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bicyclecolorado.org

CONFIDENT CYCLING SKILLS

FOR COMMUTERS

BUILDING A BICYCLE FRIENDLY COLORADO

Just about anyone can ride a bike to get to work.

Written by David Cowan
Education Director
Bicycle Colorado

Whatever you ride, wherever you ride and whenever you ride, we're there for you.

Bicycle Colorado uses the tools of education and advocacy to make Colorado one of the most bicycle-friendly states.

We encourage and promote bicycling, increase safety, improve conditions and provide a voice for people who ride bicycles in Colorado. With the support of our members and numerous public and private sector partnerships, we've made significant strides in improving bicycling since 1992.

To learn more or to become a member, visit bicyclecolorado.org.

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Welcome

The report is in: commuting by bicycle could be one of the best decisions you've ever made. You took the step to attend this course, read this curriculum, and ultimately give bicycle commuting a chance. Congratulations!

In this curriculum you will find many reasons to ride to work, for errands and for fun. You will also find tips to drive your bicycle more effectively, ideas for carrying your stuff, cleaning up at work, and additional information to make bicycling a more enjoyable and more promising alternative form of transport. While the information provided here is based on years of experience, please remember that everyone's experience is different and all riders need to customize their rides to be exactly that: their ride. And most importantly, have fun!

Why Bike Commute?

In a era where gasoline prices have hit all time highs, obesity rates are off the charts and health care costs are going through the roof, something as simple as pedaling your bicycle to work or for fun makes complete sense.

Annual bicycle operation and maintenance cost approximately $120, compared to $13,950 per year for a car that is driven 15,000 miles. *CommuteSolutions.org*

For example, bicycling:

Saves You Money
Any bicyclist could tell you that you save on gas, less frequent maintenance and other car related costs. But what other hidden costs are you saving? You save on gym memberships (who needs to work out when you ride all the time?), healthcare costs (bicyclists don't get sick as often as people who do not ride bikes), and it will save you time by making you more productive at work while giving you an outlet for your stress.

New bicycle commuters can expect to lose 13 pounds in their first year of bicycle commuting.
–Bicycle Magazine

Bicycling Is Environmentally Friendly
Riding a bicycle instead of a car for your daily commute will reduce your use of fossil fuels for transportation. A study by the U.S. Department of Transportation states "Bicycling and walking conserve roadway and residential space, avert the need to build, service, and dispose of autos; and spare users of public space the noise, speed, and intimidation that often characterize motor vehicle use, particularly in urban areas."

Bicycling Promotes Healthier Lifestyles
High levels of stress, obesity and heart disease rate at the top of the list of common health concerns among adults in the U.S. More than 50% of adults in the U.S. are considered physically inactive. The simple act of pedaling your bicycle to work can significantly improve your health by strengthening your heart and lungs while boosting self esteem and providing that "exercise high" that helps you arrive at work energized and ready to tackle your day.

Strengthens Family and Community
Slowing down and seeing your neighborhood at a bicycle's pace lets you get to know your community better. Daily commuter Marion Rice said "Instead of driving by neighborhoods, we are really in neighborhoods, saying hi to our neighbors and noticing interesting things about the place we live in." Riding a bicycle opens up the world around you and gives you time to take it in. This gives you a chance to chat with a neighbor, ride with your family, or discover a once unnoticed neighborhood restaurant. These are among the many advantages of participating in your community at a bicycle's pace.

It's Fun!
Let's not forget that for most people riding a bicycle was a favorite activity of their youth. Every ride represents a return to freedom, independence and joy that dominated childhood. Riding a bike is fun. Why not relive a piece of youthful bliss with a ride to work?

Bicycle Commuting – Excuse Busters

Bicycling is a smart and beneficial choice. However, with the right motivation, people can find reasons not to ride their bike to work. Let's talk about the top six common myths about not being able to ride your bicycle for transportation and the solutions for making them happen.

1. I live too far from work and I don't have enough time.
While some people do live 30-50 miles away from their workplace, 40% of most car trips are two miles or less. These distances are not only possible, but practical for pedaling. Consider the amount of time you spend sitting in traffic. Now consider the time you spend at the gym combined with the time you spend looking for a parking spot and walking from your car to the office. This is all time that should be factored into your commute. Most bicycle commuters find that when they consider all the aspects, they save time by riding their bikes to work! If you find your distance is too far to ride both ways, perhaps taking the bus or train part way and biking the rest is a practical solution. Other commuters drive to work with their bike and then ride the bike home. The next day, they just reverse the process. Like most change, once you begin to consider the alternatives, a new world may open up to you.

Bicycling improves quality of life. It gets you outside, relieves stress, makes you feel better, and created a way to spend time with family and friends. Best of all, it's convenient, flexible and free. Whether for recreation, transportation, or competition, bicycling offers a lifetime of health and fun.
–Bikes Belong

2. My office requires me to dress up.
I once knew an accountant who biked to and from work 10 miles each day. He said that by leaving all of his suits at the office he was able to bike in, quickly clean up in the bathroom, and pick from his choice of suits. Every few weeks he would send his suits out to be dry-cleaned and start the process all over again. Depending on your situation, you could potentially wear your work clothes and ride slowly into work so you don't break a sweat. Or, if you ride in a few times a week, you could wear riding clothes and simple stash a few pairs of pants and tops at the office. You have a lot of options and your coworkers will be impressed.

On a commute of 10 miles, bicyclists save roughly $7.50 and spare the air 1/2 pound of carbon monoxide emissions. They also burn 350 calories! *–SmartTrips*

3. My office doesn't provide showers.
Sweat doesn't stink. Removing it from your body shortly after arriving at the office with a handiwipe or a towellette will leave your co workers wondering how you managed to bike to work and look so good. Employees can clean up in the restroom by storing a hygiene kit in their desk to help freshen up. Other creative bicycle commuters have struck deals with nearby health clubs to stop in just for use of their showers.

