavement markings used to mark a designated bike route. Placed in the travel lane, they encourage bicyclists to ride in a safe position outside of the door zone (where driver’s side doors of parked cars open). There are regular shared lane markings and green shared lane markings, they both mean the same thing. Motor vehicles are permitted to drive in travel lanes where shared lane markings are present. Bicyclists may be traveling in the same lane so motorists must travel behind them until it is safe to pass (they must give the bicyclist at least three feet).



Shared lane markings include a bicycle symbol and a double chevron indicating the direction of travel. They do not designate any part of the roadway as exclusive to either motorists or bicyclists. Rather, the symbols highlight the fact that the travel lane is shared.

## Bike Boulevard

A bike boulevard is a lower-volume, lower-speed street that has been optimized for bike traffic. The purpose of a bike boulevard is to provide bicyclists, especially those who are not comfortable riding on busy streets, a safer and more relaxing place to ride. While many residential streets are already favorable to most bicyclists, a bike boulevard goes the extra step to provide safe crossings at major streets and encourage motorists to travel at slow speeds, while reducing the frequency of stop signs.



This environment is created through a variety of traffic calming and design elements such as speed humps, traffic circles, curb extensions, medians, and traffic signals. Many of the changes, especially the intersection treatments, improve safety for pedestrians and motorists, too. Bike boulevards are designated with pavement markings that include a large bicycle symbol with the text “BLVD.”

## Bike Box

A bike box is a type of advanced stop bar that is used at some signalized intersections. The bike box includes two elements, 1) an advanced stop line for motorists to wait behind, and 2) a marked space for bicyclists to wait in. When the traffic signal is red, motorists must wait behind the bike box and behind the stop line. Bicyclists are allowed to ride to the front of the traffic queue into the bike box and wait for a green signal. When the traffic signal turns green, motorists must yield to bicyclists before proceeding or making a turn.



The purpose of a bike box is to allow bicyclists to wait at the front of traffic queues so they are more visible to motorists. This is to improve the safety of bicyclists at intersections.

## Bike-Related Road Signs

While motorists are always required to share the road with bicyclists, sometimes there are signs reminding them to do so. For a time, “Share the Road” signs were popular across the state. Recently, however, traffic engineers have started moving away from them for signs with more direct language, such as “Bikes May Use Full Lane.” Their intention is to encourage motorists to avoid crowding cyclists and give them a full three feet when passing. Sometimes there are just yellow diamond-shaped signs (often on sharrows or bike boulevards) that complement the paint on the road to remind motorists bicyclists will be present.



## Shoulders & Rumble Strips

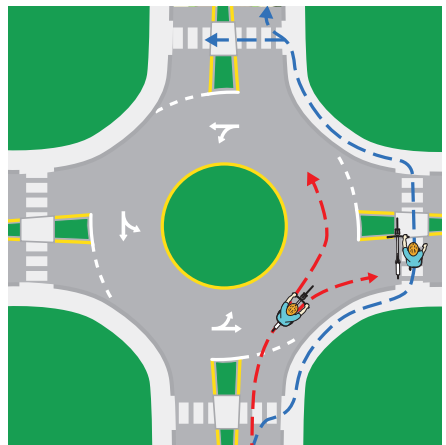
Shoulders run parallel to the roadway travel lanes and are designed for the accommodation of stopped vehicles and for emergency use. Bicyclists may legally ride on shoulders, although they are not required to do so. While shoulders are often the safest place to ride, especially on roads with high speeds or traffic volumes, it is important to note that shoulders may not be as well maintained as the lanes of travel or may be too narrow for safe riding.

Some shoulders incorporate rumble strips, which are a countermeasure for mitigating run-off-the-road crashes. Rumble strips can be hazardous for bicycles. Use caution when entering or exiting the shoulder around rumble strips. Shoulders with rumble strips often have gaps allowing bicyclists to maneuver in and out of the travel lane.

Bicyclists should yield to traffic in adjacent travel lanes when navigating intersections from shoulders.

## Roundabouts

Bicyclists can use roundabouts either as a pedestrian or in the same manner as a motorized vehicle. When using them similar to a motorist, bicyclists should center themselves in the travel lane (“take the lane”) in order to make themselves more visible to motorists and to prevent unsafe passing.



# STATE PARKS & BIKE ROUTES

## State Parks

- 🚲 Bicyclists are allowed to ride into state parks on designated roads and paths for free.
- 🚲 When arriving at a state park by bicycle, park staff will always do their best to provide camping opportunities, even if the campground is full. You will be required to pay the appropriate camping fee for the space used. It is strongly encouraged to reserve your camping site in advance at [www.dnr.state.mn.us/state\\_parks/reservations.html](http://www.dnr.state.mn.us/state_parks/reservations.html).

## U.S. Bicycle Routes in Minnesota

U.S. Bicycle Route 45 – also known as the Mississippi River Trail (MRT) – runs the entire length of the Mississippi River in Minnesota. USBR 45/MRT connects approximately 800 miles of existing shouldered highways, low-use roads, and off-road paths for bicyclists. It closely follows the Mississippi River from its headwaters at Itasca State Park to the Iowa border. Learn more about the MRT in Minnesota at [www.dot.state.mn.us/bike/mrt/](http://www.dot.state.mn.us/bike/mrt/).



Minnesota's newest national route, U.S. Bicycle Route 41 – also known as the North Star Bicycle Route – connects Minnesota's capital city of Saint Paul to the Canadian border. The northern half of the route runs along the western shore of Lake Superior, ending at Grand Portage State Park where bicyclists can end their journey with a view of Minnesota's highest waterfall on the Pigeon River. The 315-mile long route is on both highway shoulders and off-road trails. Learn more at [www.dot.state.mn.us/bike/usbr41](http://www.dot.state.mn.us/bike/usbr41).



