



BIKE TIPS & TRICKS

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BICYCLE COMMUTING

It's time to dust off the old bicycle and start riding. For some, it's been a while. Others ride rain or shine. Either way, following is some useful information I've gained from bike instruction courses and years of road experience that I hope will help all riders to have the safest, most enjoyable ride possible.

GETTING READY TO RIDE

Inspect Your Bike

The first thing you must do before riding, whether you have a road bike, hybrid bike, mountain bike, or something else, is an ABC Quick Check:

- A-Air
- B-Brakes
- C-Crank
- Quick releases
- Check detailer or overall ride ability of the bike

This quick inspection will help maintain your bike and provide top riding performance. You may want to have your ABC Quick Check done at a local bike shop by a certified bike mechanic, especially if it's been a while since you rode your bike.

Gather the Right Equipment & Clothing

Equipment:

- Water bottles (1 or 2)
- Tire pump
- Spare tubes – to quickly change a flat tire
- Tire levers
- Bike tool

- Bike storage bag
- First aid kit

Clothing:

- Bike helmet
- Moisture-wicking riding clothing
- Bike gloves
- Eye protection
- Bike shoes

Wearing light-colored garments with reflective material is paramount for biker safety, especially while riding in the early morning or at night. Wearing these clothing items will increase your visibility, allowing other bikers, vehicle drivers, and pedestrians to see you better. This greatly improves biker safety.



Remember, climate is what you expect, and weather is what you get.

Check Weather

Before riding out, check the weather conditions for the area you'll be riding in.

Fuel Up

Before hitting the road, I suggest you fuel up. Eating light, healthy carbs, like fruits, vegetables, and pasta, and low-fat meats, like chicken and turkey, will give you energy for the ride. Also, be sure to drink plenty of water before,



during, and after the ride to prevent dehydration.

I also strongly recommend stretching before and after the ride to increase flexibility and warm up your muscles. Remember, riding a bike works different muscle groups that you may not normally use.

BIKE SAFETY

Rules of the Road

It is Washington State Law to wear a bike helmet and to observe the rules of the road, just as you would in a vehicle. To paraphrase the words of John Forrester, cyclists fare best when they act like, and are treated as if, they are vehicles. Ride in bike lanes, if possible.

Ride with the flow of traffic. Do not ride against traffic. Other vehicles will not expect you to ride towards them and may not see you. This is especially true when riding up a hill or at sunset or sunrise, when the sun could affect motorists' vision.

Ride as predictably as possible. This means stay your course and do not swerve around. Use hand and arm signals when turning and stopping.

During the ride, verbally communicate to your partner(s) about road hazards like railroad tracks, rocks, glass, other vehicles, etc. By keeping your partners informed, you can prevent crashes, falls, and flat tires.

Planning for Emergencies

Hopefully the tips and tricks outlined above will allow you to have a safe, enjoyable time riding and exploring. However, it is still important to plan for emergencies.

Do an air, brake, and crank quick check before starting out.

Tell someone (a friend or relative) where you are going and when you expect to return. You never know if you might get lost in the woods or be involved in another emergency.

Carry a fully charged cell phone with you, in case of emergency.

Complete a pre-trip drive of your bike route, if possible, to check it for potential surface, moving, or visual hazards. Crashes and falls are the most common type of accidents for riders. You will reduce your chances of having an accident by taking time to look for potential hazards like other cyclists, moving cars or trucks, pedestrians, railroad tracks, grates, rocks, loose gravel, fallen trees, rain, glare, ice, snow, tall buildings, or parked vehicles.

Have a plan for what you will do in case of an accident. If you hit your head or are involved in another serious accident, consider calling 911 to have medical aid check you for signs of a concussion or other head trauma. Also, check your helmet – if it has any cracks or signs of damage, replace it.

What to Know

- Stretch before and after riding
- Ride with a partner, if possible
- Tell someone where you are going, in case of emergency
- Drive the route prior, in a vehicle, to know what you are in for
- Check the weather conditions
- Have fun!

