

REVISED EDITION

URBAN BIKERS' TRICKS & TIPS

LOW-TECH & NO-TECH ways to
FIND, RIDE, & KEEP a BICYCLE



BUYING A
BIKE



FIXING A
BIKE



FOILING
THIEVES



BEATING
TRAFFIC



HANDLING
TROUBLE



SUPER
POWER



BUSES AND
TRAINS



COLD AND
WET



HAT HEAD
AND SWEAT

by Mr. Bike Dave Glowacz

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LOW-TECH & NO-TECH ways to FIND, RIDE, & KEEP a BICYCLE

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by Dave Glowacz (Mr. Bike)

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Table of Contents

A Message from Mr. Bike . . . 1

Chapter 1: Choosing a Bike. 3

Choosing a bike type	4
Spending money on a bike	6
Making your current bike fit you.	8
Buying a new bike	12
What accessories do you need?	14
Handlebar accessories	15
Baggage accessories	16
Quick-release accessories.	18
Power accessories	19
Why have gears?	20
Tires.	22
Bike storage	24

Chapter 2: Maintenance Basics . . . 25

Maintenance quick check	26
How to patch a flat tire	28
How to remove a wheel	30
Preventing flats.	31
Lubrication.	32
Finding a bike shop	34
Do it yourself	34

Chapter 3: Avoiding Rip-Off 35

How to uglify your bike.	36
I.D.ing your bike pre-theft	39
Registering your bike	40
Insuring your bike	43
Recovering your stolen bike	44
Where to park your bike	46
How to lock	48
How to make your U lock better.	50
How much to spend on a lock	52
Buying a new frame lock.	54
Padlocks, chains, & cables.	56
Armored cables	59



Chapter 4: Getting Through Traffic 61

Sly biking	62
Ped Mode.	63
Getting comfortable with traffic	64
Looking techniques.	66
Using body language	69
Reading vehicles' body language	72
When & how to make noise	76
Lanes & turns	79
Passing on a narrow street	80
Multi-lane intersections	82
The basic left turn	84
The box left turn.	85
The impatient left turn	86
The shortcut left turn	87
Special left-turn cases	88
Bike lanes.	90
Bus traffic	93
Entrance & exit ramps.	98
Timing traffic lights	101
Going through yellow lights	103
Red lights	104
The 3-street run-around	106
Making traffic lights turn green	108
Timing pavement detectors.	112
Riding in the door zone	114
Traffic jams	117
Riding under elevated tracks	120
Short attention span safety guide.	122



Chapter 5: Trouble Situations . . . 125

When a motorist hits you.	126
Asking for money after a crash.	130
How to prevent attacks.	132
What to do when attacked.	134
Using pepper spray	136
Conflicts with motorists & peds.	138
Fighting back	140
Dogs	144
Emergency moves	146
How to turn fast.	147
How to treat a bad scrape	150

TABLE OF CONTENTS



Chapter 6: Special Techniques . . . 153

Using gears	154
How hand shifters change gears	156
How to shift	158
Bumps & ruts	159
Hills	160
Catching a ride from a vehicle	162
Using sidewalks	164
Carrying bikes on stairs	166
Getting on elevators	166
Bikes on escalators	168
Riding on stairs	170
Choosing your route	172
Choosing street maps	173



Chapter 7: Buses, Trains, & Planes 175

Bikes on buses: basics	176
Loading a front bus rack	178
Bikes inside buses	183
Subways & light rail	184
Commuter trains: basics	190
Timing your commute	194
Traveling between cities	195
Bikes on airplanes	196
Riding in and out of airports	200
Packing your bike into a box	202
Bikes in cars	206



Chapter 8: Night & Bad Weather . 207

Riding at night	208
Choosing reflective material	208
Tips for buying headlights	210
A homemade headlight system	212
On-street tips for night riding	213
Rain, cold, & snow	214
Dressing for cold	214
Dressing for rain	216
Equipping your bike	217
Riding in snow	218
Riding in rain	219
Fender options	220



Chapter 9: Avoiding Hat Head & Sweat 221

Dealing with helmets and wind	222
Fixing your hair after a bike commute	223
Three basic hair styles	223
Helmet features	224
When to replace a helmet	225
Helmet cost	227
Handling clothes & sweat	228
How to pack wrinkle-free	228
Bags for carrying clothes	229
Riding to work	230
Cleaning up at work	230
Work clothes to bike in	231
Skirts and dresses	232

Appendix A: Resource Guide 233

National advocacy groups	233
Local advocacy groups	234
World Wide Web sites	236
Bicycle touring	236
Bike maintenance books	236
Bike safety booklets	236

Appendix B: Supplier Directory 237

Can't find it?	237
Bells, whistles, & gadgets	238
Bicycles	238
Bungee cords	239
Handlebar parts	239
Hardware	239
Helmets	239
Lighting	239
Locks & accessories	240
Pepper spray	240
Rain gear	241
Registries, national	241
Tires	241

Acknowledgments 242

Index 243

A Message from Mr. Bike

Think of the bicycling you did as a child. Liberating and fun, right?

Now think about bicycling in the hard, fast metro area where you live: the potholes, the car-clogged lanes, the mad green-light scramble, the car doors that open in your face. Sure, you'd bring your bike into all of that—on the carrying rack anchored to the back of your car.

What about people who actually ride their bikes in heavy traffic? Maybe you've seen one: She glides past you and all the vehicles around you. She's not racing, but she gets around a double-parked car here, a pothole there. She either knows something you don't, or she's nuts.



*Have a bike but don't use it?
See pages 8-11.*

And you've heard how often bikes get ripped off. When you see bikes locked up all over town, you figure they keep the cops and lock makers pretty busy.

Or, one cold or rainy day, you spot a cyclist in traffic. He's not wearing one of those fancy jackets or Gore-Tex pants—yet he looks pretty comfortable.

Could you learn to do any of that stuff?

Maybe—if you pored over all the slick bike magazines you've seen. But you don't want to sit and read. Nor do you want to buy cycling clothes, parts, tools . . . it'd be nice just to ride your bike as easily as when you were a kid.

That's where my book comes in.

*How do people manage
to bike to the office?
See pages 228-231.*

My book gives you the secrets behind everything we've just described, and more—without making you spend lots of time or money.

My book tells you only what you need to know to bike confidently and efficiently in the streets of your town. Much of it came from experienced cyclists, police officers, and manufacturers—and isn't written anywhere else.

Most of what you might need is here.

(continued on next page)



*Got a fear of traffic?
See pages 64-65.*

A MESSAGE FROM MR. BIKE

Like, what type of bike (of the many kinds out there) is best for you? Or what do you do about the little things that go wrong, like flat tires? And how do you protect yourself from thieves, motorists, and bad weather?



*Hard for you to choose a bike or parts?
See pages 4 and 14.*

Or, if you already ride a lot, what are some cool tricks that the urban gear-heads know—like how to time lights or jump over stuff?

My book tells you exactly what to do in every case.

Did I say "tells?" I meant "shows": This book uses pictures more than almost any other book on cycling. Flip open to any page and you'll see.

And because you and I want to have fun, I got some hip folks to do the drawings—guys and gals who have more fun with a pencil than most people have with their entire bodies.

But this isn't a coloring book. I leave the kid's stuff for grade-school bike rodeos. Like when I diagram the four ways to make an urban right turn: At least two are trickier than something a child should ever do.

Don't get the wrong idea. I don't tell you how to charge head-on into traffic, zoom onto the sidewalk, then lock your bike with a 30-pound chain. The secrets I give you involve a little trick here and there, plus a lot of what some call stealth.

Most of these tips are interesting enough on their own. But you wouldn't sit still too long if someone just recited them to you. "Uh-uh," you'd say, crossing your arms and jutting your chin. "Show me your bike tricks."

Well . . . turn the page.



*Want to make your bike fly?
See pages 164-165.*

**STOP
HERE
AND
READ**

CHOOSING A BIKE

Buying a bike can be tough. It seems like there are too many styles. But unless you're a racer, you don't care about small differences. And most bikes have only a few big differences between them. This chapter shows you.



Page 10

So which style of bike's right for you? You only have to ask yourself how and where you ride. This chapter asks you—then, based on the answers, tells you the kind of bike you need.



Page 5

Page 11



What if you already have a bike? Perhaps you think it's too old, or it doesn't feel right. Should you get a new one? Maybe not.

Take a look at this chapter to learn whether you should fix up your old bike, and how to do it. But if you do decide to get a new bike, this chapter tells you what to watch out for.



Page 12



Page 17

What about all that extra stuff that goes with bikes . . . bike bags, water bottles, pumps? What do you really need? This chapter tells you that, too.

Speaking of extra stuff, why would you want dozens of gears on your bike? What are you missing without all those gears? Mystery solved here.



Page 20



Page 22

Also, you've probably seen your kind of bike with wider, narrower, or knobbier tires. Would you like to try different tires? Read this chapter first.

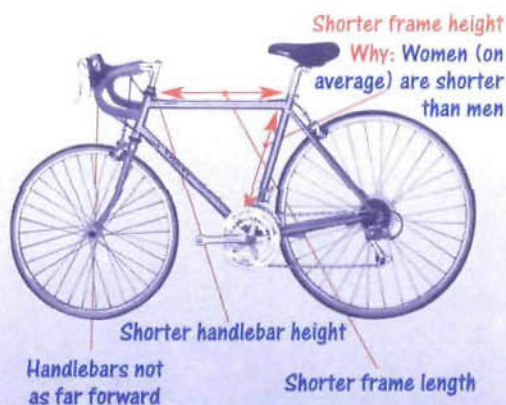
CHOOSING A

The four basic bike types

	Mountain or ATB	Cruiser	Hybrid or Comfort	Road
TIRES	 26" diameter, 2-2.25" width	 26" diameter, 2-2.25" width	 27" or 700c diameter, 1.25-2" width	 27" or 700c diameter, .7-1.25" width
HANDLE-BARS				
BODY POSITION				

Other kinds of bikes

WOMEN'S BIKES



Why: Women have shorter torsos and more arm stress

Have your bike dealer order from suppliers listed under "Bicycles, women's" in Appendix B.

FOLDING BIKES



WHY & WHY NOT

- Easily taken on buses, trains, planes
- Easily stored in small spaces
- Good for travelling and multi-modal commutes

Have your bike dealer order from suppliers listed under "Bicycles, folding" in Appendix B.

BIKE TYPE

Which bike is made for you?

How you ride	Bike type you should ride			
	Mtn	Cruiser	Hybrid	Road
over curbs	T	T		
in an upright position		P	P	
don't watch the road	T	T	T	
on roads with glass and potholes	T	T	T	
long distances			T	T, P
lots of short runs	T	T		
mainly on concrete		T	T	T
mainly on dirt	T		T	
on both dirt and concrete	T		T	
on hills	T, P		T, P	T, P
don't use gears		G		
on wet pavement	T	T	T	
fast			T, P	T, P
in lots of wind				T, P

**STOP
HERE
AND
READ**

In most bike stores you'll find four kinds of bikes. How are they different? Mostly in tire size, handlebar height and style, and the sitting position they put you in. Choosing the one that's right for you depends on how and where you ride.

Light bikes

Don't worry about the weight of your bike unless:

- > You often must carry it up stairs
- > You ride up lots of steep hills
- > You race

If you must have a light bike, remember that cruisers weigh the most. As for other bike types, you can get lighter models simply by paying more.

RECUMBENTS

WHY & WHY NOT

-  Leaning back is less stressful on upper body
-  Reclining position gives your legs more power
-  Most recumbent riders can't see over tops of cars
-  Front wheel wobbles more when you start from a stop



On recumbent bikes, you sit back as you would on a lawn chair. This posture takes the stress off of your back, arms, and neck.

SPENDING

Buy new, used, or keep old?

Situation

Do this

You don't own a usable bike and:

- You haven't ridden a bike for a while.
- You won't ride often.
- You want to spend less than \$100.



Buy a used bike.

- Fixing your current bike costs more than \$100 (see page 7).
- Keeping an old bike working costs too much because you're using it more than you'd expected.
- You have plenty of money but no bike.



Buy a new bike.

You can make your current bike fit you and it does what you want.



Keep your current bike.

You often ride through bad weather (and especially salt) and you don't mind recycling.



Get a used bike every year and recycle the old one.

MONEY ON A BIKE

How much should you spend on a bike? You can spend \$50-100 for a used bike that'll last a long time if you take good care of it. On the other hand, you can buy a decent new bike for several hundred dollars.

The more you ride, the more you should spend—but not for the bike itself! Instead:

- Buy accessories (like a carrying rack) that help you use your bike more often. (See page 14.)
- Invest in good locks, because you can then leave your bike unattended more often. (See page 52.)
- Invest in maintenance when the bike breaks or parts wear down.
- If you haven't ridden in a while, start out with a cheap used bike to see how much you'll use it.

**STOP
HERE
AND
READ**



Danger

If you spend too little:

- Once you learn how easy it is to get around, you might end up using that bike more than you'd thought.
- You buy junk, then find yourself not riding because the bike's broken or hard to ride.
- You end up without accessories that would make you more comfortable with riding: helmet, lock, lights.



Smart Ideas

- You can find a decent used bike for \$50. After a few years, when you've trashed it, give it to your favorite bike recycler.
- Look for classified ads from rich but foolish young professionals who dump their expensive bikes, cheap, when they move.
- Scout garage sales and auctions.
- Some bike shops train kids to fix bikes. And some towns offer free bikes to the public. Contact your local advocacy group (see Appendix A) to find out. If your town has such programs, donate your old bike.

MAKING YOUR

Typical fit problems

**STOP
HERE
AND
READ**

Lots of people have bikes that don't fit right. Usually the frame is too tall, short, or long. A bad fit can hurt your back, neck, or shoulders. Or it can just make you feel strange. So should you get a different bike? Maybe not. First decide whether moving the handlebars and/or seat will fix the problem.

Bending head up hurts neck

Leaning over hurts back

Too much stretching hurts shoulders

Too much knee bend hurts legs
(Knee pain can also result from not shifting gears. See p. 20.)

Too much weight hurts arms

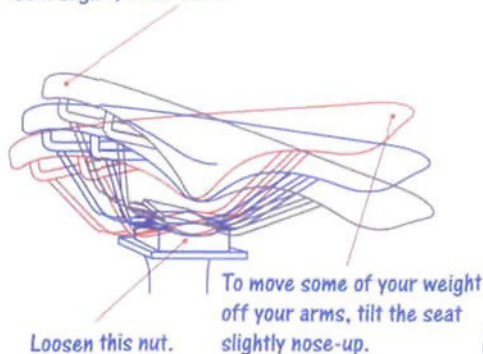


CURRENT BIKE **FIT YOU**

TILTING THE SEAT

Why: Put more or less weight on your crotch or arms

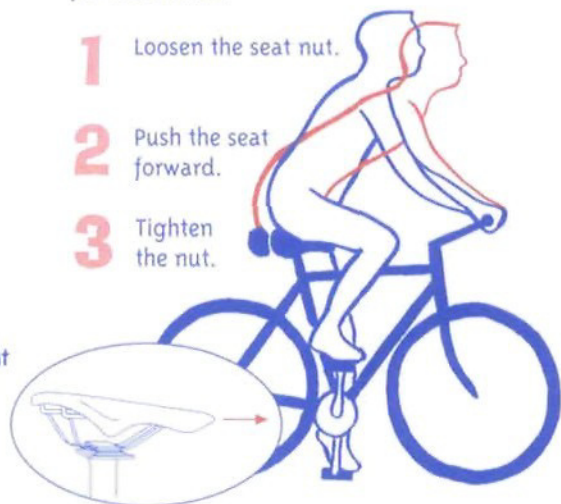
To take some weight off the front of your crotch and put more on your arms, tilt the seat slightly nose-down.