USBR 45 near Lake City, Minn., photo by MnDOT

# NIGHT RIDING

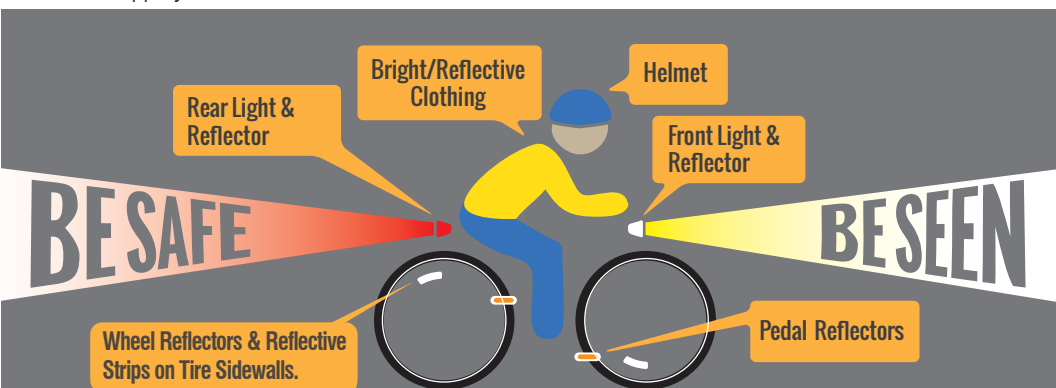
You can never be too visible on a bicycle. In addition to bright lights, bright and reflective clothing makes you more visible — and safer.

- 🚲 Always wear proper safety gear, especially a helmet.
- 🚲 The law requires you to have a white front light visible from at least 500 feet, red rear light or reflector, and pedal or wheel reflectors. For extra visibility, BikeMN strongly recommends adding one or more red rear lights to your bike and person.
- 🚲 Always wear brightly-colored, high-visibility, reflective clothing.
- 🚲 Front white headlights should always be bright enough to be seen from 500 feet away. Brighter lights that allow bicyclists to see the road conditions are preferable in many situations and can be worth the higher expense. Multiple headlights (e.g. helmet and handlebar mount) allow better visual perspective and offer safety redundancy.

# WEATHER CONSIDERATIONS

We all get caught in challenging weather at some point. Aside from having the proper clothing and safety gear, there are some challenging weather situations that you should be aware of:

- 🚲 Some weather conditions make it more difficult for other road users to see you. Use front and rear lights and wear high-visibility, reflective clothing to improve your visibility.
- 🚲 Wet weather reduces your tires' traction with the road. Be extra careful, especially when making turns.
- 🚲 Wet weather, ice, and snow affect your stopping distance. In these conditions, prepare to stop before you get to an intersection or roadway. If you have rim breaks, lightly apply your brakes to wipe moisture off your rims before applying them fully.
- 🚲 Roadways are slickest when it first starts to rain because of the oil dropped from cars mixing with the rain.
- 🚲 Snow and ice create traction problems. Reducing tire pressure helps surface contact. Knobby mountain bike or studded tires are best for winter riding.
- 🚲 Be extra cautious when riding in the rain or snow, especially when riding up or down steep hills.
- 🚲 Bridges, painted surfaces, utility covers, train tracks, and other metal in the road or trail are slippery when wet.



# RULES FOR PATHS & TRAILS

## Guidelines for Multi-Use Trails and Paths

Paths and trails are often shared by users of all ages and abilities, including bicyclists, walkers, joggers, parents pushing strollers, roller-bladers, and pets. The great variety of users and their varying speeds and mobility can make such riding more unpredictable than riding in the roadway.

- 🚲 Always wear a helmet and use safety gear.
- 🚲 Ride to the right.
- 🚲 Ride single-file when other users are present.
- 🚲 Always yield to slower path users.
- 🚲 When stopping for a rest or emergency, move completely off the trail.
- 🚲 Avoid wearing or using headphones, ear buds, cell phones, radios, or other listening devices while riding so you are not distracted and can be aware of your surroundings.
- 🚲 Control your speed, slow down, and use caution when approaching or overtaking other path users.
- 🚲 Before passing others, watch your speed and courteously announce your intentions by saying “on your left” or ringing your bike bell.
- 🚲 Don’t “spook” children or animals; always yield to them. If passing a horse, use your voice so the horse associates the bicycle with a human.
- 🚲 Obey all traffic signs and signals at road crossings.
- 🚲 Use proper lights if riding before daylight or after dusk.
- 🚲 Point to trail hazards and call out to riders behind you: “Gravel,” “Glass,” etc.
- 🚲 Use traffic hand signals when appropriate.



For more information on Minnesota trails, visit [www.dnr.state.mn.us/biking/index.html](http://www.dnr.state.mn.us/biking/index.html)

## Guidelines For Mountain Biking Trails

Know your equipment and abilities. Carry food, water, and gear for changing weather conditions.

- 🚲 Ride only on open trails — respect closures, don’t trespass, and obtain authorization if required.
- 🚲 Don’t ride trails when they are wet, this damages the trail tread and leads to ruts and erosion —and more work for trail volunteers.
- 🚲 Leave no trace — be sensitive to the environment; stay on existing trails and pack out what you take in.
- 🚲 Control your bicycle — pay attention! Anticipate problems and keep your speed under control.
- 🚲 Bicyclists always yield — make your approach known and be courteous. Always yield to uphill users. When stopping for a rest or emergency, move completely off the trail.
- 🚲 Never spook animals — animals startle easily and can create danger for you and others. Always yield when approaching a horse and ask the rider how to proceed.

For more information on mountain biking in Minnesota, visit [www.morcmtnb.org](http://www.morcmtnb.org).



## DEALING WITH DOGS

Dogs can sense fear, so try to remain calm if you encounter an angry canine. You'll feel more confident, and the dog likely will sense this too. Dogs tend to be territorial. Once you leave "their" territory, they will usually lose interest. However, if a dog does chase you, here are some options. Think ahead of time about which are right for you.

- 🚲 Don't try to outrun the dog unless you are a very strong rider. If you can't completely outrun it, the dog may catch your wheel and knock you down.
- 🚲 While on the bike, don't try anything beyond your bike-handling skills.
- 🚲 In a loud, firm voice say, "No!" "Bad dog!" "Go Home!" or other common commands.
- 🚲 Carry pepper spray or a commercial dog deterrent spray, and use according to the manufacturer's instructions.
- 🚲 Carry an "English Bobby"-style or dog-training whistle; they can often stop charging dogs in their tracks and send them home.
- 🚲 Just stop. If you do, the dog may also stop, allowing you to walk or ride slowly away.
- 🚲 Get off your bike quickly; if the dog attacks, use your bike as a barrier.
- 🚲 If a dog is a recurring problem, try to photograph it. Send a polite complaint letter with the photo to the owners as well as copies to the police and local animal authority. In the letter say that, if the dog hurts someone, the letter constitutes notice to the homeowners, which may be used in a lawsuit against them.