BASIC BIKE MAINTENANCE

Three Basic Rules for Bicycle Maintenance

- Keep your bike clean and lubricated
- Do not try to fix what you don't understand
- Never try to fix anything without proper tools (there are many bicycle-specific tools)

Source: IPBMA Basic Maintenance and Repairs

Bike maintenance can be a wide-ranging topic, so let's get started with some of the basics first: cleaning your bike, securing bolts, and lubricating key components.



Cleaning

Your bike is a collection of moving parts. When these parts come into contact with mud, grime, and debris, wear and tear is inevitable. These speed up the deterioration of your bike's components. Not surprisingly, your first line of defense against breakdowns is proper bike hygiene.

HOW TO CLEAN

There's more to cleaning your bicycle than hosing it down from time to time. Water (especially from a high-pressure hose) can damage sensitive bearing systems throughout your bike. If you wash with water, do so carefully.

Most dirty bike components can be cleaned by wiping them carefully with a dry or damp rag occasionally. Other components and parts systems will require occasional brushing, buffing, and re-lubrication to keep them in peak condition.

CLEANING SUPPLIES

The supplies you need to clean your bike depend on the component you're cleaning and its condition. Here's a short list of basic items that address most cleaning tasks:

Clean rags: Have a good supply of these on hand for grease, oil, wax-related tasks, and general cleaning and drying.

Soap: For frame washing, use something mild, like diluted dish soap or pre-formulated bike wash cleaner.

Water: Despite its potential dangers, water is still a useful cleaning tool. Make sure the water you use is clean.

Brushes: Use a couple of different sizes and shapes to get into hard-to-reach places to remove the grime that rinsing alone can't get. Old toothbrushes work great for nooks and crannies.

Solvents: Use some type of general solvent for cleaning up gummy parts like your bike chain. If possible, avoid traditional solvents, such as kerosene and turpentine. Choose a solvent designed to be easy on the environment (and you!) instead. No matter what solvent you use, make sure you dispose of it properly.

HOW OFTEN TO CLEAN

Base your bike cleaning schedule on how and how often you ride. In other words, if you spend a lot of time riding in wet, muddy, conditions, or if you ride hard, fast, and often, clean your bike more frequently.

Very few cyclists clean their bikes after every ride, but a regular schedule of frequent, simple cleaning (once a month, once a week, or more often, depending on the kinds of riding you're into) is important.

Securing Bike Bolts

Bicycles are held together by dozens of nuts, bolts, and screws that can wear down or wiggle loose, as the result of normal use. Reputable bike manufacturers such as Trek, Giant, Specialized, and Cannondale use metric-system hardware. Inexpensive brands such as Huffy or Magna may use SAE hardware or metric. Maintaining a "tight ship" is important because loose or improperly tightened bike parts can:

- Cause poor performance
- Lead to serious wear and tear
- Become a safety hazard



Keep in mind that there's more to keeping bike bolts properly tensioned than simply cranking down on every nut and bolt in sight as hard as possible. Over-tightening can cause as much damage as under-tightening, as it can lead to component failure and unsafe riding.

To ensure your bike is properly adjusted, perform frequent overall inspections, so you can catch problems before they get serious. Also, keep your eyes and ears open for trouble (rattles, squeaks, wobbles) while you ride, so you can check out the problem once you're back home.

THE PRE-RIDE INSPECTION

The best defense against loose components is a pre-ride inspection before every ride. Regular pre-ride inspections will help you catch potential problems before they develop into safety hazards. Most pre-ride inspection adjustments can be made with a simple bike multi-tool.

THE BIKE SHOP VISIT

The other important aspect of maintaining your bicycle is a regular bike shop visit. If you're a regular rider, bring your bike in for biannual checkups, to ensure that complex components such as

spokes, bearing surfaces, derailleurs, and cable systems are inspected and serviced regularly. Remember, certain parts of a bicycle should always be serviced and adjusted by experienced mechanics.

DECIDING WHAT TO DO

If you discover looseness or “play” in any bike component, you can either fix the problem yourself or bring your bicycle into a full-service bike shop. Choose the first option only if you’re sure of both the cause of the problem and the exact steps necessary to fix it. Later sections of this clinic identify adjustments best left to mechanics.

LUBRICATING YOUR BIKE

Keeping your bike parts properly lubricated is crucial for good performance. Lubrication protects moving parts against excessive wear, “freezing up,” rust, and corrosion.