4. My city has terrible weather.
Experienced bicyclists may tell you that there is no such thing as bad weather, just bad clothing. Dressing appropriately for the weather is an acquired skill that will vastly improve your bicycle commuting outlook. For example, in the cold, dressing in layers and making sure that you have just enough clothes so that you are a little cold at the start of your commute is perfect. (Remember you will eventually warm up from riding, so this is the perfect temperature to start)

In rain or wind, layers that block wind and repel rain transform what might seem miserable ride a pleasant, quiet ride in the rain. (Commutes by bike in rainy Portland are 10 times the average city!) Rain capes, ponchos, waterproof jackets, rain pants, as well as multitudes of other rain gear are all available at your local outdoor outfitters. If you plan to ride in different types of weather and choose to invest in the appropriate gear, you won't be disappointed.

5. My office doesn't have bicycle parking.
If bike racks don't exist at your organization, there may still be options. As bicycling gains momentum, businesses are increasingly more interested in providing "greener" services to their employees and clients. Requesting a bike rack for outside may be the first step. If that doesn't work, perhaps there is another place in the building that you've noticed goes unused. Check the basement, utility closets, the garage or maybe a parking area nearby where there is an attendant who could help keep an eye on your bike. The resourceful, relentless employee will quickly find a way to surpass this hurdle.

6. I'm not in good enough shape.
There is no time like the present. Begin getting in shape by riding one day a week or perhaps driving in and riding the way home. You will quickly begin to build up endurance and once you begin to feel the surge of energy it creates you will find yourself eager to increase the number of commutes by bike each week. Be careful though, you might just end up riding your bicycle all the time!

Confident Bicycling

There is a remarkable amount of information available on how to bicycle safely. The task of reading all of it is considerable so here is a short cut that will be your first step into becoming a confident bicyclist: Bicyclists are safest when they act and are treated as drivers of vehicles. What does this mean? It means that the statistically safest way to ride a bicycle is by riding as though you were a car. This is crucial, so I'll say it again: the statistically safest way to ride a bicycle is by riding as though you are a car. On a bicycle, you belong on the road. You have the same rights and pay the same taxes as the traffic surrounding you. Get comfortable with that, it's important.

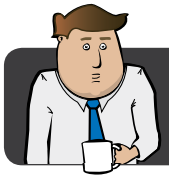
Bicyclists fare best when they act and are treated as drivers of vehicles

You are considered a vehicle after all! This right to the road comes with many responsibilities. It is each bicyclist's duty to behave in a manner that shows other drivers, riders, and pedestrians that bicyclists belong.

It is likely that you will be the slowest traffic on the road (although there are some commuters who ride as fast as or faster than cars). According to Colorado law, you shall stay as far right as the bicyclist deems safe. This, as you may have guessed, is subjective. Much of the debris thrown off by cars is near the curb and needs to be avoided while also steering clear of opening doors. In most cases riding outside of the "door zone" is the most practicable position on the road.

I've seen people ride differently, why do they do that?

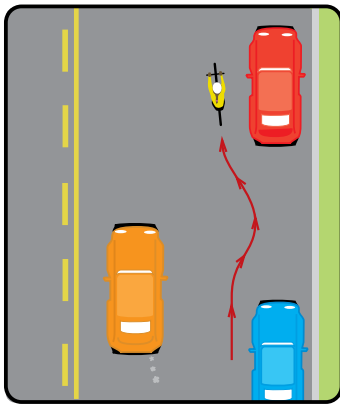
There are several reasons why people ride differently. Many beginner and advanced bicyclists are nervous about riding like a car. Old bicycle safety courses taught some techniques that are now out of date and statistically proven to be unsafe. Some bicyclists believe they have found ways to ride and remain safe when in fact they are doing exactly what makes bicycling dangerous, while others have never been taught how to ride a bicycle beyond staying upright while smiling.

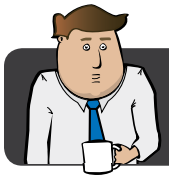


But my friend told me that I should weave in and out of parked cars?

The Weave

A common mistake among new commuters/riders is to consistently weave in and out of parked cars to allow moving traffic to pass. (see diagram on right) This is usually done out of fear of being hit by oncoming traffic or fear of upsetting drivers waiting behind the bicyclist yet it causes exactly what the rider is trying to avoid! The majority of crashes happen at intersections, when weaving in and out of parked traffic you essentially create an "intersection" every time you rejoin traffic. By maintaining a straight line while riding in the right third of the lane, the drivers behind you can predict where you will be when they are able to safely pass.

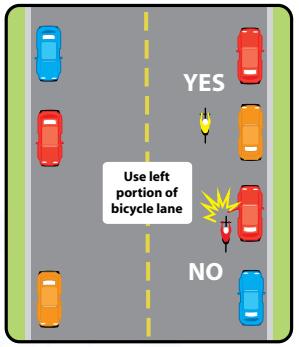




Well, if that is the case, shouldn't I ride as close to the parked cars as I can so cars can

The Door Zone

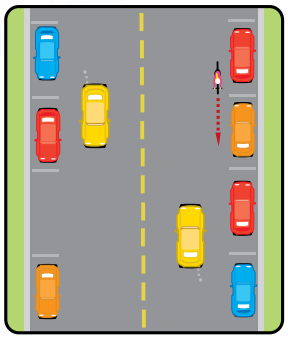
Many uninformed bicyclists ride in what is referred to as the "door zone", which is roughly the 3 feet of space to the left of a parked car. Riding in this area is risky for the bicyclist because getting "doored" by a driver who doesn't look before getting out happens much more frequently than it should. Again, people ride in this area because they are intimidated by oncoming traffic or are trying to slip around the right side of a vehicle waiting at a light. Asserting your place in the road, waiting your turn at a light, and riding as traffic will keep you out of trouble with opening doors and help communicate to drivers that you do indeed belong on the road.



What if I ride against traffic so I can see what the cars coming at me are doing?