## THEFT PREVENTION

Any lock can be broken, given enough time and the right tools, but there are ways to reduce theft risk.

### Precautions

- 🚲 If possible, take your bike indoors with you. Your next best option is locking it where you can still see it. Otherwise, lock your bike in a highly visible, well-lit area as close to your destination as possible.
- 🚲 Always lock your bike, even if you are only going to be gone for a minute. Stealing an unlocked or improperly locked bike only takes a few seconds.
- 🚲 Never lock only your bike's front wheel; you may come back to find just the front wheel.
- 🚲 Lock your frame and wheels to something solid and permanent; a thief can lift a bike over and off a sign post.
- 🚲 Take anything removable — unlocked wheels, seats, computers, lights, bike bags, etc. — with you. If you can remove it, so can a thief.

*continued next page*

## Locks & Cables

- 🚲 U-locks tend to be the strongest type of lock. Cable locks are only a minor deterrent to a bike thief. If you can, remove your front wheel and U-lock it to the rear wheel and the frame so that you fill the “U” of your U-lock.
- 🚲 You can add cables, locking quick-releases and/or seatpost bolts to secure your wheels and seat.
- 🚲 Lock your bike to a bike rack when available.
- 🚲 Don't lock your bike to fire hydrants, police and fire call boxes, gas meters, handicapped ramp railings, or bus loading zone or traffic signal posts. Avoid locking to trees, and never block public right of way on sidewalks.

## In Case of Theft

- 🚲 File a police report at the local police station with details of the theft, including your bike's serial number, and request a case number.
- 🚲 Cite the case and serial numbers whenever you communicate with the police.
- 🚲 Follow up by phone periodically to see if your bike has been recovered.
- 🚲 If you have purchased “scheduled item” insurance on your bike, contact your insurance agent. Otherwise, you must weigh the costs and benefits of filing a homeowners insurance claim.
- 🚲 Create a Google Alert with your bike's description to receive email notifications if your bike is posted for sale on sites like Craigslist and Ebay.

## Serial Numbers & Registration

Even if the police recover your stolen bike, you won't get it back without the serial number. They need proof of ownership. Ask your bike shop to show you your bike's serial number on the frame and on the sales paperwork. Some communities, including Minneapolis, will register serial numbers to help you recover your stolen bike. It's also a good idea to keep a photograph of your bike and serial number on file.

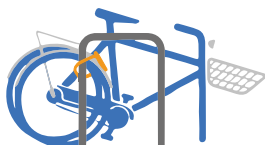
## LOCK UP SMART

### Method 1



Lock the front wheel and the frame. Use a cable to secure the rear wheel.

### Method 2



Lock the quick release front wheel alongside the frame and rear wheel.

## Look for your serial number in these locations



# DEALING WITH ROAD RAGE

If a motorist makes you feel threatened or attempts to harm you (including throwing something at you or passing too closely):

## At the Scene

- 🚲 Never assault your assailant physically, verbally, or with hand gestures. This will escalate the situation. While you have the right to defend yourself from physical violence, what you regard as “self-defense” may not be in the eyes of the law, and it may be better to try and get away from the person or call loudly for help if others are nearby.
- 🚲 If there was any contact between you or your bicycle and the other vehicle, that is considered a “collision” and the driver must stop. If they do not, call 911 immediately.
- 🚲 Note the plate number and, if possible, a description of the driver.
- 🚲 If you have a camera phone, try to take a photo or video of the license plate, car, and/or driver.
- 🚲 If the driver stops and attempts to prolong the situation, call 911 immediately.
- 🚲 Don't trade information with the other party; let the police gather any pertinent information.

## Afterward

- 🚲 Report the incident to your local police department and request a report. If you were not actually injured, police may not be willing or able to file a criminal complaint, but they are required to file a report and should follow up by warning the offending driver.
- 🚲 If the offender is a commercial driver, inform his or her employer.
- 🚲 Contact your attorney. You may be able to press criminal assault or file assault and battery charges.

# WHAT IF THERE'S A CRASH?

Bicycle crashes do happen, but most crashes actually do not involve vehicles or other people. Typically bicyclists lose control on a bad surface or hit a fixed object. Sometimes collisions with other bicycles and motor vehicles also occur. If you are involved in any crash make sure you don't ignore even a minor injury. Some injuries may be masked until later due to the adrenaline rush from the crash. Here are some tips if you are in a crash involving another vehicle or person:

## At the Scene

- 🚲 If you're hurt, don't move unless you're sure you won't hurt yourself more.
- 🚲 If you're not hurt, call 911 for medical help for other parties.
- 🚲 Apply immediate first aid to anyone injured.
- 🚲 Keep a level head so you can ask questions and take notes.
- 🚲 Get the following information:

**Drivers:** Name, address, phone number, license number, plate number, vehicle model and year, and insurance company and policy number.

**Witnesses:** Names and phone numbers.

**Officers:** Names and badge numbers. If a police report is filed get the number.

- 🚲 Use your cell phone to take photos or video of the scene and to take notes.



## Protecting Your Rights

- 🚲 Do not admit anything. Simply state the facts.
- 🚲 Do not say you're "OK." You may not know until later. If asked, simply say something like, "I will know more after I visit my doctor."
- 🚲 If asked about your bicycle, say, "I will have to have a professional check it for damage and get a repair estimate."
- 🚲 Insist that the investigating officer records your account of the crash for their crash report.

## Afterward

- 🚲 While it is fresh in your memory, write down exactly what happened.
- 🚲 Call your insurance agency. Minnesota is a "No-Fault" insurance state, and you may have coverage under your own auto insurance policy or that of the driver.
- 🚲 Keep a copy of all medical bills and papers regarding the crash.
- 🚲 Keep any damaged clothes or equipment (including your bike) as they may help your case if you end up in court.
- 🚲 Have someone take pictures of all your visible injuries.
- 🚲 Keep receipts for replacement and repair costs.
- 🚲 Have a mechanic make sure your bicycle is in safe working order.
- 🚲 Contact an attorney that specializes in bicycle law. If a criminal case is filed against the driver, you may be able to obtain restitution from the driver for economic losses. You may also be able to bring a civil claim for any personal injuries or damage to your bicycle or other property. Don't expect the courts to do anything for you if you were aggressive.