Be careful, though. Over-lubricating can lead to poor performance and component damage (excess lubricant will attract dirt and other abrasive particles). As a rule, excess lube should always be carefully wiped away before the bicycle is ridden.

Tip: When lubricating several parts at once, remember the order in which you apply the lubricants. Wiping off excess lube in the same order will give the lubricants time to soak in.

LUBRICANT OPTIONS

Bicycle greases: These tend to be thicker than oils. These should be used primarily for lubricating bearing systems (such as those found in hubs and headsets) and large-thread bolts. For example, use grease on the threads of pedal spindles before installation into crank arms.

Bicycle oils: Bike oils tend to be thinner than bike greases. These should be used to lubricate thin-thread bolts, chains, and more actively moving parts in brake and derailleur systems.

When lubricating your bike, be sure to use lubes that are suited to your weather and riding conditions. Rainy areas require more durable bike oils, while drier areas require lighter oils that won’t pick up as much dirt. Also, keep in mind that wet conditions typically require more frequent lubrications. Check with your local bike shop/mechanic

for recommendations on specific lubes that match your riding conditions.

WHAT TO LUBRICATE

Chain: Your bike's chain is the most "at risk" lubricated part. It should be lubed frequently to slow the rate of chain wear. Be sure to remove the chain from your bike occasionally to be thoroughly cleaned in a solvent and re-oiled. The more frequently you spot-lube your chain, the less necessary off-bike cleanings and chain replacements become. In general, lubricate your chain whenever it squeaks or appears "dry." Lubing after wet rides will help keep your chain from rusting. Keep in mind the type of chain lube (wet, dry or a wax lube) affects how often you need to lubricate. Avoid over-lubricating.

Brake and derailleur levers: These levers are crucial for braking and shifting. Apply a drop or two of oil to the lever pivots and the barrel adjusters occasionally to keep them functioning properly.

Brake and derailleur cables: These cables connect your brake and the derailleur assemblies to the levers you use to control them. Check them frequently, especially in wet conditions. Also re-lubricate occasionally, so they can effectively translate your commands to the component groups.

Brake and derailleur assemblies: These assemblies are made up of several small moving parts. Be sure to keep an eye on their arms, wheels, and pulleys, so they don't bind up or become rigid. Apply lubricant to the pivot points of the assemblies.

Flat Tires

TYPES OF FLATS

There are two basic types of flats: puncture flats and pinch flats. Pinch flats occur when the tire is under-inflated, and the tire strikes a hard surface such as a curb. Pinch flats generally cannot be repaired with a patch kit due to the size of the hole, and the tube must be replaced. Puncture flats occur when a sharp object, such as a thorn or glass, pierces the tire case and punctures the tube. Puncture flats can often be repaired with a patch kit.

Patch kits are available at any local bike store (LBS) for a few dollars. They should come with a few patches of varying sizes, an adhesive, a piece of emery or sandpaper for cleaning the tube surface, and instructions. Follow the instructions of the patch kit when performing repairs. Tubes that have multiple patch repairs should be replaced.

Tubes are relatively inexpensive (approximately \$6) at your LBS. There are two types of valves on tubes: Schrader (standard like an automobile) and Presta. Presta valves require a different pump attachment that is found on pumps at your LBS. A Schrader adapter, for Presta valves, can be purchased at your LBS for a few dollars and are an inexpensive alternative to a new pump.

HOW TO REPLACE FLAT TIRES

Remove the tire

1. Remove the wheel from the bike.

Most bikes now have a quick-release lever on each axle. Simply flip one of the levers to loosen the wheel. Once loose, the wheel can be pulled free. Older bikes usually have two axle nuts holding each wheel in place. Use an adjustable wrench to loosen one of the nuts, allowing the wheel to come free.

2. Completely deflate the tire.
3. Slide the rounded end of a tire tool between the tire and the rim.
4. Pry the tire away from the rim by locking the free end of the tire tool into the spokes.

Work slowly and take care not to pinch the tube.

5. Slide a second tire tool between the tire and rim.
6. Work second tire tool around the rim until the tire pops free.

Replacing a Flat Inner Tube

1. Pump up the flat tube that has been removed from the tire, so it is plump.
2. Attempt to locate the source of the flat.