MOVING THE SEAT FORWARD

Why: Puts you closer to the handlebars for less stretch

- 1 Loosen the seat nut.
- 2 Push the seat forward.
- 3 Tighten the nut.

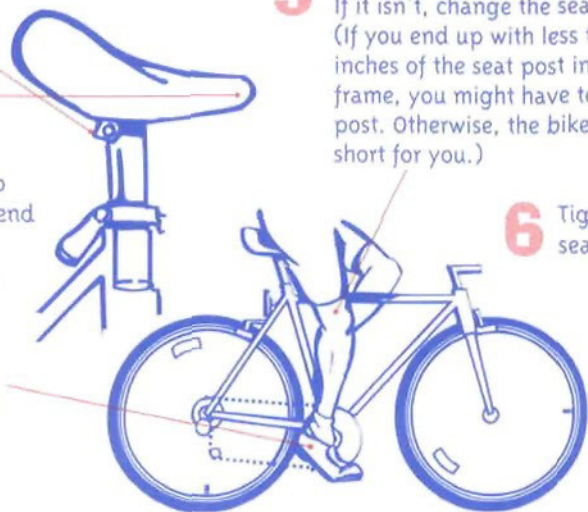


Sore butt? See page 11.

RAISING THE SEAT

Why: With the correct knee bend you pedal easier

- 1 Loosen the seat-post nut.
- 2 Pull the seat up by twisting it back and forth.
- 3 Put the bike next to a wall or have a friend hold it. Then sit lightly on the seat.
- 4 Put one pedal at the 6 o'clock position, and put your foot on it.
- 5 Your knee should be slightly bent. If it isn't, change the seat height. (If you end up with less than two inches of the seat post inside the frame, you might have to get a longer post. Otherwise, the bike is simply too short for you.)
- 6 Tighten the seat post-nut.



Adjusting the handlebars

Trick #1 is easiest. If it doesn't work try #2, then #3. But for #2 and #3 you have to take apart your handlebar assembly. If you don't know how, ask a bike mechanic to do it for you.

**STOP
HERE
AND
READ**

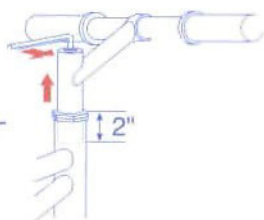
WHY



You sit straighter and don't stretch as far

1 Raising your current stem

Loosen the bolt at the top of your handlebar stem. By twisting the handlebars, pull them up to a comfortable position. If they won't get there without leaving two inches of stem inside the frame, you should replace or extend your handlebar stem.



2 Extending your stem

Get a handlebar stem riser. Risers come in several heights and diameters. Installing one requires a socket wrench with a six-inch extension, and you might have to replace some cables. (Have your bike dealer order the Pyramid Stem Riser from J&B distributors, listed under "Handlebar parts" in Appendix B.)



3 Replacing your stem

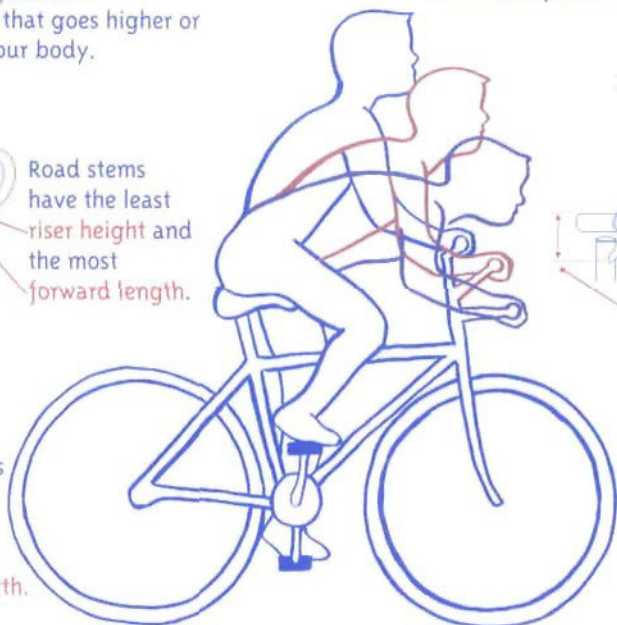
Get a stem that goes higher or closer to your body.



Road stems have the least riser height and the most forward length.



Cruiser stems have high riser height and/or no forward length.



ATB stems (for mountain and cross/hybrid bikes) have moderate riser length and height.

Fixing a sore butt

If you haven't bicycled in a while, expect to get a sore butt or crotch or chafed thighs. After you've ridden regularly, chafing or soreness should go away.



Danger
The widest and softest seats give your butt the most comfort. But if the seat's too wide, it'll rub the inside of your thighs. And if it's too soft your hips might rock—making your thighs chafe.



IF SORENESS DOESN'T STOP

- 1** Check the seat height and tilt (see page 9).



- 2** Try a different seat.



middle groove or slit



gel-filled



slim tip and raised back



spring-cushioned



split



wide rear

- 3** Use padded or seamless cycling shorts with no underwear.



- 4** Wear low-friction cycling briefs. (Seams in regular underwear cause friction.)



- 5** If friction persists (especially for women):
- Apply baby powder to both your body and shorts before cycling.
 - Apply a skin toughener, such as Preparation H, to the areas that make seat contact. Apply before you go to bed, not before you ride.
- 6** For rashes, infections, or excessive discharges:
- Use shorts with a cotton strip, to absorb moisture.
 - Before riding, use a moisture barrier such as Desitin.

BUYING A NEW BIKE

After you've decided what kind of new bike you want (see pages 4 and 5), it's time to go to the bike store. But there are a few things you should know to help you make the purchase.

**STOP
HERE
AND
READ**

Before you shop

KNOW YOUR LIMIT

Decide on your spending limit for each of these



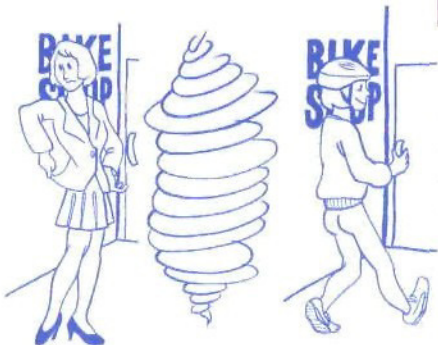
The bicycle itself



Accessories such as carrying racks and patch kits (see page 14)



Locks (see page 52)



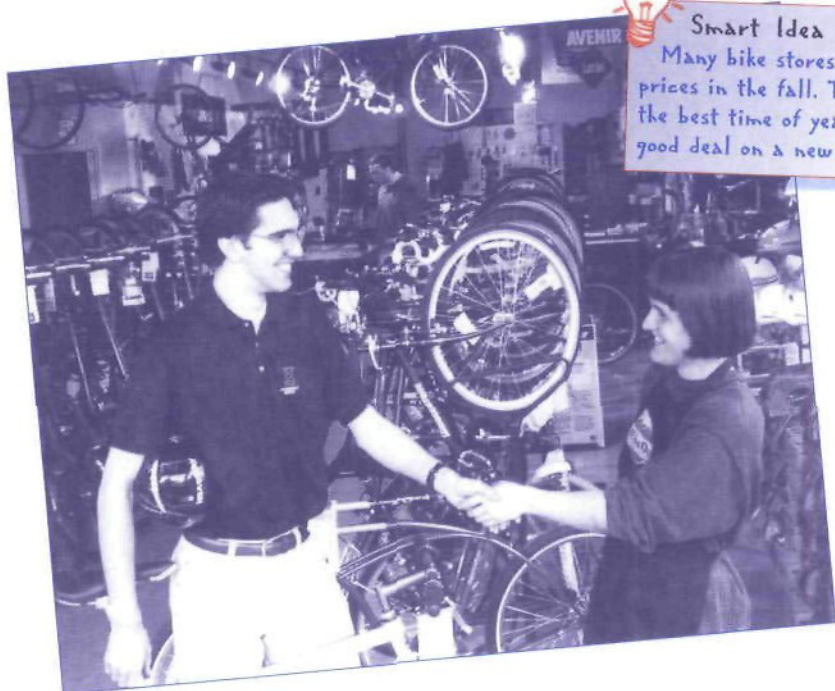
WEAR YOUR BIKE CLOTHES

Do you plan to wear the same kind of clothes whenever you ride? If so, you might want to wear them when you look for a new bike. It'll help you get the right fit.



Smart Idea

Many bike stores cut prices in the fall. This is the best time of year for a good deal on a new bike.



At the bike store

BODY POSITION

Take the bike for a test ride and check these items.



Smart Idea

If a bike salesperson won't spend time to help you get the right fit, buy your bike elsewhere. See page 34 for tips on choosing a bike shop.

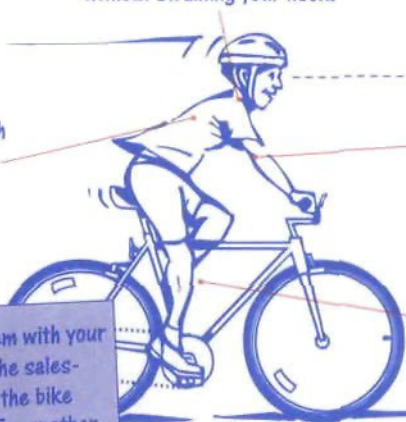
You can look straight ahead easily without straining your neck.

You don't feel too much stretch on your back, shoulders, or arms.

You can reach the handlebars comfortably with your elbows slightly bent.

With one of your feet on a pedal in the 6 o'clock position, your knee is slightly bent.

If you have a problem with your body position and the salesperson can't fix it, the bike might not fit you. Try another bike—or another bike store.



SORE BUTT

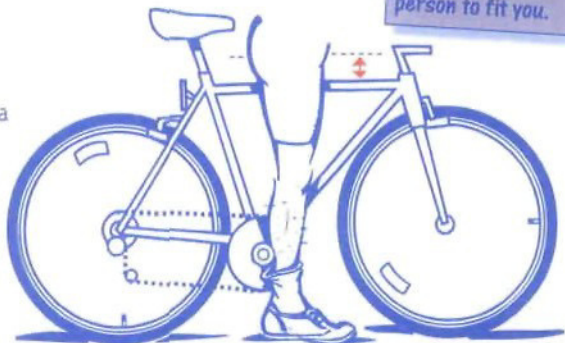
When you buy your bike, ask the salesperson if you can exchange the seat later—in case you find it uncomfortable. But, after you've ridden for a few weeks, what if your butt doesn't stop hurting? See page 11.



On a woman's frame (or any frame without a horizontal top tube), ask the salesperson to fit you.

FRAME HEIGHT

The first thing you should check on a bike is the frame height. On a bike made for men, stand with the bike between your legs, just in front of the seat. Measure the space between the top tube and your crotch. For urban riding, you want a one- to three-inch space.



WHAT ACCESSORIES DO YOU NEED?

Item	Needed if you:	For more info see page
aluminum wheels	ride in rain, so need quick stops on wet rims	219
ankle strap	wear long pants, no chain guard	233
armrests	ride far in bent-over posture	15
axle pegs	transport another adult short distances	17
basket	carry stuff occasionally	17
bungee cords	carry stuff occasionally	16
carrying rack	carry stuff occasionally	16
chain cover	ride often in rain or snow	219
fenders	protect clothes if ride often in rain or snow	222
foam grips	have hand numbness or wrist pain	15
glasses or goggles	ride in dusty or insect-filled air, or wear contacts	233
gloves	have hand numbness	15
handlebar bag	use maps often, carry stuff occasionally	17
handlebar ends	sometimes need less wind resistance	15
helmet	fall, so you won't smash your head	226
kerchief	wipe hands after bike adjustment, face after hot ride	233
key holder or chain	ride without pockets or bags	233
kickstand	park your bike, or add or remove baggage	189
lights	ride at night	212
locks	want security	52
mirrors	feel uncomfortable about what's behind	68
noise makers	need to be obvious	76
panniers	carry stuff often	17
pump	bike far from gas stations	30
quick-release seat	hit on ceilings, or fear theft	18
quick-release wheels	remove wheels often	18
reflectors	ride at night	210
seat bag	carry tools only	17
tire liners	get tire punctures	31
toe clips	ride hills, or go very fast or far	19
trailers	carry big stuff often	16
water bottle	bike long distances or in hot weather	19

**STOP
HERE
AND
READ**

When you spend money on a bike, you should budget something for accessories. Why? Some of these extras can make your biking a lot easier. This list shows you what you might need and why.

HANDLEBAR

ACCESSORIES



ACCESSORY BAR

WHY & WHY NOT

- ✔ If you have lots of gadgets (brake levers, gear shift levers, light, computer, bell), they'll crowd your handlebars.
- ✘ A thief can steal everything on the accessory bar just by taking the bar.



Shown: *ExcessAccess* accessories mount. Have your dealer order from *Sidetrak* (listed under "Handlebar parts" in Appendix B).

HANDLEBAR ENDS

ARMRESTS



WHY & WHY NOT

- ✔ When you ride long distances, they let you lean your forearms onto the handlebars.
- ✔ They make wind hit you less, and they take weight off of your wrists and hands.
- ✔ They are easily clipped on and off.



WHY & WHY NOT

- ✔ On straight handlebars, bar ends let you lean forward so wind hits you less. And they make it easier to change your hand position.

FOAM GRIPS OR BIKE GLOVES



WHY & WHY NOT

- ✔ They cushion your hands to stop pain and numbness.
- ✘ Cheap ones wear through easily.




Smart Idea

To put on new foam grips, coat your handlebars with soapy water. To remove or turn old grips, use a spray lubricant with a tube nozzle to shoot lube into the grip.



BAGGAGE

WHY & WHY NOT

 A carrying rack lets you carry stuff much more conveniently than you could in your arms or in a backpack.

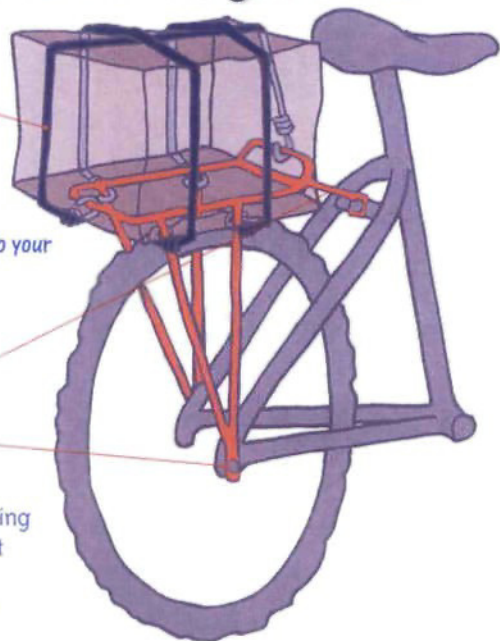
Carrying racks and bungee cords

With enough bungee cords, you can strap on really big loads.