The Wrong Way Bicyclist

You've probably also seen what is referred to as a "wrong way" bicyclist who is riding toward traffic on the left hand side of the road. THIS IS NOT SAFE! These bicyclists think that by being able to see oncoming traffic they are safer. Ironically, this technique was once part of bicycle safety courses.

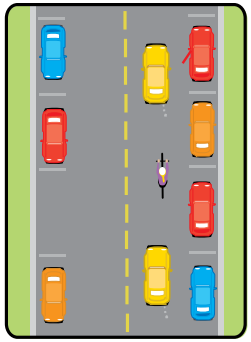


Riding against traffic like a hapless salmon doesn't work for the following reasons: 1) Motorists aren't trained to expect anything coming at them on the wrong side of the road. 2) Even if the bicyclist does see a car make a mistake, they are both moving quickly on a collision course and avoiding the accident will be near impossible. 3) Cars that are turning right onto a road never look for cars/bikes coming at them from the wrong way. Ride on the right in a straight, predictable line and you are already exhibiting Confident Bicyclists behavior!

So, if I'm going to ride in the road like a vehicle where on the road should I ride?

Lane Positioning

Lane positioning can make or break your ride. It determines how comfortable you are on the road, how quickly you can react to situations, and how motorists will treat you. Many bicyclists that have adjusted their lane positioning have reported a drastic change in the way other vehicles treat them. As previously discussed, Colorado law states that bicyclists should ride as far right as the bicyclist deems safe. Since this isn't intuitive, let's discuss the finer points of the best place to be in the road.



It helps to break lanes down into two major categories; narrow lane and wide lane. Narrow lanes roads are roads where you cannot comfortably share a lane with a vehicle. Take into consideration what type of vehicles are using the road. Fiats and logging trucks are two very different vehicles!

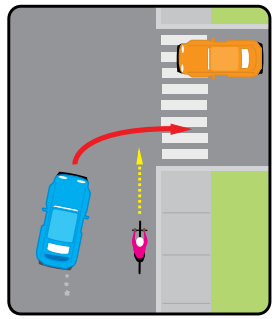
When riding on a narrow lane road you want to position yourself in such a way that you encourage passing vehicles to move into the other lane or across the center line before passing you, similar to the way they pass other slow moving vehicles like tractors or carriages. The best way to do this is to ride in the right wheel track which is usually about 1/4 to 1/3 of the way into the lane from the edge or curb. Sometimes this is referred to as "taking the lane."

Wide lanes are lanes that have a large enough shoulder or are wide enough for you to comfortably ride alongside vehicles in the same lane. When riding in a wide lane, you should ride to the right, but still give yourself some room to move both left and right to avoid debris and unexpected road conditions.

Now wait a sec, I see bicyclists sliding up the right hand side of cars all the time.

While many bicyclists pass illegally on the right to avoid waiting in line with other traffic, doing so is unsafe for several reasons. Primarily, it violates our first rule which is bicyclists fare best when they act and are treated as drivers of vehicles. By not following this primary principle, they anger drivers who think bicyclists behave as though they are entitled and the bicyclists expose themselves to the following dangers:

The Right Hook

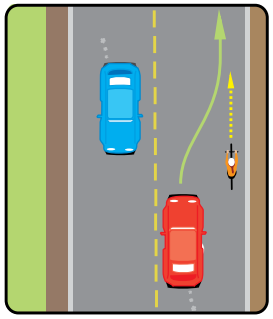


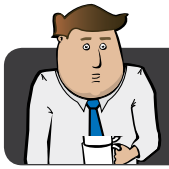
While the right hook often happens after a car passes you and then quickly turns right in front of you, it also happens when the bicyclist doesn't take the lane or "filters" alongside a car at a stop sign (or light) and the car then turns on top of the bicyclists or "Right Hooks" them. Take the lane and avoid filtering alongside traffic so that cars will treat you as an equal on the road.

Right hooks don't just happen to people on the road. Bicyclists crossing in cross walks can be right hooked as they approach the crosswalk quickly and the turning vehicle doesn't predict the bicyclists speed correctly. Remaining aware of this situation can help you prevent it in the first place.

The Squeeze

Some bicyclists who don't take the lane are distraught when a car tries to pass them while staying inside the lane and without crossing the centerline. This sometimes forces the bicyclist into parked cars, curbs, or off the road entirely. Fortunately, Colorado law has recently changed to require the motorist to allow three feet of space to safely pass bicyclists. Even still, taking the lane as outlined earlier keeps cars from trying to pass too closely when you are in a narrow lane. This straightforward tactic prevents motorist from unintentionally squeezing you off the road in the first place.





This all sounds complicated. Isn't it easier to just ride on the sidewalk?

It may seem that way because you have more experience on a sidewalk but a sidewalk has the equivalent of 25 intersections per block. Opening doors, alleyways, signs, cracks, people, dogs, leashes, tables, chairs, etc... are all obstacles on the sidewalk and no one is expecting a bicycle there. While each municipality may have its own laws regarding sidewalks, Denver's law specifically states that bicyclists are NOT permitted to use sidewalks. While it seems safer, many more crashes occur on sidewalks than on roads.

Taking the lane while riding on the road has many advantages. You may collect the occasional honk or finger, but cars are less likely to push you into a curb or turn right on top of you if they feel the need to pass you in another lane. You will also have more room to react to road debris and unexpected road conditions. Be a smart bicyclist, take the lane.

Okay, but if I ride in the road how should I deal with drivers who get angry and don't think I belong

Your best bet is to ignore anyone who honks or yells something from their car. Avoiding these confrontations ensures that they don't escalate into something unnecessary. If the car or driver is behaving in an overly aggressive manner by swerving, speeding past you, or braking in front of you to cause a crash, alert the Colorado State Patrol through their aggressive driver hotline at *CSP. Make sure you know the license plate, vehicle model, and your contact info before you call. While you are at it, you should probably just add that number to your speed dial. It is much safer to call *CSP than engage an angry and unpredictable driver.