# GUIDE TO BUYING A BICYCLE



Road



Hybrid



City



Mountain



Tricycle



BMX



Recumbent



Tandem

Buying the right bicycle requires a little homework. The payoff will be a trusted friend that will deliver many years of fun, help you stay healthy, and reduce pollution — all while transporting you comfortably and safely. Answer these questions and you'll be ready to start shopping!

## What type of riding will you do?

The major categories of bicycles are mountain bikes, hybrids (subcategories: comfort and city bikes), road bikes, touring bikes, BMX, and recumbents. Start your search by asking yourself: what types of surfaces do I expect to ride on, what distances do I want to ride and at what speed do I want to travel?

## What surfaces will you ride on?

**Paved roads, bike trails, and paths** — Road, touring, hybrid, and recumbent bikes with “slick” tires work well on hard, smooth surfaces. Mountain bikes with larger knobby tires can also be used on smooth surfaces, but you work harder to travel at the same speeds. Generally a wider tire trades off increased comfort for less speed.

**Gravel roads, dirt trails, and wilderness terrain** — The straight handlebars and wide, knobby tires of a mountain bike make it easy to navigate almost any surface. Adventure bikes are designed for both road and light off-road use. Fat tire bikes are another alternative.

## What distances will you ride?

**Short rides (2-3 miles)** — City cruisers; comfort bikes; hybrid bikes; mountain bikes.

**Moderate distances (up to 10 miles)** — Comfort or fitness bikes; road and touring bikes; recumbents.

**Longer distances (30 or more miles a day)** — Road bikes; touring bikes; recumbents.

## What speed will you ride?

**Relaxed cruising** — Cruisers; comfort bikes; hybrids.

**Moving quickly, but not racing** — Road bikes; touring bikes; mountain bikes with smoother tires; recumbents.

**High speed or racing** — Road bikes; recumbents.

## New or Used?







Buying a used bike is like buying a used car — you can get a good deal or a lemon. Whether you buy the bike from a store or from a private seller, think about how the bike handles when you ride it. Note how the bike responds when you go around corners, over obstacles, brake hard, down or up hill while both in and out of the saddle. Are you too stretched out or too cramped? Is the bike responsive, sluggish, or twitchy? Is it heavy? Are the brakes and shifters easy to use? Everything on the bike should work perfectly. Shifting should not skip, the brakes should not screech and should stop when you want and in a controlled way. The wheels should turn evenly and be balanced. All of the quick-release levers should be firmly hand-tightened with everything clean and well-lubed.

## What size bike will you need?

Do you have proper clearance (at least 1" for a road bike; 2-3" for a mountain bike or hybrid) when you straddle your bike with both feet flat on the floor? Do you feel cramped or stretched out when you're riding? Bikes are not T-shirts. If you're buying for a child, don't buy a bike that's too big and expect him or her to be safe while "growing into it." It should fit the rider now, not later. If it is too small or too big, he or she will have trouble controlling it and be much less safe. Quality children's bikes have both great resale value and "hand-me-down" potential. Cheap bikes don't.

## Where do you plan to buy your bike?

You can buy bicycles on the internet, via mail-order catalogs, at department stores, and in bicycle shops. Your best bet is a bike shop where you feel welcome and comfortable and can try the bike before you buy it. Bike shops are the best source of ongoing advice and maintenance, proper equipment, and analysis of your particular needs. They are also knowledgeable about local conditions and know the best places to ride in your area. You may have to visit several shops to find the right shop and the right bike. Ask yourself:

-  Do they answer questions and explain things well?
-  Do they ask about what kind of riding you want to do?
-  Do they spend time with you choosing a bike with the right fit?
-  Do they have a place to go for test rides?
-  Do they explain the warranties and check-ups you can expect?
-  Do they clearly show you how to operate new technology?

Try to find a shop you like within reasonable riding distance, so that it's easy to get there and so you can easily reap the benefits of patronizing that shop.

*A list of BikeMN member shops can be found at [www.bikemn.org/sponsors](http://www.bikemn.org/sponsors).*



# PROPER BIKE FIT

The suggestions listed below are “rules of thumb” for a good bike fit.

## Frame Size

Straddle the bike. There should be 1-3” of clearance between the frame and your crotch.

## Saddle Angle

The angle of the saddle should be pretty close to horizontal. Start with it level to ground and then adjust accordingly.

## Saddle Height

The most efficient seat height is when your legs are completely extended at the bottoms of the pedal stroke with your heels on the pedals, which will give you a slight bend in your knee when pedaling.

## Saddle Fore/Aft Position

Slide saddle forward or back so that with the crank arms parallel to the ground, a plumb line hanging from the bony protrusion just below your forward kneecap, bisects the axle of the pedal.

## Handlebar Height

Height should be adjusted for comfort first. Keep in mind that bars adjusted too high will result in pain from too much weight on the saddle.

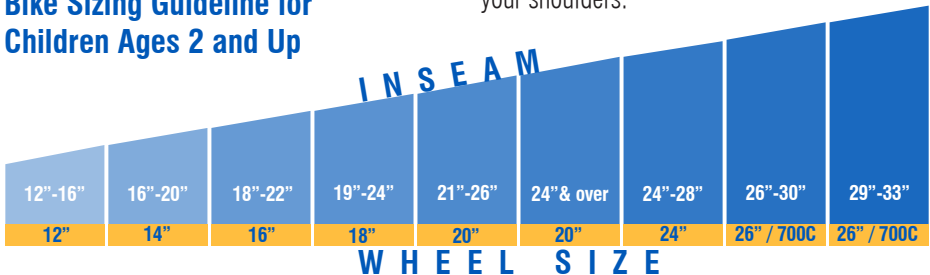
## Handlebar Reach

Place your elbow on your saddle nose and extend your arm and fingers towards the handlebars. The tips of your fingers should touch your handlebars.