Carrying racks attach to your bike in two places:

behind the seat post

next to the rear axle



net strap



adjustable bungee



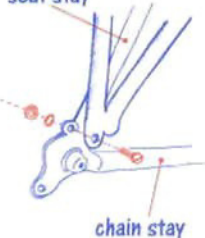
multi-strap

INSTALLATION

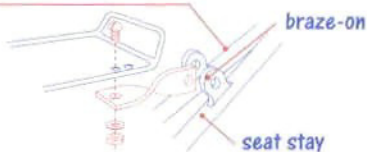
What if your bike doesn't have the right holes for mounting a carrying rack? Don't worry. You can get hardware that adapts your bike frame to hold the rack. Order clips, brackets, and extenders from a distributor listed under "Hardware" in Appendix B.

Make sure the rack doesn't get in the way of the brake cable

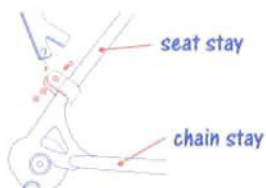
seat stay



chain stay



Attaching a rack to a bike with existing holes





Attaching a rack to a bike using extra hardware



Trailers

WHY & WHY NOT

 Can carry really big stuff.

 Needs installation, trickier to ride.



ACCESSORIES

Other carrying items

BASKETS



Smart Idea
To keep stuff from rattling around, put in a large, flat sponge.



HANDLEBAR BAGS

WHY & WHY NOT

- ✔ You can carry stuff you want to get at while you're riding, such as maps and food.
- ✘ You can't carry big stuff. If you do, get panniers.

PANNIERS

WHY & WHY NOT

- ✔ Make it easy to carry lots of stuff often.
- ✘ Not cheap. If you carry stuff less often, get side baskets.



Carries lots of stuff

Easily clip on and off your bike



Usually come in pairs: use two for long trips, one for daily commuting



Side pockets for stuff you pull out often



How to modify:

- > add shoulder strap
- > waterproof them with a spray

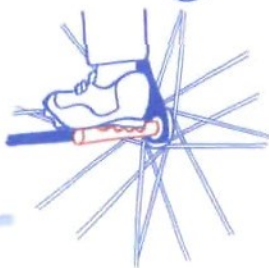
AXLE PEGS

Axle pegs (also known as free-style pegs) come in different sizes. Before you buy pegs, ask your bike dealer to check your axle size.



WHY & WHY NOT

- ✔ Lets you carry another person for short distances.
- ✘ You can't install one on a quick-release wheel.



SEAT BAGS

WHY & WHY NOT


- ✔ You want to carry only tools or other small stuff in a bag that's easy to take with you when you leave your bike unattended.



QUICK-RELEASE ACCESSORIES

Quick-release seat


WHY & WHY NOT

-  When you leave your bike, you can easily remove the seat to avoid theft.
-  When you carry your bike under a low ceiling, you can keep your seat from getting in the way.
-  When you leave your bike, you always have to take the seat with you or use a seat lock.



Quick-release wheels

WHY & WHY NOT

-  If you often remove your wheel for fixing or locking, you can remove it more easily.



Smart Idea
Don't avoid quick-release wheels because you think they're easier to steal. A thief with a wrench can just as easily remove nut-fastened wheels. Always lock through both your wheels!



HOW TO ATTACH A QUICK-RELEASE WHEEL

- 1** Flip the quick-release lever so that its inner side faces out.



- 2** Stand the bike upside down. Place the wheel into the frame so that the quick-release lever is on your left as you stand in front of the bike.



- 3** On the back wheel of a bike with a rear derailleur: to get the axle past the chain, you might have to pull the derailleur back.



- 4** Work the axle into the frame by pushing down on both sides. If the axle won't go in, unscrew the axle nut slightly: With one hand, hold the quick-release lever. With the other hand, grab the nut on the other side of the wheel. Unscrew the nut a quarter turn (counter-clockwise as you face it).






POWER ACCESSORIES



Toe clips & clipless pedals


WHY & WHY NOT

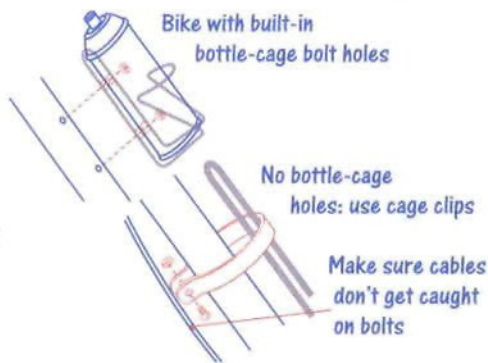
-  Give you more power on hills and in head winds by letting you pull up on each pedal.
-  Toe clips don't let you wear all kinds of shoes.
-  Toe clips don't let you take your foot off the pedal as easily as when you don't have them.



Water bottle

WHY & WHY NOT

-  You ride long distances or in hot weather, when it's important that you drink water.



- 5** After you've gotten the axle all the way in, turn the quick-release lever to a three o'clock position.



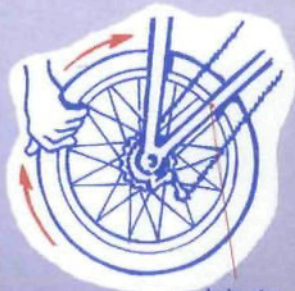
- 6** With one hand, apply the brakes to the wheel and hold them tightly. With the other hand, close the quick-release lever: flip it so that its outer side faces out. Then release the brake.



- 7** The lever is closed when it gets parallel to the chain stay, and it should close tightly. If the lever doesn't close all the way, flip the lever back open. Unscrew the axle nut (counterclockwise as you face it) a quarter turn. Then try to close the lever again. If you can easily close the lever past the point where it's parallel to the chain stay, flip the lever back open. Screw the axle nut in (clockwise as you face it) lightly, until you feel it resist your effort. Then try to close the lever again.

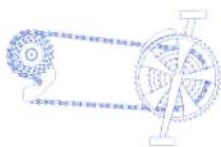


- 8** Give the wheel a slow spin. (Spin the back wheel forward so the pedals don't move.) If the tire rubs against either chain stay or brake pad, open the quick-release lever. Move the wheel so the tire doesn't rub; hold it there, and close the lever. If you can't position the wheel in a way that keeps it from rubbing on a brake pad, you might have to open your brake slightly. (If you don't know how, get expert advice.)

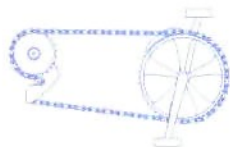


GEARS

Why have gears?



Multi-speed bike with multiple front and back gears



Single-speed bike with single front and back gears

WHY YOU SHOULD HAVE MULTIPLE GEARS



- > You have a hard time getting started from a stop.
- > On flat land, you want to accelerate quickly.
- > You want to ride like a speed demon from Hell.
- > You start and stop a lot or climb hills, and not having multiple speeds causes knee problems.
- > You want easier pedaling on hills or in wind.



ARE MORE SPEEDS BETTER?

Not always. When a bike has more than 10 speeds, many of the speeds overlap each other. So while the bike you want might come with 21 speeds, you probably don't need (and won't use) them.

WHY YOU DON'T WANT MULTIPLE GEARS

- > Multi-speed gear hardware—the derailleurs and cables—gets screwed up easily.
- > Multi-speed gear hardware requires more maintenance—especially if you often park your bike outside or ride in snow.
- > If you've always ridden single-speed bikes, it might be too much hassle to learn shifting.
- > If you haven't used multi-speed gears and don't have a problem pedaling, you don't need them.



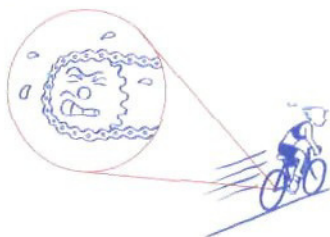
ALTERNATIVES TO MULTI-SPEED BIKES

- > Buy a single-speed bike.
- > Turn your multi-speed bike into a single-speed bike. Have a mechanic remove the derailleurs and shorten the chain.
- > Buy a bike with a multi-speed internal-gear hub. They need adjustment less often.

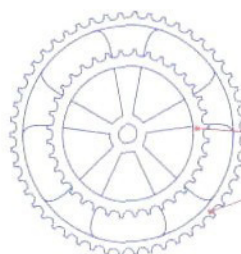


Gearing for hills: a granny gear

If you ride often on tough hills, get a bike whose front gears include a granny gear. When you shift to the granny gear, you pedal faster but with less force than you do with your other gears.



STANDARD FRONT GEARS

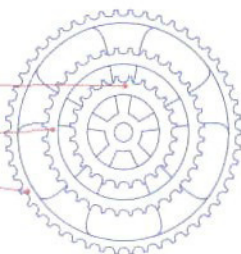


Double chainring

Smallest gear has 24 to 28 teeth

Mid-sized gear has 32 to 40 teeth

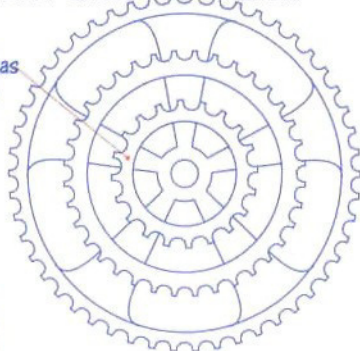
Largest gear has 42 to 53 teeth



Triple chainring

FRONT GEARS WITH GRANNY GEAR

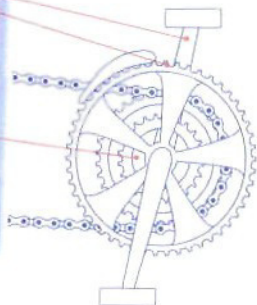
Smallest gear has 20 or 22 teeth



New Words

Crank
The front gears and arms that connect to the pedals.

Chainring
Any one of the front gear circles.



Smart Idea

For even easier pedaling on hills, get a bike whose largest rear gear has 32 or more teeth.



To learn how to shift gears, see pages 154 to 158.

TIRES

Tire size

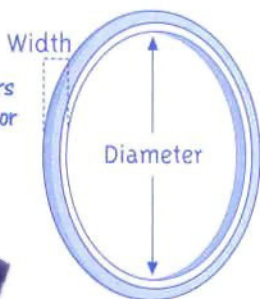
Some people replace the tires that came on their bike with skinnier or wider tires—usually because they want a tougher tire or they want to pedal more easily. If you want to replace your tires with a different kind, check here to find out which to get—and what to watch out for.

**STOP
HERE
AND
READ**

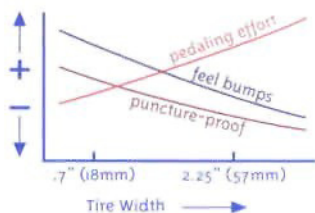
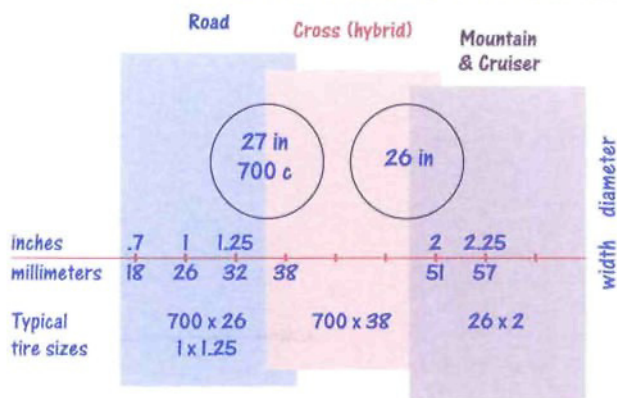
HOW TIRES ARE MEASURED

Tire size usually appears on the side

- > First number: diameter
- > Second number: width
- > Numbers may be shown in millimeters (two or three digits) or inches (one or two digits)



WHICH BIKES CAN USE WHICH SIZES



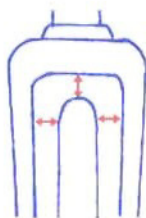
Wider tires:

- > You feel bumps less
- > Don't puncture as easily
- > Make you pedal harder
- > Recommended if you weigh more than 150 lbs.

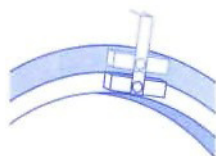
PUTTING ON A WIDER TIRE

What if you want wider tires on your bike? The rims of your wheels can probably hold tires that are slightly wider than the ones that came with your bike. For example, if your tire's size is 700 x 28, you can probably use 700 x 32 tires. To learn how wide a tire you can use, show one of your wheels to a bike dealer.

If you install a wider tire and it rubs against the frame no matter how you adjust it, it's too wide.






A wider tire might require you to move the brake pads—otherwise they'll rub the tire instead of the rim.





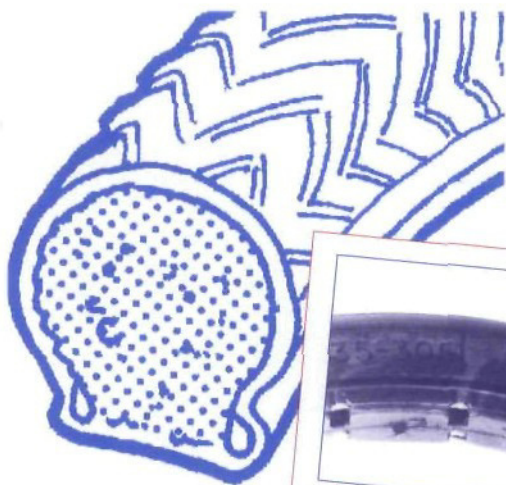
Which tread should you get?

Feature	Treads		
			
For riding often on dirt or packed snow	×		
Don't turn as easily	×		
Ride on both pavement and dirt		×	
Move faster on pavement			×
Fewer flats	×		

AIRLESS TIRES

WHY & WHY NOT

-  Never go flat
-  Never need inflation
-  Can last several times as long as standard tires
-  Available in all sizes
-  Require special tool to install
-  Cost the same as tire and tube, but you pay all at once



 **Recommended Product**
 Nu-Teck Airless Bike Tires
 Available in most sizes.
 Have your bike dealer order from Nu-Teck, listed under "Tires" in Appendix B. (For more on Mr. Bike's Recommended Products, go to www.mrbike.com/products.)

MAINTENANCE BASICS

When your bike has a problem, it's usually one of two things: a tire goes flat or something (often the chain) squeaks. If you want to keep your bike running, you should know what to do about these problems.

You can patch a flat or oil a chain pretty easily once you've seen it done. This chapter shows you how.



Page 29



Page 26

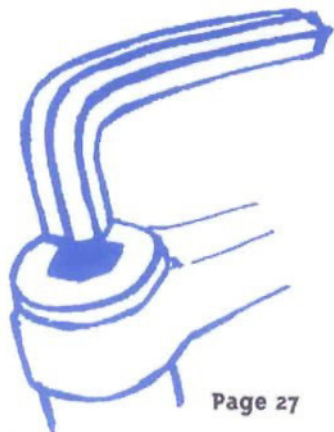
What should you do about other problems? First, you should know how to figure out whether your bike even *has* a problem. This chapter shows you how to check your bike, quick, each time you ride. This way, you can find little problems before they become big ones.

When you don't have the time, tools or know-how, you turn to the bike shop. But first you've got to find one with a good mechanic. How do you tell the expert from the inept? Find out in this chapter.



But maybe you want to learn to do most repairs yourself. If so, you'll need some tips to get started. Read 'em here.