When dialing CSP bicyclists should be prepared to report:

- Vehicle license plate number—this is mandatory
- Location/direction of travel
- Vehicle and driver description, if possible
- The aggressive driving behavior being demonstrated

Obey Traffic Signs and Signals

Every driver has a story about a scofflaw bicyclist they've seen running lights and stop signs while generally disregarding traffic law. This does not bode well for the reputation of bicyclists and often isn't fair for bicyclists in general.

By law, bicyclists are to behave as vehicles on the road. This includes stopping at stop signs and traffic signals. Most bicyclists that change this negative behavior find that lights are actually timed better when they wait, they arrive at their destination in the same time frame as when they recklessly ran signs and signals, and drivers give them more respect because they are showing respect for drivers. Do your part as a bicyclist and for your own safety: obey traffic signs and signals.

Communicate with Hand Signals
By using signals to notify surrounding traffic of your intentions you exponentially increase your predictability and safety on the road. Using these signals communicates to everyone precisely what and where you intend to go which allows them to respond accordingly. Colorado even revised their law so that you could point to the direction you are going instead of trying to remember the signals we were all taught in the fifth grade!

Over half of all bicycle/motorist crashes happen at night.

Always Use Lights and Reflectors at Night
Much like a car or truck, you are more visible during the darker hours if you have some sort of lighting. Front and rear blinking lights make you visible to drivers from farther away and reflectors are helpful when they are clean. Long time bicycle commuters often forgo fashion for function by purchasing extremely bright and reflect gear that makes them visible from far away. Vehicles can only share the road with you if they can see you, do your best to make sure they do.

Finally, expect the unexpected; your first responsibility is to be safe!

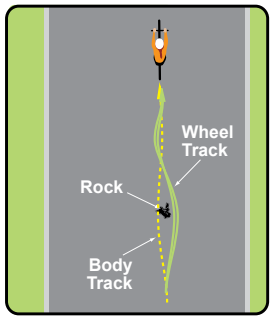
Multiuse/Bike Path Etiquette
While multiuse paths don't have specific laws for use in Colorado, there are some basic rules of thumb for traversing these often busy yet irresistibly scenic pieces of road.

- Always skate, walk, or ride on the right side of the trail
- Obey traffic control signs and markings on trail
- Pass on the left, when the trail is clear of traffic
- Give audible warning before overtaking other trail users
  - Ring your bike bell
  - Loudly and clearly call out "Passing"
- Listen up! Headphones prevent you from hearing warnings
- Use hand signals to indicate turns and stops
- Do not stop on the trail, blocking other users
- Look for traffic before entering trail
- Ride single file so that other user may pass safely
- Watch for the unexpected, especially with kids or dogs
- Slow down when the trail is crowded, and travel at speeds that are safe and appropriate to trail conditions

Five ways to avoid common crashes:
1. Ride like you drive.
2. Use lights at night
3. Communicate with signals.
4. Take the lane at intersections.
5. Be predictable and considerate of all road users.

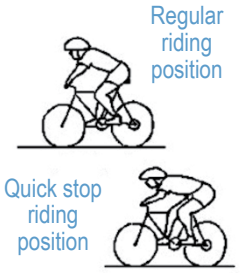
Emergency Maneuvers
Sometimes, with all the planning and safe riding there still comes a time where it is helpful to know a few emergency maneuvers in order to guide your bike safely around unsafe situations that arise. Practice the following maneuvers so that you are ready when the moment comes.

Rock Dodge
Picture yourself riding safely down the road when in your path appears a large rock. You are stuck between the parked cars on your right and the moving traffic to your left. Rather than stop your bike to get over this obstacle or freezing in fear, you can apply the technique used in the Rock Dodge to get around it.



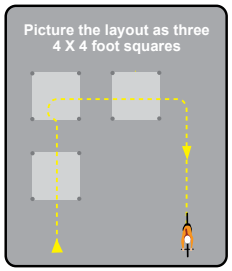
To dodge the rock, keep riding in a straight line until a moment before the rock. Just before the rock turn your wheel suddenly to about 30 degrees and without leaning so your front wheel turns away from the rock then immediately snap the handlebars back. Done fluidly, this maneuver should just barely change the path of your bicycle so that you don't swerve outside of your original line. It is most important to clear your front tire This keeps your path straight, avoids the cars on your left and the parked cars on your right, and dodges the rock. This is a great maneuver to practice on any ride so that when you truly need this skill, it is second nature.

Quick Stop
Properly stopping your bicycle as fast as possible is a critical emergency maneuver. Improper use of brakes and shifting of weight could cause you to go over your handlebars, not stop in time, or lose control as your rear wheel skids out beneath you. In order to avoid these issues use these tips:



1. Apply roughly three times as much pressure to the front brake as the rear. Your front brake is responsible for stopping 90% of your momentum.
2. With your pedals at 3 and 6 o'clock stand up and shift your weight to the rear wheel by moving your body (and butt) as far back on the bicycle as possible while you apply your brake hard. Some people find they need to push their butt back far beyond their seat.
3. If your back wheel starts to skid, let off the front brake a little to regain control of the bicycle.

Instant Turn
Imagine you are riding along when suddenly a car passes and immediately turns right in front of you. Your choice is to crash into the car, quick stop, or execute an instant turn to recover from this driver's inconsiderate act. Most of the time, an instant turn is your safest, most reliable response.



Counter intuitive to the situation an instant turn starts with a slight turn towards the opposite direction in which you intend to turn.This leans your bike in a way that increases your ability to turn fast in the other direction.Then, about a tenth of a second later drop your inside shoulder and turn the handlebars sharp in the opposite direction. Do not use your brakes while executing this. Having prepared your bicycle with the initial lean this turn will happen much faster than if you just turned your handlebars. Your bike should quickly recover riding 90 degrees away from your original course.

BACK TO THE BASICS:

Commuter gear, routes, and keeping your bike working.