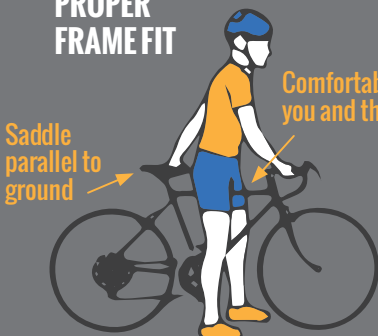
## Handlebar Width

Handlebars should be about the same width as your shoulders.

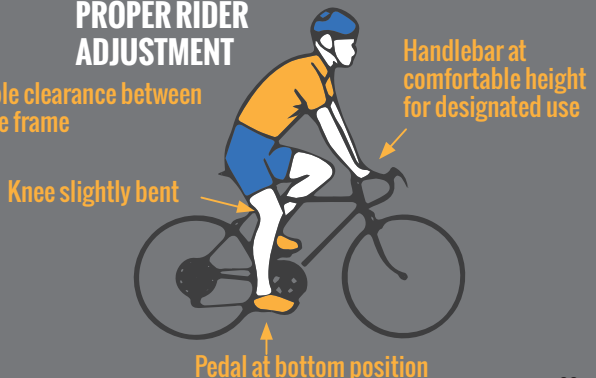
## Bike Sizing Guideline for Children Ages 2 and Up



## PROPER FRAME FIT



## PROPER RIDER ADJUSTMENT



# TIPS FOR FITTING A BIKE HELMET

## EYES



### HELMET POSITION

Your helmet should sit level on your head and low on your forehead — one or two finger widths above your eyebrows.

## EARS



### SIDE STRAPS

Adjust the slider on both side straps to form a V-shape under and slightly in front of each ear.

## MOUTH



### FINAL FIT

Does your helmet fit right? Open your mouth wide...big yawn! The helmet should pull down on the head.

All new bicycle helmets sold in the United States today must be tested and meet the uniform safety standard issued by the U.S. Consumer Product Safety Commission (CPSC). Replace any helmet that is involved in a crash, damaged, has been outgrown, or every 3-5 years.

# MINNESOTA BICYCLE LAWS—FAQ

The following is a summary of the Minnesota Statutes (2017) pertaining to bicyclists. For more details concerning the following laws and penalties, please visit [www.revisor.mn.gov/statutes/?id=169.222](http://www.revisor.mn.gov/statutes/?id=169.222).

## 1. What is the definition of a bicycle?

### **Minnesota Statute 169.011, Subdivision 4:**

- (a) “Bicycle” means every device capable of being propelled solely by human power upon which any person may ride, having two tandem wheels, and including any device generally recognized as a bicycle though equipped with two front or rear wheels. Bicycle includes an electric-assisted bicycle, as defined in subdivision 27.
- (b) “Bicycle” does not include scooters, motorized foot scooters, or similar devices.

## 2. Is a bicycle considered a motor vehicle in Minnesota?

### **No. Minnesota Statute 169.011, Subdivision 42:**

A “motor vehicle” is defined as every vehicle which is self-propelled and every vehicle which is propelled by electric power obtained from overhead trolley wires. Motor vehicle does not include an electric personal assistive mobility device or a vehicle moved solely by human power.

## 3. What is an electric-assisted bicycle and where can I use one?

### **Minnesota Statute 169.011, Subdivision 27:**

“Electric-assisted bicycle” means a bicycle with two or three wheels that:

- (1) has a saddle and fully operable pedals for human propulsion;
- (2) meets the requirements:
  - (i) of federal motor vehicle safety standards for a motor-driven cycle in Code of Federal Regulations, title 49, sections 571.1 et seq.; or
  - (ii) for bicycles under Code of Federal Regulations, title 16, part 1512, or successor requirements; and
- (3) has an electric motor that (i) has a power output of not more than 1,000 watts, (ii) is incapable of propelling the vehicle at a speed of more than 20 miles per hour, (iii) is incapable of further increasing the speed of the device when human power alone is used to propel the vehicle at a speed of more than 20 miles per hour, and (iv) disengages or ceases to function when the vehicle’s brakes are applied.

### **Minnesota Statute 169.011, Subdivision 47:**

An electric-assisted bicycle with pedals and a motor that can’t go faster than 20 mph is considered a bicycle under state law; all relevant bicycle laws apply.

### **Minnesota Statute 169.222, Subdivision 6(b)**

The driver of an electric-assisted bicycle must be at least 15 years old.

### **Minnesota Statute 85.015, Subdivision 1(d) and Statute 85.018, Subdivision 2(d):**

Generally electric-assisted bicycles may operate like bicycles do, unless otherwise posted.

#### 4. What is the definition of a roadway?

##### **Minnesota Statute 169.011, Subdivision 68:**

“Roadway” means that portion of a highway improved, designed or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder. During periods when the commissioner allows the use of dynamic shoulder lanes as defined in subdivision 25, roadway includes that shoulder. In the event a highway includes two or more separate roadways, the term “roadway” as used herein shall refer to any such roadway separately but not to all such roadways collectively.

#### 5. Can a bicyclist be given a ticket for impeding traffic if they are traveling on a roadway and obeying all rules of the road?

**No. Bicyclists are considered traffic based on Minnesota Statute 169.011, Subdivision 84** and have the same rights and responsibilities applicable to the driver of a vehicle according to Minnesota Statute 169.222, Subdivision 1.

**Minnesota Statute 169.011 states:** “Traffic” means pedestrians, ridden or herded animals, vehicles, streetcars and other conveyances, either singly or together, while using any highway for purposes of travel.

#### 6. Is it legal for bicyclists to run red lights?

**No, but it is defensible in one scenario. Minnesota Statute 169.06, Subdivision 9:**

If a bicyclist has come to a complete stop and is waiting at a light that uses a sensor that does not detect them, then the bicyclist must: 1) wait a reasonable amount of time (recommend at least one signal cycle), 2) proceed after yielding to all cross traffic. Then, if pulled over, the bicyclist can say that they met the limited conditions cited under Minnesota’s Affirmative Defense Statute.

#### 7. Are there passing laws motor vehicles must follow when passing a bicyclist? What if there is a no passing zone?

**Yes, 3 feet is the minimum passing distance a motor vehicle must provide. More space is better and needed for safety at higher speeds. Minnesota Statute 169.18, Subdivision 3:**

(3) the operator of a motor vehicle overtaking a bicycle or individual proceeding in the same direction on the roadway shall leave a safe distance, but in no case less than three feet clearance, when passing the bicycle or individual and shall maintain clearance until safely past the overtaken bicycle or individual.