Page 30



Page 27

MAINTENANCE

If you haven't used your bike in a while, you should check a few things before riding. And even if you use your bike every day, it can get out of whack pretty quickly. These pages tell you how to catch the obvious problems before you ride.

**STOP
HERE
AND
READ**



Inflation

Tires lose a little air every day. Use a pressure gauge to make sure the tire's pressure isn't more than five pounds under the needed pressure (printed on the side of the tire).

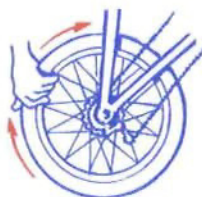
What to do

Add air.

No gauge? Push each tire hard against a curb. If you can flatten it, add air.

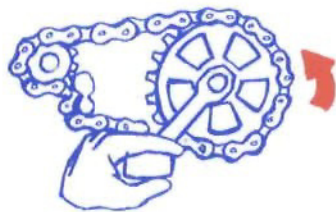
Wheel spin

Lift each wheel up and give it a slow spin. (Spin the back wheel forward so the pedals don't move.) Check that it doesn't rub against the brake pads, frame, or anything else.



What to do

- 1** If the wheel rubs against the frame or the brake pads, loosen the axle nuts or quick-release lever, push the tire so it doesn't rub, and tighten the axle.
- 2** If the wheel rubs against a brake pad and step 1 doesn't work, move the pads farther from the wheel. You can usually do this by turning an adjuster barrel located at one end of the brake cable. If it still rubs, have a mechanic true the wheel.
- 3** If the wheel doesn't spin freely but it's not rubbing, have a mechanic check the axle and/or replace the bearings.



Chain

Use your hand to pedal the chain backward.

What to do

If it squeaks or hangs up, lubricate it. If it's badly rusted, have it replaced or have the rust removed.



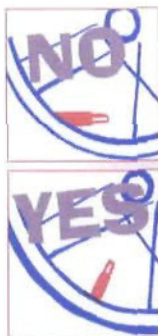
QUICK CHECK

Tires

Turn each wheel slowly. Look for glass or debris embedded in the tire, and for big cuts.

What to do

Remove glass or other debris. (A small screwdriver helps.) If you spot any big cuts, bulges, bubbles, or places you can see the inner casing, replace the tire.



If the valve stem doesn't point straight at the middle of the wheel, the rim might cut it.

What to do

Let the air out and straighten the valve.

Handlebars

Hold the front tire between your legs and try to turn the handlebars with moderate pressure.

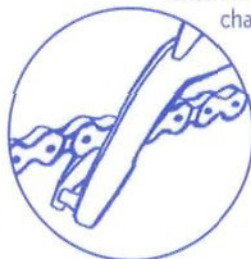
What to do

If the handlebars are loose, tighten the stem bolt slightly.

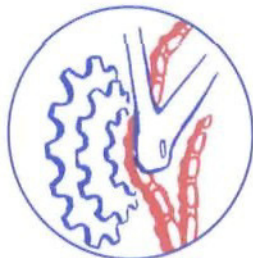


Shifting

At the start of your ride, try all the gears, shifting each gear lever from high to low. You have a problem if the lever sticks, you can't shift to all gears, the chain rubs the derailleur, or the chain jumps off the gears.



Chain rubs the derailleur



Chain jumps off the gears

What to do

Have a mechanic clean and adjust the derailleur, or replace the derailleur cable and/or housing.

Brakes

Check for any of these problems on each wheel:



When you apply the brake, one or both brake pads don't touch the rim.



You can squeeze your brake lever all the way to the handlebars.



The brake can't stop the tire from moving on dry, clean pavement.

What to do

- 1 Try moving the brake pads closer to the wheel. You can usually do this by turning an adjuster barrel, located at one end of the brake cable.
- 2 If adjustment doesn't work, have a mechanic check the brakes, replacing the brake cables or pads if needed.

FIXING &

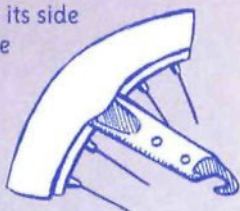
How to patch a flat tire

WHAT YOU'LL NEED

- > Tire patches
- > Patch glue
- > Sandpaper or sanding pad
- > Air pump
- > Two tire levers or flat-head screwdrivers

Remove

- 1** Lay your bike on its side or stand it upside down.
- 2** Use a tire lever or screwdriver to pry the tire over the rim. (Take care with screwdrivers. They can easily puncture your tube.)



- 3** Leave the lever or screwdriver between the tire and rim so it doesn't pop back in. If you don't have another lever or screwdriver, insert a flat stick.
- 4** A few inches away, pry out more of the tire. Pry around the tire until you've pried out the entire side.

- 5** Reach under the tire and pull out the inner tube. Work around the tire until you've pulled the whole tube out.



- 6** To get the valve out of the rim, hold the tire away from the valve with your thumb. Use your other hand to pull out the valve.



Find

- 7** Pump air into the tube until it's stretched tight. If you can't find the hole by listening, lightly grab the tube with a circle made by your thumb and fingers. Run your hand around the tube until you feel a stream of air.



- 8** If you hear but can't see the hole, rub saliva over it. It'll bubble over the hole. If the hole's too big to patch (bigger than a pin-hole) or it's right next to the valve stem, you must remove the wheel and replace the tube.



- 9** Mark the hole with pen, pencil, stone, or chalk. Draw an asterisk, using the hole as the middle.

Flat tires are a cyclist's most common problem. If you use your bike a lot, you should know how to patch a flat. But you'll have to fix fewer flats if you take preventive steps (shown on page 31).

**STOP
HERE
AND
READ**

STOPPING FLATS

Patch

- 10** Let all the air out of the tube by pushing in the valve stem.



- 11** Using sandpaper, a metal sanding pad, or a rough stone, roughen the tube around the hole. Roughen an area about as big as a quarter.



- 12** Squeeze a little glue out of the glue container. Using the container's nozzle, smear the glue over the roughened area.



- 13** To keep the glue in the tube from drying out: Squeeze the container until glue starts coming out, then cap it.

- 14** Taking care not to touch the glue, hold the tube against the tire to find where the puncture occurred. Look closely at the tire's outside, and run your fingers along the underside. Remove any debris.



- 15** Remove the foil backing from a patch. Place the patch onto the glued area. Press for about a minute.

Replace

- 16** Put the valve into its rim hole: On the side of the tire sticking over the rim, hold the tire back with your thumb. Push the valve in, and pull it through on the other side.



- 17** Pump a little air into the tube to give it shape. Work the tube into the tire, all the way around. Don't let the tube get twisted. If you get to the end and there's too much tube left: Pull the tube out and start over, putting in a little slack as you go.



- 18** Using your thumbs, push the tire back inside the rim. Don't pinch the tube between the rim and the tire. If the last part won't go over the rim easily, use a tire lever or screwdriver to pry it.



- 19** Push the valve most of the way into the tire. Make sure the tire sits in the rim evenly. Then pull the valve back out.



Inflate

- 20** Pump air into the tire until it's inflated, but not hard. Then let all the air out of the tire. This gets the kinks out of the tube.

- 21** Inflate the tire to its recommended pressure.

Other stuff you need

Air pumps

- > When using a gas-station pump, fill the tire with short bursts. After each burst, check the air pressure so you don't explode the tire.
- > Get a floor pump with a built-in pressure gauge. It'll help you keep your tires inflated to the right pressure.



Old sock

Keep an old sock in your bike bag. When you have to make back-wheel repairs, cover one hand with the sock before grabbing your chain. You can also keep your tire patch stuff in the sock.

Bike lock

Always carry a lock so you can lock your bike outside. If your bike breaks down and you don't have time or tools to fix it, you can lock it and get it later. (What kind of lock? See Chapter 3.)

Self-adhesive patches

Self-adhesive patches need no glue: You just peel and stick 'em on. So they're great to have in freezing weather, or at any time your tire-patch glue has dried out.

Danger:

Most of these patches leak after the tire's been deflated.



Smart Idea

Always carry a spare inner tube. Why? You might get a flat and discover you're out of patches or glue. Also, it's hard to patch a flat in extreme cold.



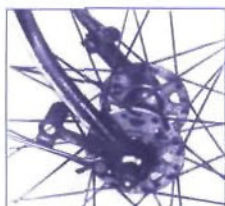
I teach people to learn to fix flats by having them first put on a spare tube—quick and easy. Then I teach them to put on patches.

Cynthia McArthur

fixes bikes in Minneapolis MN

How to remove a wheel

- 1** Lay the bike on its side or stand it upside down.
- 2** Loosen the brakes. On some bikes you do this with a lever, on others by turning the barrel adjuster (see page 27).
- 3** Loosen the axle. On some bikes you flip the quick-release lever. With no quick release, use an adjustable wrench to unscrew the nut on each side of the axle.
- 4** On a back wheel, pull the derailleur back and hold it. Then pull the wheel out of the frame. Use your hand to free gears from the chain.
- 5** On a front wheel, remove retainer clips, if present. Then pull the wheel out. To learn how to replace the wheel, see page 18.



Preventing flats

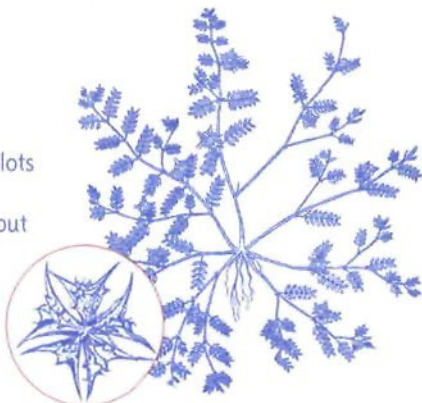
Tactic	How it works	Why	Why not
Tire inflated to maximum air pressure	<ul style="list-style-type: none"> > Repels sharp objects > On hard bumps, tube won't get pinched 	Little or no cost	Must do it every week
Kevlar-belted tires	Embedded object can't get thru belt to puncture tube	As easy to install as standard tire	<ul style="list-style-type: none"> > Higher cost > Not 100% effective
Wide tire	Less pressure directed at any single point	As easy to install as standard tire	Takes more effort to ride
Puncture-proof tire liners	Goes between tire and tube to block sharp objects	Effective	Installation slightly tricky (see below)
Thorn-resistant tubes	Thicker and heavier than regular tubes	As easy to install as standard tube	More expensive
Self-sealing tube	Contains liquid sealant that automatically plugs holes	Effective	<ul style="list-style-type: none"> > More expensive > Won't prevent blow-outs > Can clog air valve
Airless tires	Completely solid, no inner tube	Completely eliminates flats	<ul style="list-style-type: none"> > Can't make easier to ride by changing inflation > Tricky to install
Switch front and back tires	Back tire wears faster, so it lasts longer when switched	No cost	It's a hassle

Tire liners

Where the ends of a tire liner overlap, they sometimes chafe the inner tube and cause a flat. You can prevent this by sanding down the ends to make them thinner.

Thorns

In the autumn in much of North America, thorns cause lots of flats. The thorns often come from a plant called the puncture vine (*Tribulus terrestris*), shown here. Watch out for them when you ride on sidewalks or through parking lots. If you ride over some, stop and brush them off your tires. And when one sticks into a tire, some cyclists leave it in. That lets the tire stay inflated long enough to get someplace where they can fix a flat.



LUBRICATION

Choosing a chain lube

Situation	Lube Type	Active Ingredients	Why & Why Not
Clean, dry urban riding	Standard bike lube	Teflon, PTFE, synthetic oil	<ul style="list-style-type: none">> Penetrates to chain's rollers> Lasts longer than non-bike lubes> Doesn't attract dirt> Relatively inexpensive
	Silicone spray	Silicone	<ul style="list-style-type: none">> Cheap and doesn't attract dirt> Doesn't last long
	Household oil	Petroleum	<ul style="list-style-type: none">> Cheap> Attracts dirt, doesn't last long
Ride in rain & fog	Standard bike lube	Teflon, PTFE, synthetic oil	See above
Ride in snow & salt	High-viscosity or long-distance bike lube	Teflon, PAO, molybdenum, detergent polymers	<ul style="list-style-type: none">> Long-lasting> Attracts less dirt
	Motor oil	Petroleum	<ul style="list-style-type: none">> Heavy weight (90W) lasts longer> Attracts lots of dirt
Ride in dry dirt & dust	Protective or self-cleaning bike lubes	Paraffin wax	Flake-off film repels dirt

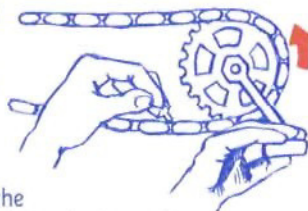


Smart Ideas

- > Should you get a squeeze bottle or spray? A squeeze bottle drips on, so you waste less lube. But a spray's faster to use.
- > If a chain's heavily rusted, first try lubing it with a high-penetrating lube. If the chain still squeaks or jerks, remove rust with naval jelly or replace the chain.
- > Before you lube a chain after riding in wet conditions, spray it with WD-40 to drive out moisture. After WD-40, wipe off the chain and let it dry before lubing.

How to lube a chain

- 1 Grab the bottom of the chain loosely with a lint-free rag. With the other hand turn the pedals backward, sliding the chain through the rag. Pedal the chain around twice to remove grime.
- 2 With one hand, pedal the chain backward so it goes completely around once. At the same time, with the other hand drip or spray lubricant onto the chain. **Drip:** Turn the chain slowly and put one drop on each place where two chain links meet. **Spray:** Cover the wheel with a rag so you don't get lube on it. Turn the chain more quickly than for dripping.
- 3 If you use a lube that can attract dirt (see the table above), repeat step #1 to get the excess lubricant off the chain.



Lubing other parts

What lube to use

Use any general-purpose lubricant. In most cases, household oil works fine. Except for gears, pedals, and axles, lubricate each part once for every 60 days you use your bike. Lube more if you ride in rain or snow.



Smart Idea

After lubing a part, move it back and forth to spread the lube.

What to do about dry or squeaky parts? It's one of the most common bike problems, especially with chains. It's also the easiest to fix, by lubricating—also known as lubing or oiling. These pages tell you what lubes to use, and how and where.

**STOP
HERE
AND
READ**



Back gear assembly (freewheel)

If your back wheel clicks or hums loudly when you coast, lay the bike on its side and drip lube into the hub of the gears. Leave the bike on its side for a while so the lube can work in. If noise persists, replace the assembly.

Brakes

Lube where the brake arms connect to the frame and each other.

Brake & derailleur cables

If you ride often in rain or snow, drip lube into the top openings of cable housings. *Don't* do this to self-lubing cables or Teflon housings.

Gear-shift levers

Lube the pivot points. With hand-grip shifters, lay the bike on its side and drip lube into the place where the shifter meets the handlebars.

Brake levers

Lube the pivot points.

Front derailleur

Lube the hinges.