Choosing the Right Bike

Many new bicyclists say that picking out a bicycle can be a dizzying task, and even well versed bicyclists oftentimes struggle to find "the right bike." Deciding which type of bike, the size, speeds, and versatility are all subjects where the help of an expert is essential. The following information will help you to narrow your choices so that you choose a bicycle that fits your body and your needs.

Mountain Bike—The mountain bike is a durable bike with big knobs on the tires to make riding off-road and in mud easy. Generally these bikes have suspension systems which dampen the shock of bumping around on rocks, sticks, and uneven trails. While these were primarily designed for riding off road many bicyclists like this type of bike (with slick tires) for getting around town so that they can ride up and over whatever they fancy.

Road Bike—Quite the opposite of the mountain bike, the road bike is designed to be light, aerodynamic, and fast. The tires are thinner with no knobs which don't absorb bumps well but roll quickly over flat road, the handlebars have multiple hand holds for longer rides and the gearing is intended for high speeds on long lengths of paved road. Commuters with longer rides or that enjoy weekend races can usually be found on some style of the road bike.

Hybrid Bike—The hybrid is exactly what it suggests: a hybrid between the road bike and the mountain bike. The tires aren't as knobby but aren't slick. While generally a bit heavier, the upright position lends itself to riders who don't like the aggressive positioning of the handlebars on both road bikes and mountain bikes. Many enjoy this type of bike for city riding and light off road riding. Its affordable price makes it attractive to newer bicyclists.

Cyclocross Bike—Growing in popularity is the cyclocross bike. This bike comes with traditional road bike style handle bars combined with larger, knobbier tires. While initially designed for a racing style that merges both off-road and on road in the same course, cyclocross bikes are becoming more popular because of their versatility in tire size while maintaining the speed and feel of a road bike.

Alternative Choices—There are other options besides these four. Recumbent bikes, that retain a portion of the bicycle market, are bicycles that are reclined and said to minimize wind resistance while maximizing comfort. Some find these bikes much more difficult to maneuver in small spaces. Tandems, bicycles built for two, or three, or four are great fun for weekend riding and for bicycle pools to work. You could also brave a unicycle, BMX bike, or a tall bike but these have less utility when used for commuting.

Choosing the Right Route

You probably know the best route to drive to work, which in most cases isn't the best route for bike commuting. If you leave your driver mentality at home, your new bike route to work can introduce you to parts of your city that you've never known. Your ideal bike route has less traffic, which means you'll want to avoid the busy, wide streets and highways that cars normally drive. Often, opting for a smaller, quieter street that runs parallel to the main arterials is your best choice.

Check to see if your city publishes a bicycle map that shows preferred routes for bicyclists. These routes are built to discourage driving fast and encourage bicyclists by narrowing streets and adding stop signs and signage to alert drivers to the presence of bicyclists.

Your final route will not always be the shortest route. Experienced commuters don't mind going an extra mile to ride greenway in place of a bad neighborhood or a nice easy flat ride that is a little longer than the direct route over an enormous hill. For the first year of one commuter's ride, she wasn't yet comfortable with traffic so she rode 5 minutes out of the way every day to stay on roads with little traffic until she worked up the skills to navigate busier roads. By then she was in such great shape that she found new, longer routes every day to make the ride an adventure.

When reviewing a map to choose the right route you should look for:

- A designated bike path
- Smooth, even pavement
- Streetlights
- Scenic views and tree lined streets
- Lighter traffic patterns
- Sidewalks (which usually indicate the street was designed with pedestrians or bicyclists in mind)
- Proximity to services (like a neighborhood coffee shop)

How Far Can You Go?

As we discussed earlier, when you ask a bicycle commuter "How far are you willing to go?" the answer will vary wildly. Some commuters ride 20 miles daily, others that live close to work only bike a mile or two. When you begin commuting you may find that a mile or two ride leaves your legs burning so much that you want to give up. Have faith, with time you will be able to easily complete your commute while your strength and endurance will leave you wanting to add miles to your rides.

Accessorize!

When considering the cost of bike commuting it is important to include the cost of the necessary extras. By accommodating your bicycle with the following articles you will find yourself prepared for anything that comes during your commute.

Bike Lock
A good, solid bike lock is essential to the frequent commuter. Using a U-lock, a thick cable lock—or even better, a combination of both—is important to those who like their bikes enough to keep them. This relatively inexpensive purchase can save you the price of a whole new bike.

Helmet
If you buy nothing else, buy a helmet. Helmets can reduce the risk of head injury by as much as 85%! While some riders opt out of wearing a helmet because of fashion, this integral piece of biker garb will literally save your skull in the one instance you will definitely need it. Like a car seat, you want to make sure that you replace your helmet if it has been in a crash or if you've owned it for more than 5 years.

Ensuring that your helmet fits correctly is as important as wearing the helmet in the first place. Use Bicycle Colorado's "two finger test" to guarantee your helmet will stay on your head in case of a crash.

Does Your Helmet Fit?
Use the Two Finger Test.

Two fingers between bottom of helmet and top of eyebrows.

Two fingers should make a "V" around ears to demonstrate how straps should lay.

Only two fingers should fit snugly between strap and chin.

All helmets in the US have to be approved by the Consumer Product Safety Commission, so all helmets meet the same requirements whether they cost $30 or $300.

Patch Kit, Extra Tube, and Pump
As you will discover later, being able to repair your own tire is an ability that every bicyclists should master. These tools are essential for completing that task on the side of the road so you don't have to walk your bike all the way home. Amazingly, the bicyclists are so friendly in Colorado that if you have an extra tube or patch kit someone will stop to help.

Lights (Front and Rear)
Over 50% of bicycle crashes happen at night. Cars can't give you the space you deserve on the road if they can't see you! In the state of Colorado, bicyclists must use front and rear lights when it is dark outside. Not only is this a law, but this is just smart bicycling. You can get an inexpensive set of entry level lights at your local bike shop.