**Motorists can also cross a double yellow line to the left side of the roadway to pass a bicycle going in the same direction when it is safe to do so, Minnesota Statute 169.18, Subdivision 5, and:**

(c) ... (2) the driver of the motor vehicle either (i) provides a safe clearance distance, in no case less than the greater of three feet or one-half the width of the motor vehicle, or (ii) completely enters the left lane of the highway; (3) the operator of the bicycle is not (i) making a left turn, or (ii) signaling that the bicycle operator intends to make a left turn; and (4) the driver of the motor vehicle complies with all other applicable requirements under this section.

## 8. What other rules must a motorist follow when overtaking or following bicyclists?

### **Minnesota Statute 169.18, Subdivision 4:**

(4) the driver of a vehicle may overtake and pass another vehicle upon the right only under conditions permitting such movement in safety. In no event shall such movement be made by driving in a bicycle lane or onto the shoulder, whether paved or unpaved, or off the pavement or main-traveled portion of the roadway.

## 9. Can a motorist park or drive in a bike lane?

### **No, motorists may not drive in bike lanes. Minnesota Statute 169.18, Subdivision 6:**

Whenever a bicycle lane has been established on a roadway, any person operating a motor vehicle on such roadway shall not drive in the bicycle lane except to perform parking maneuvers in order to park where parking is permitted, to enter or leave the highway or to prepare for a turn as provided in section 169.19, Subdivision 1.

### **No, motorists may not park in a bike lane unless signed as such. Minnesota Statute 169.34, Subdivision 1:**

No person shall stop, stand, or park a vehicle, except when necessary to avoid conflict with other traffic or in compliance with the directions of a police officer or traffic-control device, in any of the following places:

(14) within a bicycle lane, except when posted signs permit parking.

## 10. Does a bicyclist have to obey the same traffic laws as a motorist?

### **Yes. Minnesota Statute 169.222, Subdivision 1:**

Every person operating a bicycle shall have all of the rights and duties applicable to the driver of any other vehicle by this chapter, except in respect to those provisions in this chapter relating expressly to bicycles and in respect to those provisions of this chapter which by their nature cannot reasonably be applied to bicycles.

## 11. Is it legal to ride between lanes (AKA lane splitting/filtering)?

**No, riding between lanes of stopped or especially moving traffic is not safe and is discouraged.** Minnesota Statute 169.222 relates specifically to the operation of bicycles and requires that people riding bicycles must abide by the laws of any other vehicle. Statute 169.18 requires that vehicles be driven within a single lane.

### **Minnesota Statute 169.222, Subdivision 1:**

Traffic laws apply. Every person operating a bicycle shall have all of the rights and duties applicable to the driver of any other vehicle by this chapter, except in respect to those provisions in this chapter relating expressly to bicycles and in respect to those provisions of this chapter which by their nature cannot reasonably be applied to bicycles.

### **Minnesota Statute 169.18, Subdivision 7(a)**

Laned highway. When any roadway has been divided into two or more clearly marked lanes for traffic, the following rules, in addition to all others consistent herewith, shall apply:

(a) A vehicle shall be driven as nearly as practicable entirely within a single lane and shall not be moved from such lane until the driver has first ascertained that such movement can be made with safety.

**12. Is it legal to carry another person on a bicycle? What about a child seat?**

**Yes, if the bicycle was designed to carry a passenger or has an approved and attached child seat. Minnesota Statute 169.222, Subdivision 2:**

No bicycle, including a tandem bicycle, cargo or utility bicycle, or trailer, shall be used to carry more persons at one time than the number for which it is designed and equipped, except an adult rider may carry a child in a seat designed for carrying children that is securely attached to the bicycle.

**13. Is it legal to grab onto another vehicle to “hitch a ride”?**

**No. Minnesota Statute 169.222, Subdivision 3:**

Persons riding upon any bicycle, coaster, roller skates, toboggan, sled, skateboard or toy vehicle shall not attach the same or themselves to any street car or vehicle upon a roadway.

**14. Does a bicyclist have to ride with the direction of traffic?**

**Yes. A bicyclist on the roadway in a traffic lane should ride in the direction of traffic, as should a bicyclist on the shoulder or in a bike lane. Minnesota Statute 169.222, Subdivision 1 and 4(b):**

4(b) If a bicycle is traveling on a shoulder of a roadway, the bicycle shall travel in the same direction as adjacent vehicular traffic.

**15. Must a bicyclist ride in a bike lane or a side path?**

**No. There is no law which requires bicyclists to use a bike lane.** Bicyclists may need to use adjacent lanes to pass another bicyclist, to avoid being too close to parked cars (if opening car doors could obstruct their path), to avoid obstructions or slippery conditions or to prepare for a turn. Whenever bicyclists enter or exit a bike lane or side path, they should signal and yield to motorists already in an adjacent travel lane.

**16. Where in the right half of the roadway must a bicyclist ride?**

Because bikes are narrow it is sometimes possible for bikes and vehicles to share the same lane (14-feet or greater wide lanes). Where this is possible, the bicyclist must keep as far to the right as safe (see below). Faster traffic can overtake provided it can safely pass the cyclist (three foot minimum).

When overtaking is not safe for either the faster motor vehicle or the bicyclist (less than 3 feet clearance), the bicyclist is legally entitled to use as much of the lane as reasonable for safety (generally in lanes 14-feet wide or less), the motor vehicle should either wait to pass or change lanes to overtake the bicyclist.

**Minnesota Statute 169.222, Subdivision 4:**

(a) Every person operating a bicycle upon a roadway shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations:

- (1) when overtaking and passing another vehicle proceeding in the same direction;
- (2) when preparing for a left turn at an intersection or into a private road or driveway;
- (3) when reasonably necessary to avoid conditions, including fixed or moving objects, vehicles, pedestrians, animals, surface hazards or narrow width lanes, that make it unsafe to continue along the right-hand curb or edge; or
- (4) when operating on the shoulder of a roadway or in a bicycle lane.