Pedals

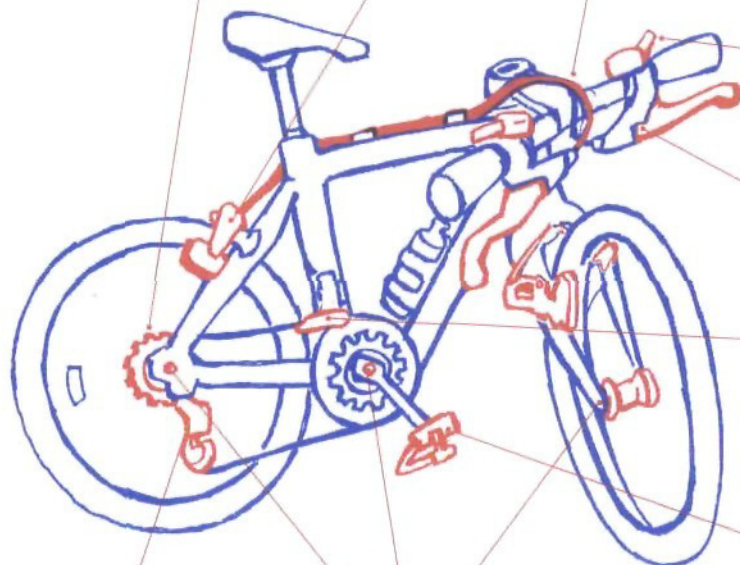
If a pedal squeaks, lay the bike on its side and drip lube into the pedal's axle. Leave the bike on its side for a while so the lube can work in. If squeaking persists, replace the pedal.

Back derailleur

Lube the hinges and the gear hubs.

Wheel axles, pedal axle (bottom bracket)

Have a mechanic grease and replace the bearings every year.



GETTING HELP

Finding a bike shop

One of the best ways to get good, regular maintenance is to find a good bike shop. How? Here are some tips.

- 1** Ask around. Find people who ride like you do, and are happy with the work done on their bikes. Get the name of their bike shop.
- 2** Go to a recommended shop and talk with the owner or manager. (If you can, do this when they're not busy: during cold or rainy seasons, or mid-morning on a business day.) Tell them you want to find a shop where you can regularly have your bike fixed.
- 3** Ask about the mechanics. Are they experienced urban bikers? Also ask if you can use the same mechanic every time (just as you'd always have the same person cut your hair). Some shops hire certain mechanics just for the summer, so you don't know if they'll be around next year.
- 4** How does the dealer react to your questions? If they seem willing to spend time with you, you might have found a winner.

Do it yourself

Maybe you'd like to know enough about repairs to keep your bike going in emergencies. Or maybe you can't pay a bike shop every time you need repairs. If so, learn to fix stuff yourself—it's easier than you might think! Several ways to learn:

- **Take a class.** Many bike dealers, community colleges, and bike clubs offer bike-repair classes.
 - **Get an advisor.** Find a friend or bike dealer who's willing to advise you when you can't figure stuff out. In exchange for a bike dealer's help with your bike, you can:
- 1** Buy the tools and parts you need at their shop.
 - 2** Refer your friends to them.
 - 3** Put off big repairs until cold or rainy months, when they need business.

AVOIDING RIP-OFF

Lots of bikes get ripped off because people park them in the wrong places. A good lock is a bad joke if a thief saws through the fence it's locked to. In this chapter you'll learn the good and bad places to lock your bike.



Page 47

Page 55



Some locks have been around so long that thieves treat them like pet dogs: they take them out every day. Which ones do thieves know best? This chapter tells you.

It's not only locks that turn thieves away. If you make your bike look ugly, you might steer a thief toward somebody else's bike that looks better. This chapter tells you how.



Page 38

But, in spite of good locking, what if your bike finally does get ripped off? There's one good

way to prepare: Give your bike I.D. If someone finds your stolen bike, positive I.D. helps get it back to you. This chapter describes a bunch of different ways to I.D.



Page 42

Also, many stolen bikes don't go far from where they got snatched. Knowing where to look can help you find your stolen bike. You'll get ideas on where to look from this chapter.

HOW TO UGLIFY

Wrap the frame with inner tubes or tape

WHAT YOU'LL NEED



- > Black electrical tape or duct tape
- > Dark garbage bags or old inner tubes
- > Scissors



If your handlebars have bright tape, cover them with black tape.

Cut inner tubes open, and wrap long strips around frame.

Many thieves can't tell a cheap bike from a titanium-alloy wallet buster. They simply go for anything that looks new and shiny. So how do you keep thieves from looking at your bike, whether it's a Kmart special or a high-tech ultra-light? **Uglify!**

**STOP
HERE
AND
READ**



Wrap tight next to cables so they don't rub too much.

Use separate pieces to get around water bottle cages.

Cover every possible part of the frame with your materials.

WHY & WHY NOT

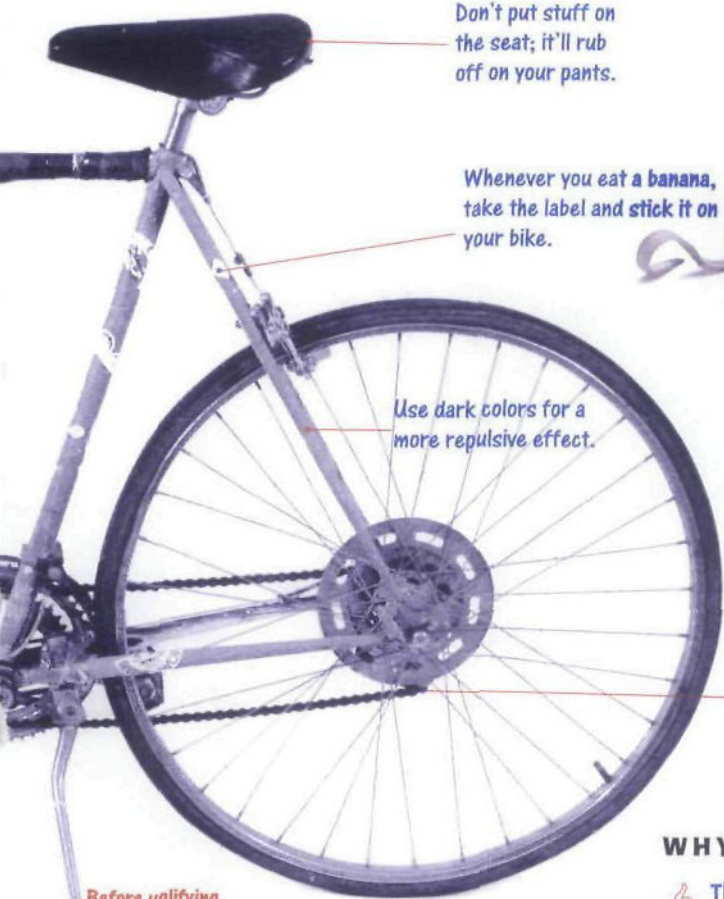
- You can remove the ugly covering later.
- Might interfere with your cables.

YOUR BIKE

Paint your frame and cover it with stickers

WHAT YOU'LL NEED

- > Anything that will stick to painted metal surface:
- > Tape
- > Nail polish
- > Oil-based paint
- > Bumper or fruit stickers
- > Laundry marker



Don't put stuff on the seat; it'll rub off on your pants.

Whenever you eat a banana, take the label and stick it on your bike.



Use dark colors for a more repulsive effect.

Avoid moving parts.

Before uglifying



WHY & WHY NOT

-  The ugliness you can achieve is limited only by your imagination.
-  If you want to remove this stuff later, it'll take lots of work.

Ride a junky-looking used bike



Smart Idea

Don't buy a bike off the street; it's probably stolen. You might get a good deal, but you'll support the work of thieves.

WHY & WHY NOT

 Takes little effort.

 Costs money.

Buy an old used bike at a garage sale, or take an old bike of your own.


Clean and lube the chain and brakes.

Let your bike get dirty

When your bike gets dirty from riding in rain, snow, or mud, clean off the moving parts only.

WHY & WHY NOT

 Takes little effort.

 Dirt comes off on your clothes and hands.

Take the bike to a bike dealer and get it fixed up.

Replace tires, cables, and bearings.

Let dirt stay on the frame and tires.



Smart Idea

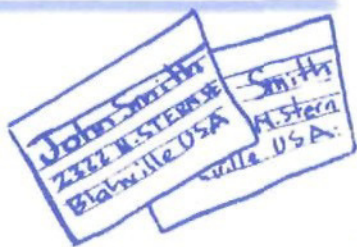
New tires can make a bike look new! Get new tires with dark sidewalls, or used tires.

I.D.ING YOUR BIKE PRE-THEFT

Hiding I.D. inside your bike

WHY & WHY NOT

- 👍 To make it easier to I.D. your bike at an auction or pawn shop.
- 👍 Thieves can't see it, so it will remain where you put it.



How to hide I.D.

1 Take several 3-by-2-inch pieces of light cardboard. On them write your name, address, and phone number. Or use your business card. Write on it, "If you find this card, this bike was stolen from me."

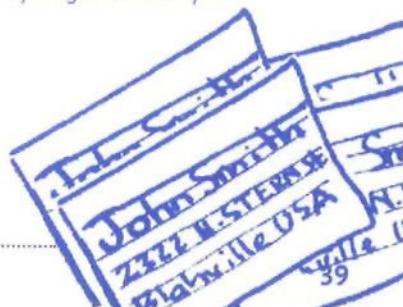
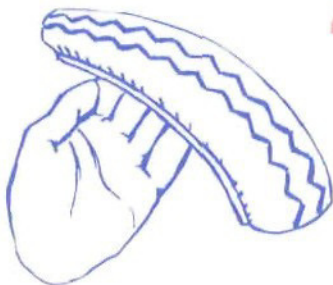
2 Remove the cap or hand grip from one end of your handlebars. Curl up one card and slide it in.



3 Put the other card into a small plastic bag and seal it with tape to keep it dry. Remove your seat from the seat post. Curl up the bagged card and slide it in. Use a pencil to push it down. (To remove it, use a straightened-out coat hanger with a hooked end.)



4 Put another card between your tire and inner tube. When your stolen bike's new owner fixes a flat (the most common repair), they might contact you.



Registering your bike

How to find a registry

City or state registration

Ask your local bike dealer if your city or state has a program for registering bikes. If it does, ask how to register.

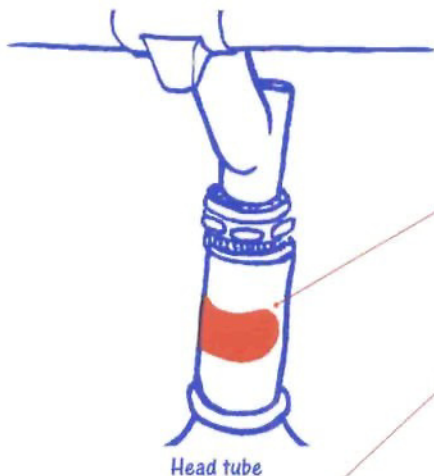
Private registries

Several private organizations run national bike registries. For contact info, see "Registries, national" in Appendix B.

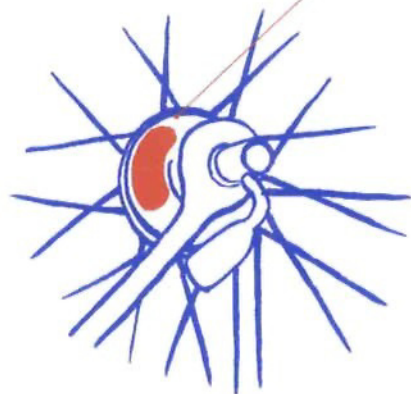
In every city, police recover hundreds of stolen bikes each year but can't find their owners. But if your bike's registered, police can get it back to you.

**STOP
HERE
AND
READ**

Where to find your serial number



Head tube



Rear wheel mount

PRIVATE REGISTRIES: WHY & WHY NOT

-  Available even if your city or state doesn't have a registration program.
-  Lets police in other areas identify you as the owner of a recovered bike.
-  The programs mark your bike with a decal that a thief can cover or remove.
-  Not all police know about the private registries. So the registries don't help if the decal's removed and police who recover your bike don't know to call the registry.

How to register

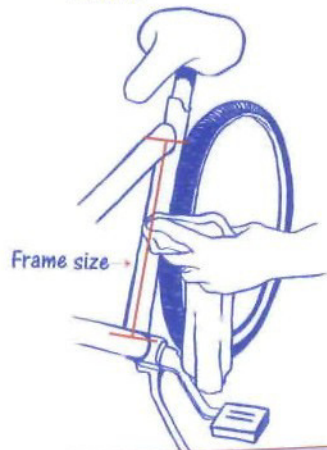
Bike registrations are just like the ones for cars: they describe the make, model, color, and serial number. Keep a copy of this information for yourself.

1 Find your bike's serial number.

2 Fill out the registration form and send it in.



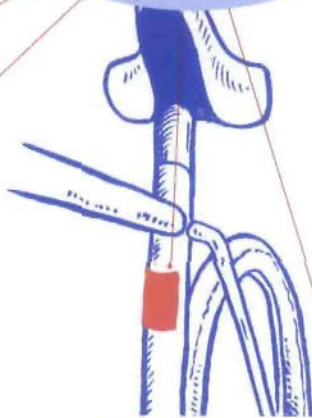
3 If the registration uses a decal, clean a spot on the seat post tube and stick it there.



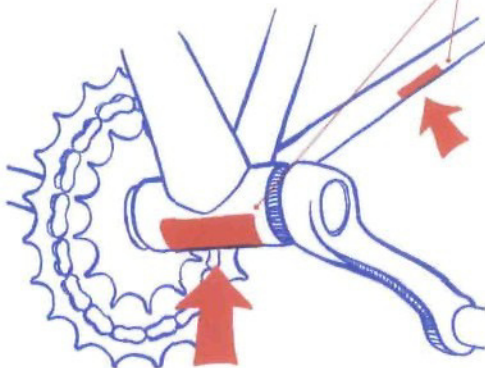
Smart Ideas

- > If your bike has more than one series of numbers stamped onto the frame, it's hard to know which is the serial number. So write them all down.
- > If your town doesn't register bikes, find a bike-riding cop and put him or her in touch with a national bike registry.

YF94M00947



Seat post tube



Under crank or chain stay

Etching your bike

WHAT YOU'LL NEED

- > Electric engraving tool > Stamping tools

OR



How to engrave

- 1 Pick an obvious place on your bike's frame, like the top of the top tube.
- 2 Engrave your social security or social insurance number. If you want to make it easier for police to find you, etch your telephone number and first name.
- 3 To prevent rust, cover the etched area with clear fingernail polish or spray lacquer.



Smart Idea

Have someone take a photograph of you standing next to your bike. This way, if a thief somehow erases etched numbers on your bike, you'll have another way to prove the bike's yours.

WHY & WHY NOT

- 👍 It's hard for thieves to sell stolen goods that have etched I.D. Unless a thief wants the trouble of covering or filing down an etch, he'll take a different bike.
- 👍 You can more easily I.D. your bike at an auction or pawn shop.
- 👍 Registering your bike isn't enough. When you engrave, if someone other than a cop finds your bike, they can find you.
- 👍 Thieves sometimes remove a bike's serial number.

Insuring your bike

Lock manufacturers


If you can prove a lock failed, some lock manufacturers will reimburse you for a stolen bike. Usually you must first register your bike. See the theft agreement that came with your lock. The sample agreements shown here tell you what to look for.


Protection in the first year often free; sometimes you can pay for extra years.

No payout if you don't return the broken lock.

No payout if you don't return all the keys.

WHY & WHY NOT

 If thieves steal your expensive bike, insurance will help pay for a new one.

 Some plans have extensive limitations.