If it is a pinch flat, it will be obvious, as air will rapidly escape.

Replace the tube with a new one. If it is a puncture flat, the source

may be more difficult to locate. Rotate the tube close to your ear, listening for the air escaping. You may have to place the tube close to your cheek to feel the air. Once the puncture is located, mark it with a highlighter (if you have one available).

3. Check the interior and exterior of the tire for anything embedded in the rubber. Debris still in the tire will cause another puncture, if not removed.

Use the stem, as a reference point, to compare the location of the puncture in the tube to the corresponding location on the tire. If no obvious debris is located, carefully sweep your fingers through the inside of the tire to locate the source of the puncture. If you have gloves, it is best to wear them when doing this to avoid being cut.

4. Follow the instructions on the patch kit regarding patch repair.

Installing the New Tire

1. Take a new tire and slip one edge of it all the way around the rim.

It should be possible to do this by hand, although you can use one of the tire tools, if necessary.

Skip this step if you are only changing the tube and have left the tire partially on the rim.

2. Place the inner tube completely inside the new tire.

Take care to line up the inner tube valve with the valve hole in the rim. It might help to inflate the tube very slightly. However, if the tube is too inflated, it will be difficult to get the tire back on the rim.

3. Push as much of the second edge of the tire onto the rim as possible.

Attempt to place the entire tire onto the rim, without using tools, to avoid pinch flats. This can be done by holding one edge of where the tire is still off the rim and using your other hand to roll the tire over the edge of the rim. If you cannot place the tire on the rim by hand, insert a tire tool between the rim and the portion of the tire that is not yet installed.

4. Lever the tool upward slowly and force the tire over the rim edge.

Use a second tool to push the tube into place, if necessary.

5. Gently roll the tire into place over the rim edge.

Work slowly and avoid snapping the tire into place, as this tends to pinch the tube and cause air leaks.

6. Inflate the tire to the recommended pressure written on the side of the tire and replace the wheel on the bike.

I sincerely hope you have found these Bicycle Commuting Tips and Tricks helpful and instructive.

Please enjoy biking safely and responsibly. Happy riding!

Bill Mack
Public Safety Sergeant



In addition, a quick online search will give you many how-to videos.



FINDING A ROUTE



Tacoma-Pierce County Walking Guide

The Tacoma-Pierce County Walking Guide offers great maps, trail highlights, and terrain descriptions. Check it out to learn about trails and parks you may not be familiar with.



Pierce County Bike Map

The bike map shows bike routes in Pierce County.



WA Bike & Pedestrian Maps

The Washington Department of Transportation offers a comprehensive list of bicycle and pedestrian maps throughout the state.



Bike Radar

Bike Radar is an online database of user-submitted routes. You can search by location, terrain, or difficulty for commutes and recreational rides.



Tacoma Washington Bicycle Club

The Tacoma Washington Bicycle Club post some of their favorite routes. Other cyclists can also provide helpful advice about routes.

TRAIL & ROAD MAINTENANCE

The following are resources to report maintenance issues. Print it out or save the numbers in your phone. By reporting issues, you help make roads and trails safer for everyone. Thanks!

Auburn: 253.931.3048 or citizenreport@auburnwa.gov

Bonney Lake: 253.862.8602

Buckley: 360.829.3157

Carbonado: 360.829.0125

DuPont: 253.912.5381

Eatonville: 360.832.3361, press 0

Edgewood: 253.952.3299 or cityhall@cityofedgewood.org

Enumclaw: 360.825.3593

Fife: 253.922.9315 or publicworks@cityoffife.org

Fircrest: 253.564.8900

Gig Harbor: 253.851.6170

Lakewood: 253.589.2489

Milton: 253.922.8738

Orting: 360.893.2219, ext. 139

Pacific: 253.929.1113

Pierce County: 253.798.7250

Puyallup: 253.841.5505

Roy: 253.843.1113 or publicworks@cityofroywa.us

Ruston: 253.759.3544

South Prairie: 360.897.8878

Steilacoom: 253.581.1912

Sumner: 253.299.5700 or pw@sumnerwa.gov

Tacoma: 253.591.5525

University Place: 253.460.6494

Wilkeson: 360.829.0790



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PierceTransit.org