Be Visible
Similar to lights, a bright jacket or shirt is yet another way to help motorist see and respect you and your rights. While bright colors definitely work, neon orange, green, or yellow scream to motorist "I'm here!" Wearing anything bright assures you will be seen on the road.

Eye Protection
Wearing some sort of eye protection cuts down on glare, bright sunshine and UV rays, but in the warm months they keep dust and bugs out and in the cold months they deflect cold air and wet elements.

Pant Leg Protection
Avoid shredding your pants in your chain or on your chain rings by either rolling up your right pant leg (the leg nearest to all the moving bicycle parts) or purchase a low cost reflective leg band that simultaneously protects your pants and reflects light of oncoming traffic.

Carrying Your Stuff

TIP: Try leaving clothes at work so that you don't have to carry a full load every day. Some commuters will drive their stuff in on Monday, ride Tuesday, Wednesday, Thursday, and drive things home on Friday.

One complaint about bicycle commuting is from bicyclists trying to find a way to adequately get their supplies from point A to point B in the fastest, safest, and driest way possible. As any (and every) commuter will tell you there are endless options for carrying your things to and from your workplace. Depending on your specific needs, any one (or combination) of the following options may be applicable.

Backpack
The great part about a backpack is that just about everybody already has one. Throw it on and go! While most backpacks aren't waterproof, placing your important items in plastic zip lock bags inside the backpack is a good way to guarantee that they don't get wet.

Messenger Bag
The brother of the back pack, the messenger bag is usually affixed to your body with a cross strap and stabilizer. The true messenger bag is water proof, rests flat on your back when you hunch over your bicycle, and easily slides to your front side when you stop for groceries, mail, or to deliver a package. Bicycle messengers have proven that these are great when you want something durable that you need to access regularly.

Rack/Pannier
The combination of the rack and pannier is an oldie but a goodie. Panniers, bags that hang on a rack attached to the bike, are roomy, don't cause a sweaty back and are easy to remove and replace if you are making a last minute grocery stop. The rack/pannier combination is great for longer commutes where you don't want the nuisance of a weighty pack on a sweaty back.

Grocery Pannier
The grocery pannier is an open bag that attaches to your rack. While these are fantastic you are probably more familiar with the DIY version of a milk crate that has been zip tied to the rack. The advantage of this system is that you can easily drop anything (including other bags) inside and remove it just as quickly.

Carrying your stuff doesn't need to hinder your riding. You are bound to be successful if you take the time to choose a way to carry your things that matches your needs.

Cleaning Up For the Office

Making yourself presentable for the office is high on the list of priorities for many bicycle commuters. Many have found reliable and inventive ways to make sure they are looking their best shortly after arriving. Keep in mind that some offices have higher expectations than others and some commutes are longer, hotter, or wetter than others so it is important to consider all the options:

- Wear synthetic Coolmax clothing when bicycling so sweat is wicked away from the skin minimizing needed cleanup.
- Roll your clothes before putting them in the bag to come to work. This will keep your clothes less wrinkled.
- Shower before you leave home so that you are clean to start off. That way, when you clean up the sweat at work you are already thoroughly clean underneath.
- Take a few minutes to cool down at your desk before cleaning up, there's no point in cleaning up if you keep sweating!
- Keep a clean up kit at your desk. Deodorant, a towel, and some baby wipes serve well for a quick wipe down in your office bathroom.
- While some haircuts lend themselves to air gel/spray and a blow dryer added to your desk kit will help fix any residual helmet hair effect.
- Work in a very formal atmosphere? Consider keeping a week's worth of clothes at the office and sending them to the dry cleaner every Friday to prepare them for the next week's usage.

Commuting With Kids

It is easy to dismiss bicycle commuting for the duties of parenthood. The responsibilities of moving children to and from daycare, appointments, and schools can be wearying, but if anyone deserves to reap the benefits of bicycle riding it's your kids.

Don't give up your ride just yet. Creative parents have found that using a burley trailer or bicycle child seat has enabled them to drop their kids at day care (with the Burley) and ride the rest of the way into work.

Your kids not only get the joy of riding on the back of a bicycle they also learn an important lesson about their environment and the community around them.

Minimizing the Risk of Theft

After investing the time and money into your bicycle and its accessories the worst thing that could happen would be that somebody would run off with your bike. If you followed our advice earlier in this book you already have a lock for your bicycle but what is the best way to lock it up?

As mentioned earlier, locking your bike correctly is a must if you want to hold onto your bicycle. There are several strategies for doing this. Incorporate the following tips and you'll reduce a thief's interest in your bicycle considerably.

1. The shiniest bike on the rack is the most attractive. Some commuters "uglify" their bicycles by adding stickers, tape, or anything that makes it look less new and shiny than the others.
2. Where you lock up your bike is almost more important than how you lock it. Locking up in areas that are well lit and in main pedestrian traffic areas adds eyes and witnesses which most bike thieves abhor.
3. Be sure you lock to something that is a permanent structure (some bike thieves have been known to install fake posts for easy removal of bikes).
4. The cost of your lock should be directly proportional to the cost of your bike. Don't try to protect your new $2000 road bike with a $10 lock.
5. A U-lock should go through the frame of your bike, the front wheel, and preferably a bike rack or steel post. For extra security use a cable to lock your back wheel to the U-lock or better yet, use two U-locks for the front and back of your bicycle.
6. Double check your lock job after every locking.

Fitting Your Bicycle

As children, we often made the mistake of riding on any bike we managed to get our leg over. Now, as adults, we are wiser and know that the key to properly fitting your bicycle is frame size. Frame size is measured in many different ways depending on the style of bicycle and manufacturer. A good rule of thumb is to make sure that if you are on a road bike when you stand over the top tube there is one to two inches between you and the tube. If sizing a mountain bike or hybrid you generally want between 3 and 4 inches of space. This extra space is to make emergency stops safer and since you stop and maneuver more on the mountain bike this extra room is crucial.