UNCONDITIONAL LIFETIME WARRANTY
We warrant this product to be free from defects in materials and workmanship under normal use for the life of the product. If this product contains a defect in materials or workmanship, we will replace it for free. Just send the defective lock to Sisko Lock Company, 418 9th Street, Bajor DS 90009, USA. We'll send you a new lock and a check to cover your postage. You do not have to send a receipt.

LIMITED ANTI-THEFT AGREEMENT
If theft of your bicycle is due to the Sisko product being broken or opened by forceful means, Sisko will pay you the value of your bicycle up to \$US 4,000, subject to the limitations and conditions described below (the "Limited Anti-Theft Agreement"). This Limited Anti-Theft Agreement applies, at no additional cost, to the original consumer purchaser only for one (1) year following the purchase of your Sisko product as shown on your original sales receipt. (The original buyer may extend the Agreement for two (2) additional years for an added fee as described below.) This Limited Anti-Theft Agreement is not to be construed as insurance.

REGISTRATION CONDITIONS

- To validate this Limited Anti-Theft Agreement:
1. Mail, by certified mail, to Sisko Lock Co., 418 9th Street, Bajor DS 90009, USA, the following items within 15 days of purchase of your Sisko lock:
 - a. A completed registration form that came with your lock.
 - b. The original sales receipt for the purchase of your lock.
 - c. The original UPC bar code label from the Sisko package (we will not accept photocopies).
 - d. A copy of the sales receipt from the purchase of your bicycle or, if not available, a signed and dated appraisal for your bicycle from your dealer on the dealer's letterhead.
 2. Register your bicycle with an official authority (your local police department or other appropriate agency) unless such registration is unavailable. Identify the agency you registered with in the space provided on the agreement receipt.

Registering the lock might include getting your bike appraised, keeping the bar code from the lock package, having proof of police bike registration, and sending all this stuff by certified mail.

IN THE EVENT OF A THEFT

- A. Report the theft to the police within 72 hours.
- B. Notify Defiant within seven (7) days by certified mail to Defiant Lock Co., 2 Sao Paulo Pl., Bockport NX 74205, USA, and include:
 1. A copy of the police report showing that you reported the theft to police within 72 hours of discovery of the theft.
 2. A copy of the claim filed with your insurance company, if covered.
 3. Your broken Defiant lock.
 4. All original keys from your Defiant product (unless you purchased a combination lock). Failure to return all keys voids this agreement.

LIMITATIONS

- A. Defiant will not be liable if theft occurred because:
 1. The frame of the bicycle was not properly locked to a solidly anchored, immovable object.
 2. The object to which the bicycle was locked to dismantled or cut.
 3. The lock was opened by means of a torch, battery-operated tool, or power tool.
- B. Defiant's total liability under the terms of this Guarantee is limited to:
 1. The purchase price of the stolen bicycle including separately purchased accessories or taxes, up to \$4,000.
 2. The amount of item (1) above less the amount of any other insurance collectible due to the theft.
 3. The replacement cost of the bicycle only, and not any damages connected with an attempted theft.
- C. This Guarantee does not cover bicycles used commercially and applies only to thefts occurring in the United States of America, District of Columbia, Canada and Puerto Rico.
- D. The maximum amount we'll pay to any owner in the 50 U.S. currency regardless of the number and kind of bicycles registered under this Guarantee.
- E. If your address is in the State of New York, and you purchased the receipt for your Defiant product shows it was up to \$4,000 of insurance protection instead of Defiant's Agreement. This insurance protection is not renewable. If your bicycle is stolen within one (1) year from the date of purchase and is not covered by your insurance, the amount of insurance that you will receive rather than

Protection for only one year in New York State.

No payout if the thief uses a torch or power tool.

No payout if the locked-to object is cut.

Home or apartment insurers

If you have homeowner's or renter's insurance, ask your agent how to insure your bike. Also, some companies insure personal property (such as bikes) without renter's or homeowner's insurance. In any case, make sure the bike's covered whether it's stolen inside or outside your home.

RECOVERING

What to do after it's stolen

1 Save remaining parts

Look around on the ground for leftover parts of your lock or bike. You might need them later to show to the police or lock manufacturer.



2 Find serial number

Find your bike's serial number and, if you have it, a copy of your registration. If you don't have the serial number, try getting it from the store where you bought the bike.



3 Report to police & registry

- > Report the theft to the police in the town in which your bike was stolen.
- > Ask for a police report number.
- > Ask police how they'll contact you if they find your bike.
- > If the bike's listed with a private registry, contact the registry.

4 If your bike's insured

Report the theft to your insurance company or lock manufacturer.



Smart Ideas

- > If you find your bike, lock it with your own lock. That way, it won't go anywhere until you can persuade the current owner to give it up.
- > If you find a junk shop selling lots of bikes, they're probably stolen. Tell your local bike clubs, advocacy group, or city bike agency. They can spread the word to other cyclists.

If you find your stolen bike

- 1 Finding your bike means zip unless you can prove it's yours. Make sure you have a copy of your serial number, or can otherwise prove the bike's yours. (See "I.D.ing your bike" on page 39.)
- 2 Tell the seller the bike belongs to you, and show them your serial number or other identification. Then match your I.D. to the one on your bike.
- 3 If the seller refuses to give you the bike, leave—then return with the police.

YOUR STOLEN BIKE

Where to look for your bike

Flea markets

Junk shops or pawn shops
If you don't see bikes on display, ask if they have any.

"For sale" ads in newspapers
Look within the first two weeks of your theft.

Police auctions
Police recover many stolen bikes. Ask your local police when they hold auctions.

Offering a reward

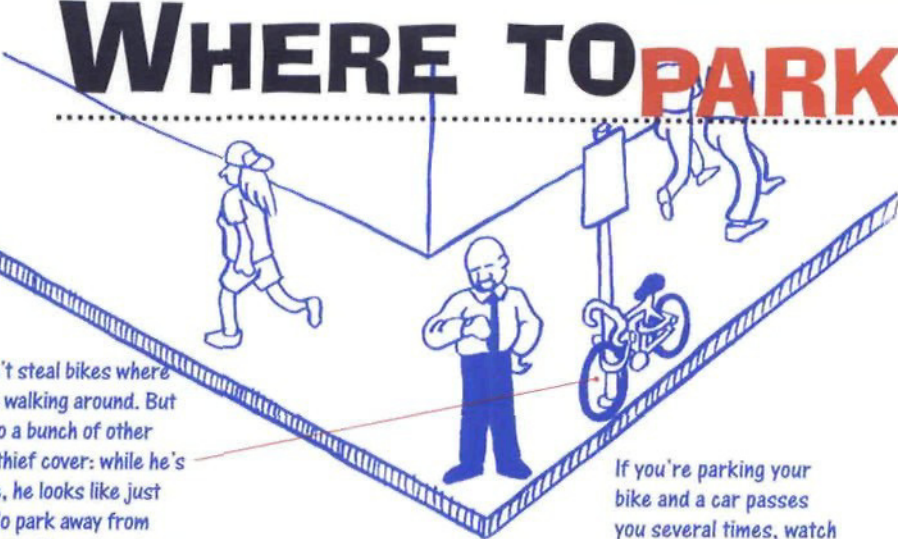
- Stick your reward flyer to lampposts and sign poles in the neighborhood in which your bike was stolen.
- If your town has bike messengers, send a reward flyer to each messenger company.



I put up flyers all over the neighborhood, offering a \$100 reward for my bike. I got it back in three days.

Patti Howells, San Francisco
on offering rewards

WHERE TO **PARK**

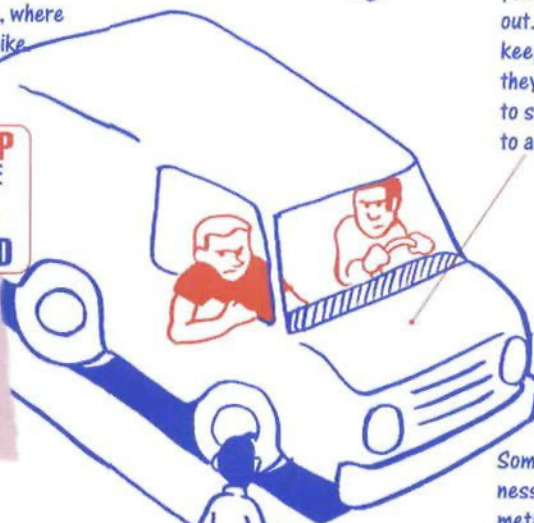


Some thieves don't steal bikes where lots of people are walking around. But if you park next to a bunch of other bikes, you give a thief cover: while he's stealing your bike, he looks like just another cyclist. So park away from other bikes but out in the open, where people pass very close to the bike.


If you're parking your bike and a car passes you several times, watch out. If the occupants keep looking at you, they're probably planning to steal your bike. Move to another spot.

When you arrive at your destination, or even at home, where do you park your bike? How you choose a parking place can cut your chances of rip-off.

**STOP
HERE
AND
READ**



Some cities and businesses provide thick metal bike racks embedded into the sidewalk. These are secure places to park.



Some public parking lots will let you park your bike for a small fee. If you forget your lock, look for an attended parking lot.

How TO Lock

Always lock

Never, never leave your bike unlocked—even if you leave it for only half a minute. A thief can grab your bike in seconds.

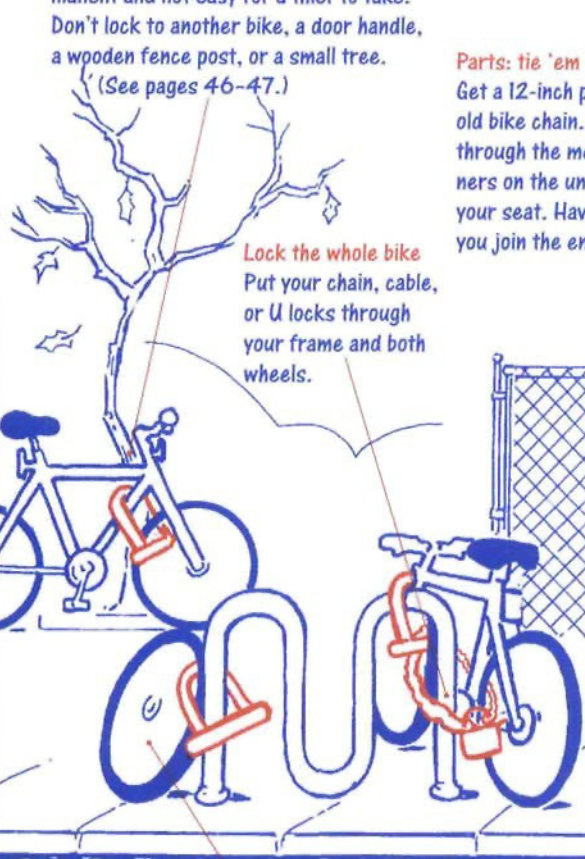
Lock to fixed objects

Lock your bike to something that's permanent and not easy for a thief to take. Don't lock to another bike, a door handle, a wooden fence post, or a small tree.

(See pages 46–47.)

Lock the whole bike

Put your chain, cable, or U locks through your frame and both wheels.



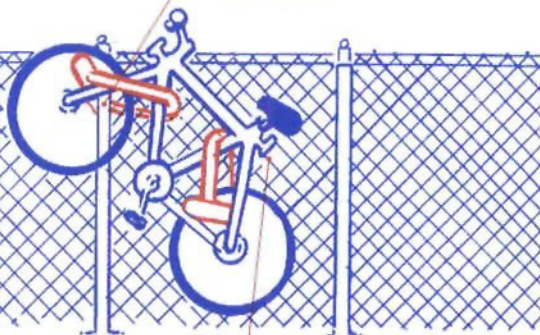
Parts: tie 'em

Get a 12-inch piece of old bike chain. Put it through the metal runners on the underside of your seat. Have a mechanic help you join the ends of the chain.



Chain link fences

Always lock to the metal posts of chain link fences, not the links. To get your bike close enough, hang one handlebar over the top of the fence.



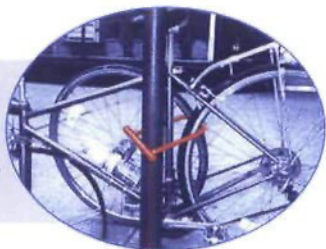
Parts: take 'em

Remove any parts you can't lock and a thief could grab easily: a quick-release seat, horn, bike bag, pump, water bottle, or lights. If removing quick-release parts is a hassle, replace them with permanent ones.

Wheelize

Never lock through your wheel without locking the frame. Even if you don't have quick-release wheels, a thief can unbolt your wheel in seconds.

Take the front wheel off, if you have to. (This is easier with quick-release wheels.)



**STOP
HERE
AND
READ**

You need good, reliable locks to stop thieves from stealing your bike. But the way you lock is just as important.

Cross lock

Because most people only use one lock, you should use two. That way, a thief will go for somebody else's bike. (For more info, see page 53.)

GOOD

Put one lock through your frame and rear wheel, and put the second through your frame and front wheel.

BETTER

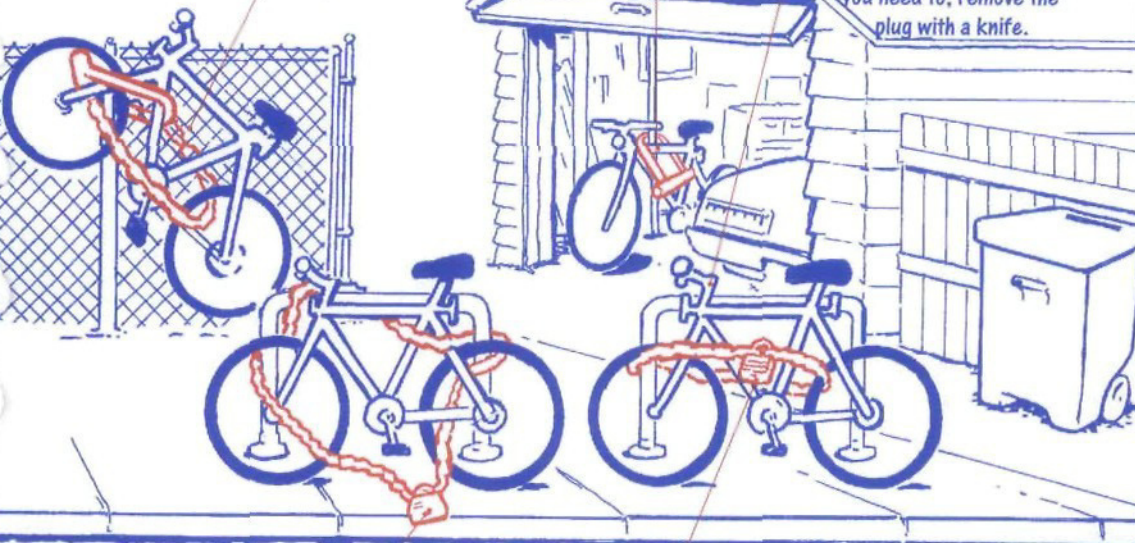
You need one kind of tool to cut a metal bar (such as a lock shackle) and a different tool to cut a metal cable. Most thieves don't carry both. (At least, until they read this.) So a good way to foil thieves is to use both a shackle-type lock, such as a U lock, and a cable with a built-in lock.

Lock in storage

In the U.S., about a fifth of bike thefts occur in residences. If you keep your bike in a garage, basement, or on a porch, lock it.