## 17. May bicyclists ride two abreast?

**Although riding single-file is often safest, bicyclists are allowed to ride two-abreast on roads. Minnesota Statute 169.222, Subdivision 4:**

(c) Persons riding bicycles upon a roadway or shoulder shall not ride more than two abreast and shall not impede the normal and reasonable movement of traffic and, on a laned roadway, shall ride within a single lane.

## 18. Must a bicyclist ride on the sidewalk?

**No.** Minnesota law does not require bicyclists to ride on the sidewalk and BikeMN does not generally recommend it because of safety hazards to the bicyclist and to pedestrians. Most importantly, sidewalks are not designed for bicycle travel speed. *(BikeMN recommends that children 10 and under ride on the sidewalk and under the leadership of an adult as they may not yet have developed the physical skills and cognitive ability to navigate roadways.)*

## 19. Is it legal for a bicyclist to ride on the sidewalk?

**Sometimes. Minnesota Statute 169.222, Subdivision 4:**

Minnesota law does not prohibit sidewalk riding unless in a business district or where prohibited by city ordinance. In Minnesota, a business district, defined by a block with more than 50 percent business use. Additionally, a person lawfully operating a bicycle on a sidewalk, or across a roadway or shoulder on a crosswalk, shall have all the rights and duties applicable to a pedestrian under the same circumstances. This means that the bicyclist must not enter a crosswalk if a vehicle is approaching and it is impossible for the driver to stop. While riding on a sidewalk a bicyclist should move at pedestrian speeds and must also continue to give an audible signal when passing other pedestrians and yield to other pedestrians on the sidewalk. *(BikeMN recommends that children 10 and under ride on the sidewalk and under the leadership of an adult as they may not yet have developed the physical skills and cognitive ability to navigate roadways.)*

## 20. Does a bicyclist have to dismount and walk their bike through a crosswalk?

**No, but use caution.** A bicyclist using a crosswalk does not explicitly have to dismount to cross the intersection, but in some cases this may be the safest option. A person lawfully operating a bicycle on a sidewalk, or across a roadway or shoulder on a crosswalk, shall have all the rights and duties applicable to a pedestrian under the same circumstances. This means that the bicyclist must not enter a crosswalk if a vehicle is approaching and it is impossible for the vehicle to stop.

## 21. Does a bicyclist have to wear a helmet?

**Minnesota state law does not require bicyclists to wear helmets.** The Bicycle Alliance of Minnesota strongly recommends wearing one because they can prevent or reduce the severity of head and brain injuries in the event of a crash.

## 22. Does a bicyclist have to use lights when it's dark?

**Yes. Minnesota Statute 169.222, Subdivision 6:**

(a) No person shall operate a bicycle at night time unless the bicycle or its operator is equipped with (1) a lamp which emits a white light visible from a distance of at least 500 feet to the front; and (2) a red reflector of a type approved by the Department of Public Safety which is visible from all distances from 100 feet to 600 feet to the rear when directly in front of lawful lower beams of headlamps on a motor vehicle. A bicycle equipped with lamps that are visible from a distance of at least 500 feet from both the front and the rear is deemed to fully comply with this paragraph.

## 23. Does the law require brakes on bicycles?

**Yes. The law requires a brake, which includes fixed gear bicycles. Minnesota Statute 169.222, Subdivision 6:**

(e) No person shall operate a bicycle unless it is equipped with a rear brake or front and rear brakes which will enable the operator to make a braked wheel skid on dry, level, clean pavement. A bicycle equipped with a direct or fixed gear that can make the rear wheel skid on dry, level, clean pavement shall be deemed to fully comply with this paragraph.

## 24. Does a bicyclist have to signal their turns or lane changes?

**Yes, but not always. Minnesota Statute 169.222, Subdivision 8:**

An arm signal to turn right or left shall be given continuously during the last 100 feet traveled by the bicycle before turning, unless the arm is needed to control the bicycle, and shall be given while the bicycle is stopped waiting to turn.

## 25. Is it legal to park on the street? Where can bicyclists park on a sidewalk?

**Yes. Minnesota Statute 169.222, Subdivision 9:**

(a) A person may park a bicycle on a sidewalk unless prohibited or restricted by local authorities. A bicycle parked on a sidewalk shall not impede the normal and reasonable movement of pedestrian or other traffic.

(b) A bicycle may be parked on a roadway at any location where parking is allowed if it is parked in such a manner that it does not obstruct the movement of a legally parked motor vehicle.

## 26. Is it legal to ride on a limited-access highway?

**No. Bicyclists are prohibited from controlled access highways.** Bicyclists are only prohibited where freeway entrance signage prohibits it. This means that most of Minnesota's state and trunk highways are accessible by bike.

**Minnesota Statute 169.305, Subdivision 1:**

(c) The commissioner of transportation may by order, and any public authority may by ordinance, with respect to any controlled-access highway under their jurisdictions prohibit or regulate the use of any such highway by pedestrians, bicycles or other nonmotorized traffic, or by motorized bicycles, or by any class or kind of traffic which is found to be incompatible with the normal and safe flow of traffic.

## **27. Is there any law against motorists opening their doors into bicyclists?**

**Yes. Minnesota Statute 169.315:**

No person shall open any door on a motor vehicle unless and until it is reasonably safe to do so and can be done without interfering with the movement of other traffic\*. No person shall allow any door on the side of a vehicle adjacent to moving traffic to remain open for a period of time longer than necessary to load or unload passengers.

\*A bicycle would be included under this protection, since it is legally traffic according to Minnesota Statute 169.222, Subdivision 1.

## **28. Does a bicycle have to stop for a flashing parked school bus? Can a bike pass?**

**Yes, a bicyclist must stop and wait because a bicycle is a “vehicle.” Minnesota Statute 169.444:**

Subdivision 1: When a school bus is stopped on a street or highway, or other location where signs have been erected and is displaying an extended stop-signal arm and flashing red lights, the driver of a vehicle approaching the bus shall stop the vehicle at least 20 feet away from the bus. The vehicle driver shall not allow the vehicle to move until the school bus stop-signal arm is retracted and the red lights are no longer flashing.

Subdivision 2: No person may pass or attempt to pass a school bus in a motor vehicle on the right-hand, passenger-door side of the bus when the school bus is displaying the prewarning flashing amber signals.