Once you are sure that there is enough space between you and the top tube take a look at the seat. Properly setting your seat height and angle can prevent serious knee pain or injury. Have your friend hold the bike while you sit on it. When the pedal is at the six o'clock angle you want there to be a very slight bend in your knee. The easiest way to do this is to adjust your seat so that when you sit with the back of your heel on the pedal with the pedal in the six o'clock position and your leg straight. By adjusting your seat to this height, whenyou put your toe on the pedal instead of your heel there should be a slight bend in your knee.

While stand over and seat height are very helpful in fitting a bicycle there are many other factors beyond the scope of this book. If you are interested in dialing in your bicycle fit perfectly, contact your local bike shop. Most shops have someone who has specifically been trained to professionally fit riders to their rides.

Bike Maintenance

The thought of maintaining their own bike is often enough to send potential bicycle commuters running towards their cars. While it is not necessary to have the skills to overhaul your bottom bracket it is nice to recognize mechanical failures and possibly make the small adjustments that prevent you from visiting your local bike mechanic every time you get a flat tire. The following is intended to be a basic introduction to minor bicycle adjustments, for more thorough, detailed descriptions of bicycle mechanics get any one of the number of good mechanics books out there such as Zinn and the Art of Bicycle Maintenance or Park Tool Big Blue Book of Bike Repair or stop by your Local Bike Shop

ABC Quick Check

Although regular maintenance on your bicycle is important to giving your bicycle a long life, the average bicyclist doesn't know what it looks or sounds like when something is wrong. The following safety check is an excellent way for the amateur bicyclist to get an idea as to whether or not their bike is needing maintenance or not. Quickly do this check before every ride, it will save you much time and headache in the long run.

A is for Air

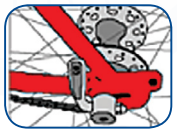
Squeeze the tires and make sure that they are firm. If the tire isn't firm add air to the recommended PSI written on the sidewall of the tire. This is also a good time to quickly inspect your tire for any possible punctures or signs of aging.

B is for Brakes

Hold the brakes down and try to rock the bike back and forth. If the bike stays in one place your brakes are functional, if the bikes moves, your brakes need adjustment. This is also a good time to check brake pads to ensure there is plenty of pad left and there is no debris on the pads or rims of the wheel.

C is for Chain and Cranks

Take a quick spin with the bike to make sure everything operates fine before you find yourself five miles from home. You should be listening for strange sounds and feeling for wobbles to ensure there is plenty of pad left and there is no debris on the pads or rims of the wheel.



Quick is for Quick Releases

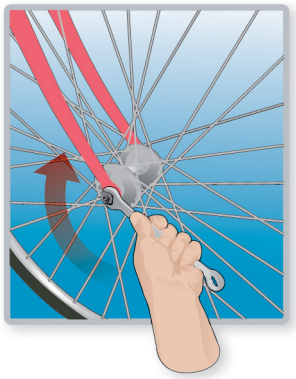
The quick release on the wheel needs to be engaged before riding to make sure the wheel doesn't fall out. Make sure release levers are tight.

Check is for Checking the Bike Out

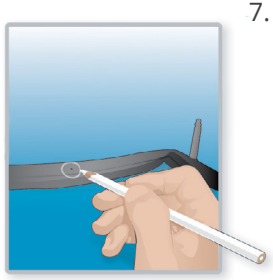
Take a quick spin with the bike to make sure everything operates fine before you find yourself five miles from home. You should be listening for strange sounds and feeling for wobbles.

Changing a Flat Tire

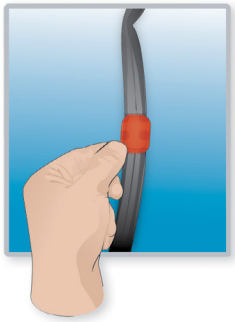
Every bicyclist knows the dreaded hiss of the punctured tire. Don't let this be the end of the world, look over our directions for changing a flat, try to do it once before you are out on the road, and then you'll be able to be your own knight in shining armor!



1. If the flat is on the rear wheel, shift to the smallest cog on the cassette. Release the brakes to allow the tire to clear the brake pads. Remove the wheel.
2. Check the outside of the tire for signs of damage and mark the location of the damage.
3. Deflate the tire completely. Push the valve pin in (for a Schrader valve), or first unscrew the nut, then push the valve pin (Presta valve).
4. Push one bead of the tire towards the center of the rim around the entire wheel. Insert tire levers opposite the valve. Two or three spokes further around, insert the second tire lever. If necessary, insert a third tire lever.
5. Pull the rest of one side of the tire off by hand, working around, starting at the location of the tire levers. Do not remove the whole tire from the wheel rim.
6. Extract the tub from the tire keeping the relative positioning of the tire and tube intact. This way the wheel, tire, and the tube retain their relationship.



7. Inflate the problem tube with enough air so you can find the hole by feeling or hearing the air escape. The hole(s) in the tube will tell you where to look for the cause of the flat. Make absolutely sure the offending foreign object, if any, is gone before you continue. (careful here, sometimes there is more than one object!)
8. Inflate the good tube with enough air to give it shape.
9. Insert the tube into the tire starting with the valve stem then feed it around.



10. Seat the tube over the center of the rim. Work the bead of the tire back onto the wheel. Use your hands to avoid pinching the tube with a tire lever.
11. As you refill the tire, check that the tire does not bulge off of the rim. Pump the tire up to the recommended pressure shown on the tire sidewall.
12. Install the wheel. Connect any brake cables you had to release.