Parts: seal 'em

Plug the head of your handlebar-release bolt with silicon adhesive, epoxy, or rubber cement so a thief can't unbolt your handlebars. When you need to, remove the plug with a knife.

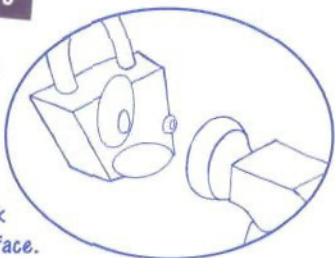


NO

Locks in space

Thieves can open some locks by hitting them with a hammer. But to break the lock, the lock must be placed against something hard, like a wall or sidewalk. If you use a padlock, wrap your chain or cable tightly, and place the lock so it can't be put up against a hard surface.

YES



HOW TO MAKE



Beating the Pry

Some locks have the keyhole at the end of the cross bar. Because the cross bar sticks out, a thief can slip the end of a long pipe over it and pry the cross bar off.

WHAT TO DO

1 Collar



From a hardware store, get a piece of pipe hardware called a T joint.



Or go to a bike shop and get a U lock collar.



Slip it over the lock's keyhole end.

2 Position

Face the keyhole end toward the sidewalk or a wall so a thief can't get a pipe over it.



IS YOUR LOCK ABOUT TO DIE?



When your lock gets worn, it can freeze up so that you can't unlock it.

How you know it's ready to die: It starts getting hard for you to turn the key.

WHAT TO DO

Every month, squirt oil or some other lube into your keyhole. Do it more often if your bike sits outside frequently, or if you lock it many times per day.

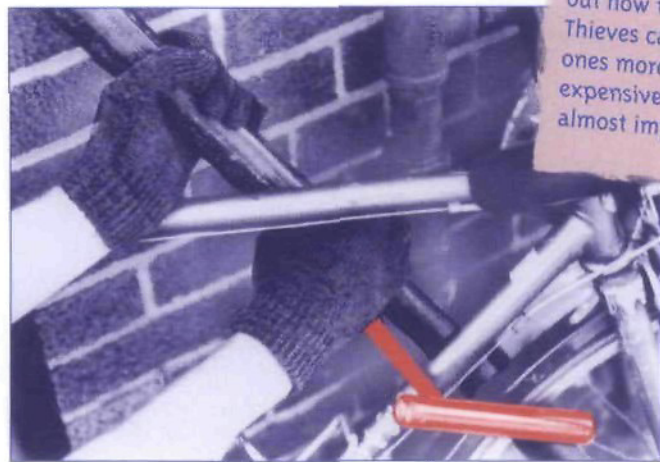
If your lock gets rained on, squirt WD-40 inside the keyhole to drive out moisture.



YOUR U LOCK BETTER

Beating the Pop

If the opening is wide enough, a thief can stick a thick pipe or expanding car-tire jack into the U and pop it open.

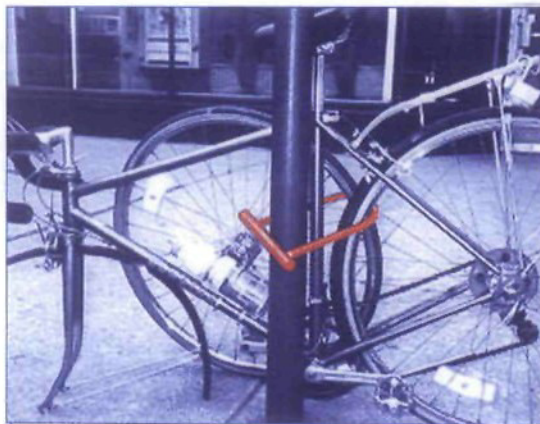


Because so many cyclists use U-shaped frame locks, thieves have figured out how to break them. Thieves can break cheaper ones more easily. The most expensive U locks are almost impossible to break.

**STOP
HERE
AND
READ**

WHAT TO DO

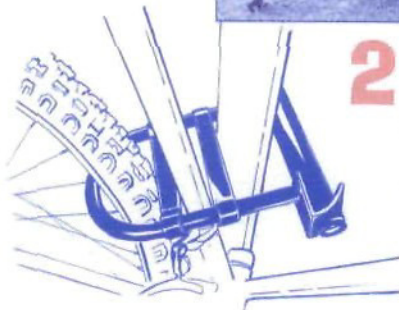
- 1 Fill**
Lock your bike so the entire middle of the U is filled, leaving no room to stick a tool in. One way to fill it: Lock both of your tires and your frame to a thick metal pole.



- 2 Straps**
Buy steel reinforcement straps that slip onto the U and fill the space. (Have your bike dealer order from Joannou, listed under "Locks & accessories" in Appendix B.)



Smart Idea
Get a mini-U lock, or a U lock with a narrow shackle. For examples see page 55.

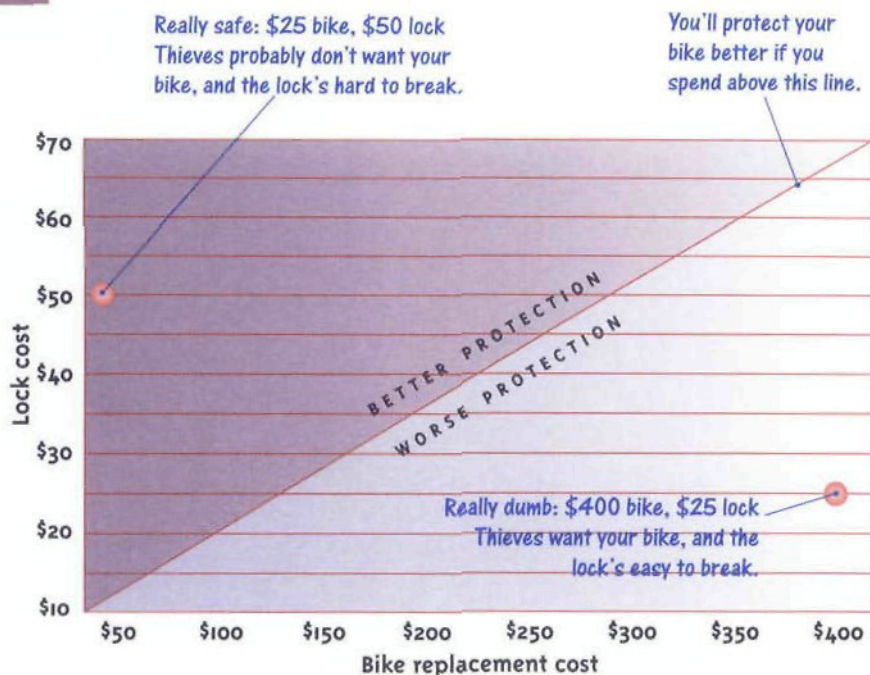


BEFORE YOU

How much should you spend?

The more you pay for your lock, the better it will protect you. How much should you spend? If it would cost a lot to replace your bike, you should invest in a very good lock. Spend less when you have a cheap bike. Use these charts as a guide:

Bike replacement cost	Spend this much on locks
\$100	one-third (\$33)
\$200	one-fifth (\$40)
\$300	one-fifth (\$60)
\$400	one-sixth (\$67)



BUY A LOCK

Cross lock: buy two independent systems

Hardware combinations for cross locking

frame lock



heavy chain with thick padlock

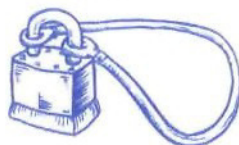


Can weigh lots, but the extra security can be worth it.

frame lock



heavy cable with thick padlock



Careful: Thieves can cut cheap cables easily.

chain with padlock



heavy cable with built-in lock



Don't get a cheap cable lock; they're easy to pick (more info on page 58).

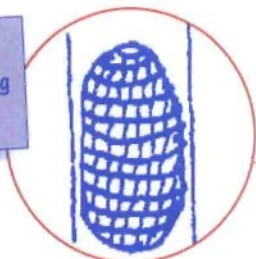


New Word Cross locking

When you cross lock your bike, you use two different lock systems at once—such as a U lock and a cable. Cross locking forces thieves to spend more time and use more than one kind of tool. If a thief sees that your bike is cross locked, he might move on to another bike that isn't.

BUYING A NEW

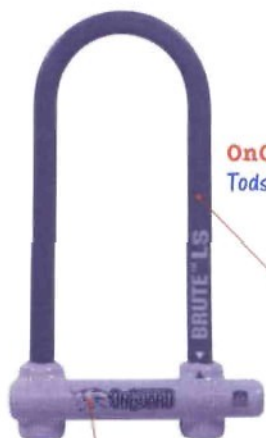
Cable inside metal
Flexible clasp resists prying and twisting.



Stocks Lock
Stocks
Manufacturing



OnGuard Brute LS
Todson



Top comes to a point
Requires more force to pull shackle apart.

Square cross-section
Makes shackle harder to cut than a shackle with a round cross-section.

Granit X-Plus 54 HB
ABUS



Double deadbolt
Shackle locks on both sides—instead of locking on one side and just hooking on the other.

New York 3000
Kryptonite



Middle keyhole
Keyhole is in the middle of the cross bar so the end doesn't stick out.



Smart Idea
Some lock makers let you order the same key for all the locks you own. They call this "locks keyed alike."

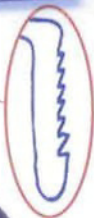
FRAME LOCK

Retractable

You can make the inner space smaller so thieves can't pry or pop the lock.



Ultra Club for Bikes
Kent International



OnGuard Brute Mini
Todson



Narrow space
Narrow inner space makes it hard for thieves to get a tool inside to pry or pop the lock open.



Street Cuff
Master Lock



Force 6 (Long)
Master Lock

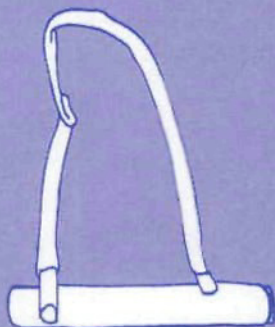
Built-in holder

Makes it easy to carry the lock on your bike frame. (If your lock doesn't come with a holder, you can buy one separately.)

**STOP
HERE
AND
READ**

Many bicyclists use a U-shaped type of frame lock—a lock that's big enough to fit around part of a bike's frame and tires. But frame locks come in many types; they're shaped like "U"s, rectangles, and even circles. The expensive ones have different features that make them bad for thieves.

WHAT'S WRONG WITH CHEAP U LOCKS



Cheap U locks are easier for thieves to cut, pry open with a lever, or pop with a tire jack.

New Word Shackle

On a lock, the piece of metal (usually curved) that inserts into the main body of the lock.

PADLOCKS,

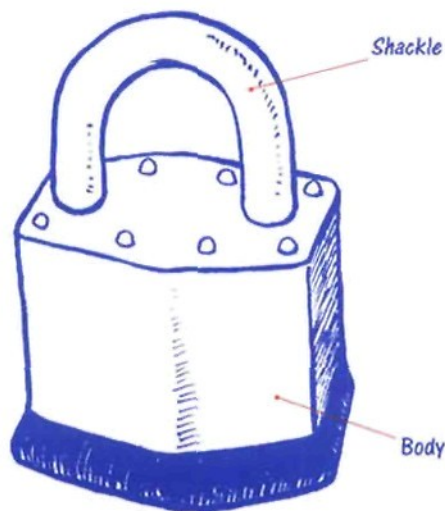
Padlocks

WHAT TO GET

- Shackles 3/8 inch (10 mm.) thick or more
- Case-hardened shackle

DON'T GET

- Combination locks
- Shackles less than 5/16 inch (8 mm.) thick



New Word

Case hardening

A piece of metal is case hardened by heating it. Case hardening makes the outside harder, so a thief can't cut it as easily. But case hardening doesn't harden the inside of the metal, so it doesn't become brittle. A thief could break a brittle piece of metal by twisting it.

How to tell if a lock is case hardened:

The words "case hardened" appear on the lock or the package. If these words don't appear, don't believe a salesperson who tells you the lock is case hardened.

CHAINS, & CABLES

Chains

WHAT TO GET

- Case-hardened links $\frac{3}{8}$ inch (10 mm.) thick or more
- Thick chains with four-sided or six-sided links

DON'T GET

- Links less than $\frac{5}{16}$ inch (8 mm.) thick

How to tell if a chain is case hardened:



LISTEN

If you rattle a case-hardened chain against a hard surface, it'll make a bright, ringing sound. A non-hardened chain will sound duller.



LOOK

If the words "anti-theft" appear on a chain or its package, it's usually case hardened. There's no other way to tell a case-hardened chain by looking at it.

Chains with four-sided or six-sided links

Thieves can't cut chains with links having square or hexagonal cross-sections (like the ones shown below) as easily as they can cut chains with links having round cross-sections.

New York Fahgettaboudit
Kryptonite



QuadraChain
St. Pierre
Manufacturing



OnGuard Beast 12mm
Todson

Wire cables

WHAT TO GET

- > Cables 3/8 inch (10 mm.) thick or more
- > Cables with more than 300 strands

DON'T GET

- > Cables 5/16 inch (8 mm.) thick or less

How cables stop thieves

1 Type of cutter

Bolt cutters can snap hard metal. But they can't snap cable. So if a thief wants to cut both locks and cables, he needs both a bolt cutter and a cable cutter or hacksaw. Most thieves don't carry both.

2 Thick & dense

Cables that stop thieves are either very thick (3/8 inch or more) or very dense. Very dense cables have 300 to 900 strands. Inferior cables have only 100 to 200 strands.



3 Lock

When using a cable, don't use a padlock that has a shackle less than 3/8 inch (10 mm.) thick; a thief can simply cut the lock. (You can also use a cable with a built-in lock—but you shouldn't get a cheap one.)



Where to get wire cables

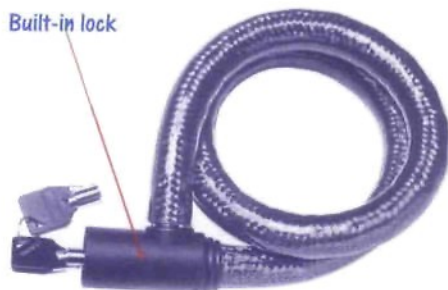
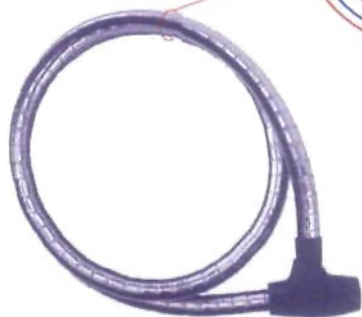
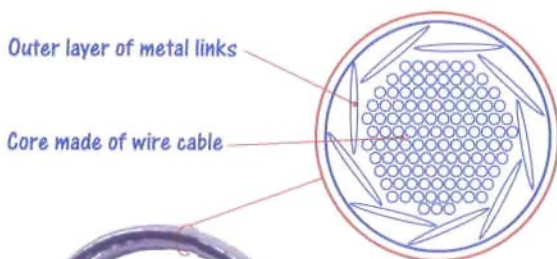
Most bike stores sell cable that's only 5/16 inch (8 mm.) thick. For thicker cables, you must find a cable supplier. Look in your yellow pages telephone directory under "Cable," "Wire & Cable," "Wire Products," or "Wire Rope."