## **29. Is it legal to use a cell phone while riding a bike?**

**Yes. However, Bicycle Alliance of Minnesota strongly discourages bicyclists from any kind of distracted driving.**

## **30. Is it legal to text while cycling?**

**Technically, it is legal.** However, all motor vehicle drivers are prohibited from texting while driving. BikeMN discourages bicycle drivers from any distracted bicycling behavior.

## **31. Can you be charged with a DUI while riding your bicycle?**

**No. Although it would be dangerous to ride a bicycle while intoxicated, a bicycle is not a motor vehicle according to Minnesota state law.** DUI applies only to motor vehicle operators. Other laws may apply to your behavior while intoxicated. The Bicycle Alliance of Minnesota strongly discourages operating a bicycle while intoxicated.

## **If a bicyclist is cited for a violation, does it go on their driving record?**

**Sometimes.** Depending on the law enforcement agency and location, the citation issued may be administrative or statutory. If administrative, it does not go on a person's driving record. If statutory, (usually on a roadway not a trail) and a moving violation, it does go on a person's driving record.

## **32. Does a bicyclist have to carry a driver's license?**

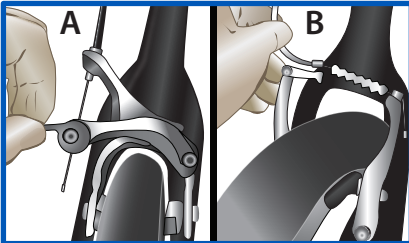
**No, the law does not require you to carry a driver's license.** The Bicycle Alliance of Minnesota, however, strongly recommends that all bicyclists carry some type of picture ID when riding. Law enforcement or safety personnel may need to identify you or contact your family in case of an emergency. If you have known health issues, it is critical that you carry identification that both identifies you and describes any health issues you may have.

# FIXING A FLAT



## BASIC TOOLS

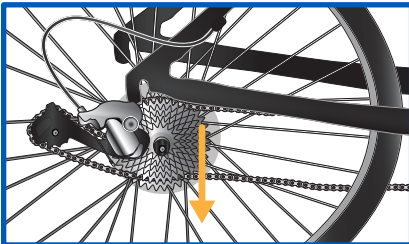
- 🚲 Spare tube
- 🚲 Tire lever
- 🚲 Pump or inflator
- 🚲 Crescent wrench (if wheels are bolted on)
- 🚲 Patch kit (not pictured)



## RELEASE BRAKES

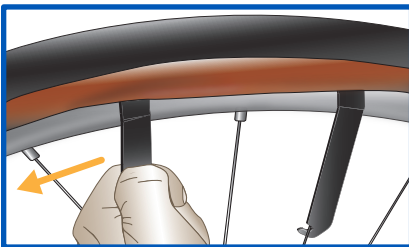
Graphic A. On side-pull brakes, there is usually a tension-release lever on the side.

Graphic B. On V-Brakes remove cable from arm.



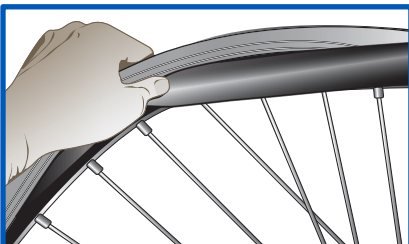
## REMOVE WHEEL

Unlock quick-release lever or loosen wheel nuts, and remove wheel from frame. Contrary to the illustration, the chain should be on the smallest chain ring for wheel removal.



## UNSEAT TIRE

Use tire lever to unseat tire from rim on one side only.



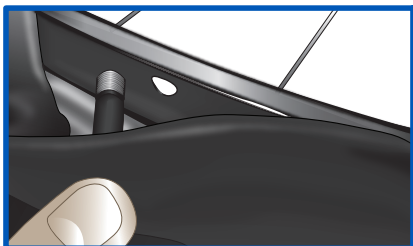
## REMOVE TUBE

Reach into tire and pull tube out. Generally, first pull the part of the tube that is opposite the valve stem.



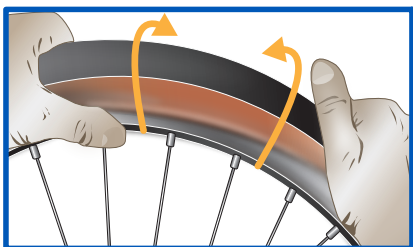
## CHECK TIRE/ TUBE

Run a cloth on the inside of the tire and across the tube to check for embedded objects such as glass, nails, etc.



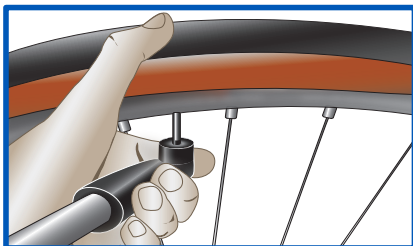
## INSTALL NEW TUBE

Slightly inflate tube to give it shape. Put valve stem in first.



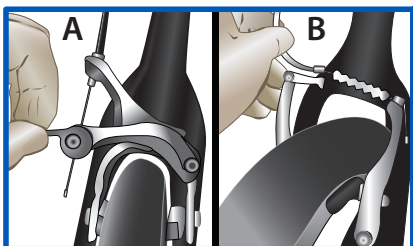
## PUT TIRE BACK ON RIM

Carefully work tire back on rim, making sure not to pinch tube between rim and tire. Start with section by valve stem. Push valve stem upwards to make sure it is not caught between tire and rim.



## PUMP TIRE

Use your pump or inflator to re-inflate the tire. The proper PSI will be listed on the wall of the tire.



## REPLACE WHEEL

Put the wheel back into the frame. Tighten and close the quick release mechanism or tighten the nuts for the wheel. Also remember to re-engage your brakes.







## Top 5 Habits for People Friendly Drivers

Don't drive aggressively, while distracted or while intoxicated

Drive slower – never above the speed limit

Be alert for bicyclists and pedestrians – especially at intersections and trail crossings – and prepared to yield and stop

Be patient when passing a bicyclist – slow down and pass only when it's safe.

Exit your vehicle safely – look for bicyclists before opening your car door.



BICYCLE ALLIANCE OF MINNESOTA  
Bicycle Alliance of Minnesota

3745 Minnehaha Ave, Minneapolis, MN 55406

www.bikemn.org •   /bikemn