(source: League of American Bicyclists)

Resources

Websites

bicyclecolorado.org

bikecommutetips.blogspot.com

bikeforums.net

commutebybike.com

icebike.com

parktools.com

sheldonbrown.com

Books

How to Live Well Without Owning a Car – by Chris Balish

Zinn and the Art of Road Bike Maintennace – by Lennard Zinn

Zinn and the Art of Mountain Bike Maintenance – by Lennard Zinn

Urban Bikers' Tips and Tricks: Low-Tech & No-Tech Ways to Find, Ride, and Keep a Bicycle – by Dave Glowacz

The Art of Urban Cycling: Lessons from the Street – by Robert Hurst

Effective Cycling – by John Forester

Bicycle and the Law: Your Rights as a Cyclist – by Bob Mionske

Big Blue Book – by Park Tools

Colorado Bicycle Law

Operation of bicycles and other human-powered vehicles

1. Every person riding a bicycle shall have all of the rights and duties applicable to the driver of any other vehicle under this article, except as to special regulations in this article and except as to those provisions which by their nature can have no application. Said riders shall comply with the rules set forth in this section and section 42-4-221, and when using streets and highways within incorporated cities and towns, shall be subject to local ordinances regulating the operation of bicycles as provided in section 42-4-111.

2. It is the intent of the general assembly that nothing contained in House Bill No. 1246, enacted at the second regular session of the fifty-sixth general assembly, shall in any way be construed to modify or increase the duty of the department of transportation or any political subdivision to sign or maintain highways or sidewalks or to affect or increase the liability of the state of Colorado or any political subdivision under the "Colorado Governmental Immunity Act", article 10 of title 24, C.R.S.

3. No bicycle shall be used to carry more persons at one time than the number for which it is designed or equipped.

4. No person riding upon any bicycle shall attach the same or himself to any motor vehicle upon a roadway.

5. Any person riding a bicycle shall ride in the right-hand lane. When being overtaken by another vehicle, such person shall ride as close to the right-hand side as practicable. Where a paved shoulder suitable for bicycle riding is present, persons operating bicycles shall ride on the paved shoulder. These provisions shall apply, except under any of the following situations:
   A. When overtaking and passing another bicycle or vehicle proceeding in the same direction;
   B. When preparing for a left turn at an intersection or into a private road or driveway;
   C. When reasonably necessary to avoid hazardous conditions, including, but not limited to, fixed or moving objects, parked or moving vehicles, pedestrians, animals, or surface hazards.

6. A. Persons operating bicycles on roadways shall ride single file; except that riding no more than two abreast is permitted in the following circumstances:
      1) When riding two abreast will not impede the normal and reasonable movement of traffic; or
      2) When riding on paths or parts of roadways set aside for the exclusive use of bicycles.

B. Persons riding two abreast shall ride within a single lane.

7. A person operating a bicycle shall keep at least one hand on the handlebars at all times.

8. A. A person riding a bicycle intending to turn left shall follow a course described in sections 42-4-901 (1), 42-4-903, and 42-4-1007 or may make a left turn in the manner prescribed in paragraph (b) of this subsection (8).
   B. A person riding a bicycle intending to turn left shall approach the turn as closely as practicable to the right-hand curb or edge of the roadway. After proceeding across the intersecting roadway to the far corner of the curb or intersection of the roadway edges, the bicyclist shall stop, as much as practicable, out of the way of traffic. After stopping, the bicyclist shall yield to any traffic proceeding in either direction along the roadway the bicyclist had been using. After yielding and complying with any official traffic control device or police officer regulating traffic on the highway along which he intends to proceed, the bicyclist may proceed in the new direction.
   C. Notwithstanding the provisions of paragraphs (a) and (b) of this subsection (8), the transportation commission and local authorities in their respective jurisdictions may cause official traffic control devices to be placed on roadways and thereby require and direct that a specific course be traveled.

9. A. Except as otherwise provided in this subsection (9), every person riding a bicycle shall signal his intention to turn or stop in accordance with the provisions of section 42-4-903; except that a person riding a bicycle may signal a right turn with the right arm extended horizontally.
   B. A signal of intention to turn right or left when required shall be given continuously during not less than the last one hundred feet traveled by the bicycle before turning and shall be given while the bicycle is stopped waiting to turn. A signal by hand and arm need not be given continuously if the hand is needed in the control or operation of the bicycle.

10. A. A person riding a bicycle upon and along a sidewalk or pathway or across a roadway upon and along a crosswalk shall yield the right-of-way to any pedestrian and shall give an audible signal before overtaking and passing such pedestrian. A person riding a bicycle in a crosswalk shall do so in a manner that is safe for pedestrians.
    B. A person shall not ride a bicycle upon and along a sidewalk or pathway or across a roadway upon and along a crosswalk where such use of bicycles is prohibited by official traffic control devices or local ordinances. A person riding a bicycle shall dismount before entering any crosswalk where required by official traffic control devices or local ordinances.

C. A person riding or walking a bicycle upon and along a sidewalk or pathway or across a roadway upon and along a crosswalk shall have all the rights and duties applicable to a pedestrian under the same circumstances, including, but not limited to, the rights and duties granted and required by section 42-4-802.

11. A. A person may park a bicycle on a sidewalk unless prohibited or restricted by an official traffic control device or local ordinance.
    B. A bicycle parked on a sidewalk shall not impede the normal and reasonable movement of pedestrian or other traffic.
    C. A bicycle may be parked on the road at any angle to the curb or edge of the road at any location where parking is allowed in such a manner as does not impede the normal and reasonable movement of traffic.
    D. In all other respects, bicycles parked anywhere on a highway shall conform to the provisions of part 11 of this article regulating the parking of vehicles.

12. A. Any person who violates any provision of this section commits a class 2 misdemeanor traffic offense; except that section 42-2-127 shall not apply.
    B. Any person riding a bicycle who violates any provision of this article other than this section which is applicable to such a vehicle and for which a penalty is specified shall be subject to the same specified penalty as any other vehicle; except the section 42-2-127 shall not apply.

13. Upon request, the law enforcement agency having jurisdiction shall complete a report concerning an injury or death incident that involves a bicycle on the roadways of the state, even if such accident does not involve a motor vehicle.

Section 2. 42-4-802 Pedestrians' right-of-way in crosswalks.

Pedestrians' right-of-way in crosswalks.

(3) No pedestrian shall suddenly leave a curb or other place of safety and ride a bicycle, walk, or run into the path of a moving vehicle which is so close as to constitute an immediate hazard.