Recommended Product
 Flexweave 1/2 inch cable
 Has over 800 strands.
 Have your bike dealer
 order from Kabletek, listed
 under "Locks & accessories" in
 Appendix B. (For more on Mr.
 Bike's Recommended Products, go
 to www.mrbike.com/products.)

Armored cables

Armored cables usually have an inner wire cable covered by steel plates or links. So thieves can find them harder to cut than a simple wire cable.



HOW TO MEASURE THICKNESS OF WIRE CABLES

Many wire cables have a plastic outer casing. If you can't see through the casing to the metal, measure the width of the casing. Then subtract 1/16 inch (2 mm.). If you can see through the casing, measure only the width of the metal inside.



Thickness guide

inches	millimeters
1/4	7
5/16	9
3/8	10
7/16	12
1/2	13
9/16	15
5/8	16



Smart Idea
To carry your chain or cable, wrap it tightly around your seat post, and lock it.

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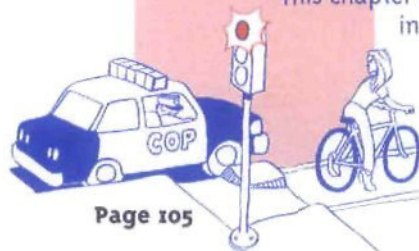
GETTING THROUGH TRAFFIC

Sometimes you want to get somewhere more quickly than usual. Or you think you take too many chances. Or you think: I should be able to maneuver this bike a lot better than I move a two-ton car; how can I?

This chapter can help you in each case.



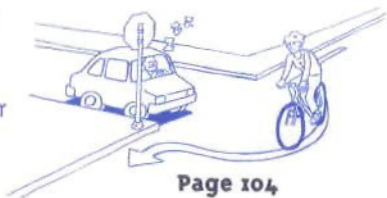
Page 103



Page 105

Also, if police in your area are cracking down on cyclists, you can't just blast through red lights. This chapter will give you other options. Some are perfectly legal. Others aren't, but at least they're not obvious.

This chapter will also have you threading through traffic jams, beating red lights, and spotting problems before they trip you. You can feel all the power of a motor vehicle—with none of the pollution.



Page 104



Page 70

When you start feeling powerful, it shows. Motorists notice your confidence and trust you to act like you know what you're doing. It helps to give them clear gestures too, which this chapter explains.

But what if you're afraid of traffic? Two things can help: Knowing how cyclists really get hurt, and practice. This chapter tells you about both of these.



Page 115

SLY BIKING



New Word

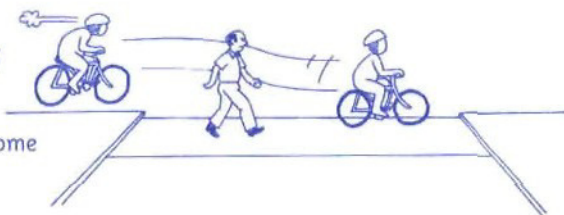
Sly biker

Many of the tips in this chapter help you bike more safely. But others will put you in danger unless you know how to read traffic well, as a sly biker does. We've marked tips for sly bikers with the symbol shown here.

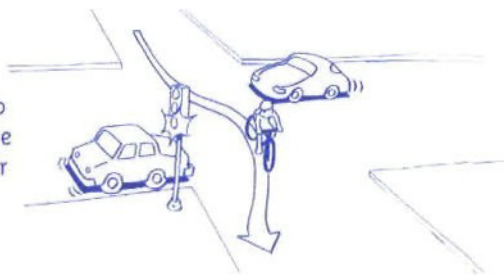


Sly Bikers Only!

To some, getting through traffic fast means brute force: running red lights, cutting off pedestrians, going the wrong way, and breaking traffic laws. Such actions can move you faster, and this chapter shows you the best ways to do some of them—if that's how you want to bicycle.



But you have another option: sly biking. Sly biking means, for example, that you time traffic lights instead of racing to beat them. It means that you *feel* what the motorist ahead of you will do before he or she does it, so you react immediately—without slowing down.



Good dancers glide all over the floor in subtle, complex motions. But they don't step on others' feet or get in others' ways. Likewise, the best sly biker can beat traffic without scaring peds or making motorists hit their brakes.



PED MODE



New Word

Ped mode (pedestrian mode):
Behaving like someone on foot,
instead of like someone on a bike.

In many places, people don't know that bicyclists are supposed to obey traffic laws. In fact, when you're on the street with your bike, you won't surprise most people if you suddenly get off of your bike and start walking. After all, that's one convenience of biking: the ability to suddenly become a pedestrian.

**STOP
HERE
AND
READ**

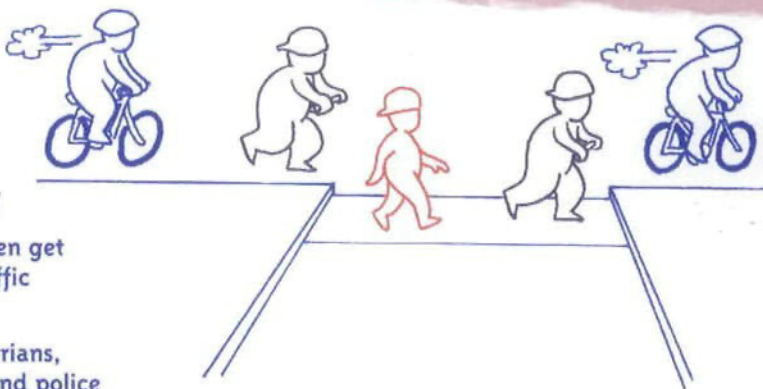
WHY



You can often get through traffic quicker.

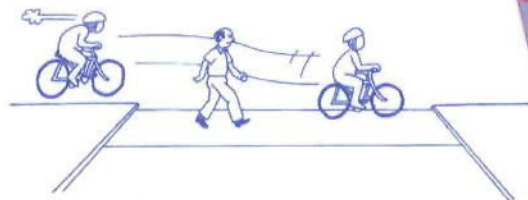


Most pedestrians, motorists, and police officers think it's OK for cyclists to act like pedestrians.



Total ped mode

Getting off your bike and walking.



Partial ped mode

Riding your bike in places where people usually walk, like crosswalks and sidewalks.



Smart Idea
When biking in crosswalks or on sidewalks, slow down and always yield to people walking. That way, peds will think well of bikers.

GETTING

SURPRISE FACTS

1 NOT AS DANGEROUS AS IT LOOKS

Bicycling in traffic isn't as scary as it looks from the sidewalk. Bicyclists don't usually get hit by motorists from behind—one of the most common fears.

Cyclists do get into trouble when they don't act like the other vehicles around them—namely, cars.



2 YOU ALREADY KNOW HOW

Because you probably know how to drive a car, you already know how to get through traffic. You just have to apply this knowledge to bicycling.

3 YOU'VE ALREADY TAKEN BIGGER RISKS

More bike crashes happen on off-street paths than in traffic. Why? On paths, people bike next to walkers, runners, skaters, skate-boarders, dogs, and small children.



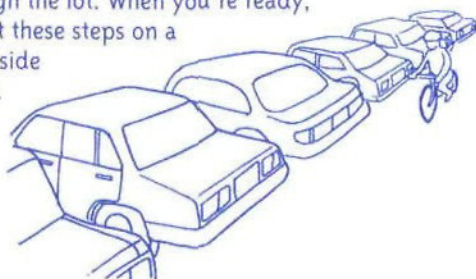
If you don't already ride in traffic, this page has a few tips to help make you more comfortable.

**STOP
HERE
AND
READ**

How to learn

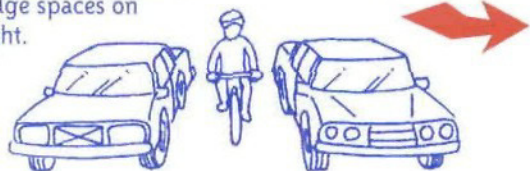
1 PRACTICE

At first, biking next to two-ton hunks of metal (cars) scares most people. How do you get over it? Walk or drive your bike to a quiet parking lot and ride around. Ride down rows of cars, getting closer and closer. When you get within four feet of a line of cars, practice looking inside the cars. Look for people who might open doors or pull out in front of you. Then practice following cars through the lot. When you're ready, repeat these steps on a quiet side street.



2 GET TO KNOW YOUR BIKE

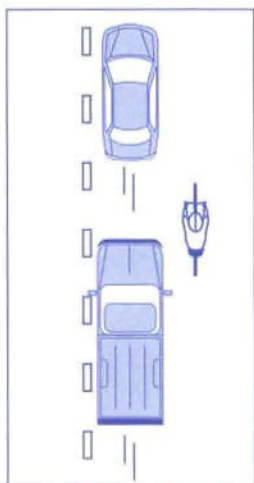
You might not ever need these skills, but knowing how your bike performs will build your confidence. Learn how small a space your bike will fit through by riding between objects, such as parked cars or sign poles. Do this until you can judge spaces on sight.



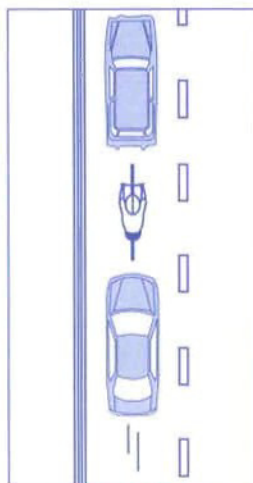
COMFORTABLE WITH TRAFFIC

3 TAKE IT EASY

Remember that on a street, you either **share the lane** (cars pass next to you) or **take the lane** (you ride in the middle, and cars stay behind you or pass in another lane). If a street's not wide enough for you to share safely, and taking the lane scares you, stay off that street—at least until you feel more comfortable. Riding behind an experienced partner can help.



sharing the lane



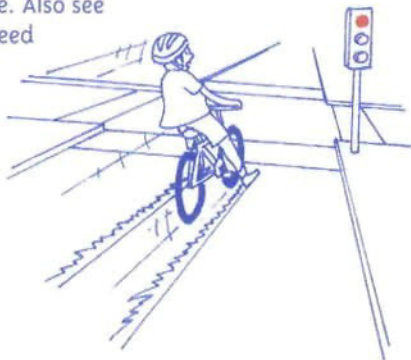
taking the lane

4 TAKE A CLASS

Thousands have learned to ride confidently in traffic by taking a BikeEd (U.S.) or CAN-BIKE (Canada) class. To find one near you, contact the League of American Bicyclists or Canadian Cycling Association (listed under "National advocacy groups" in Appendix A).



Learn how well your brakes work: go fast, then try to stop within 10 feet. Then try to stop within six feet, then three feet, then one. Also see how quickly you can speed up from a stop. For more info on stopping, see page 146.



LOOKING

The up-and-down scan

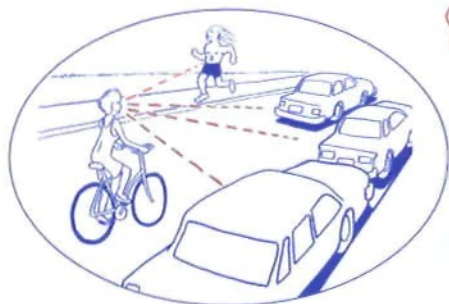
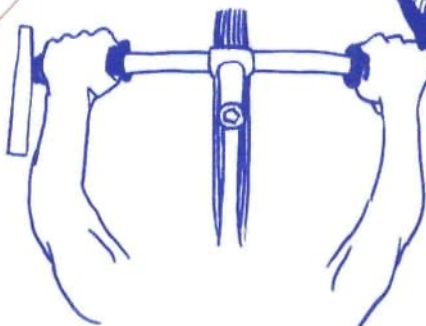


Look at the ground 20 to 30 feet in front of you.

Don't focus on stuff that doesn't affect you.

2 Look up at traffic in front and to the sides.

3 Look back down at the ground.



**STOP
HERE
AND
READ**

As you ride, you have to avoid two kinds of things: hazards on the ground right in front of you, and cars and pedestrians up ahead and on either side. You should always know how both the ground and the traffic around you looks.

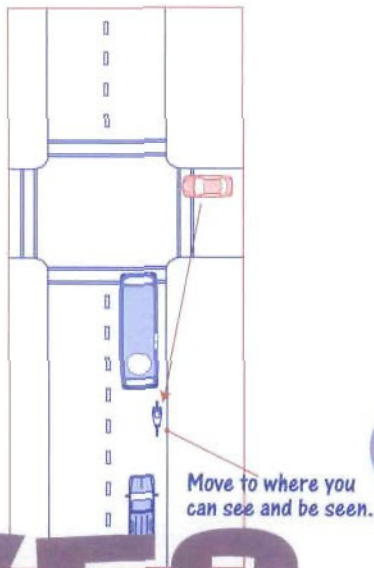
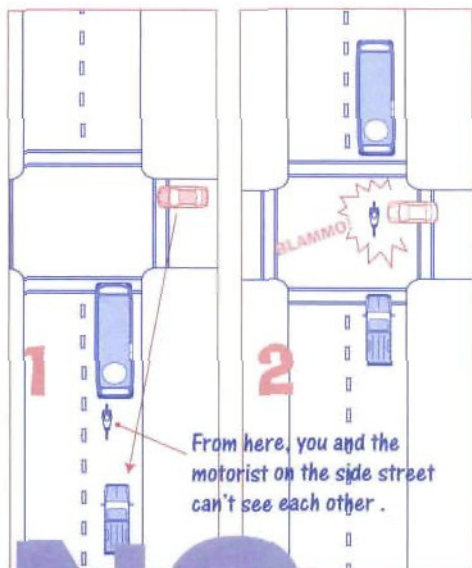


Sly Bikers Only!

If you want to check out something interesting on the sidewalk, first do a quick look at potential dangers ahead and to the sides. This gives you a few seconds to stare.

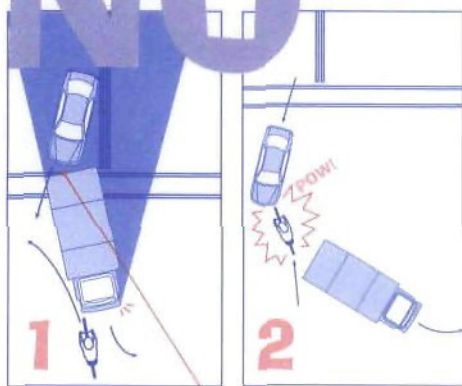
TECHNIQUES

When a vehicle blocks your view

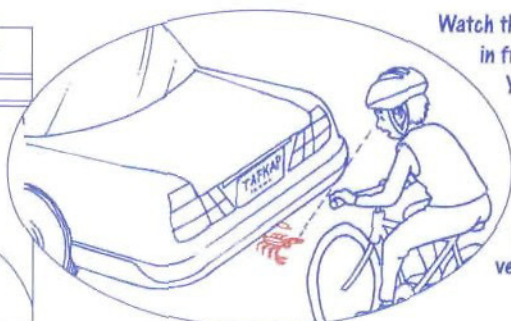
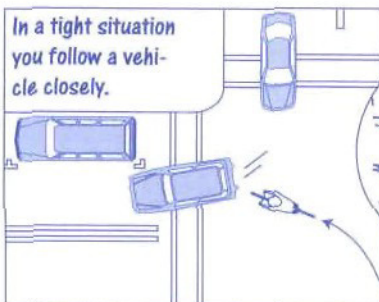
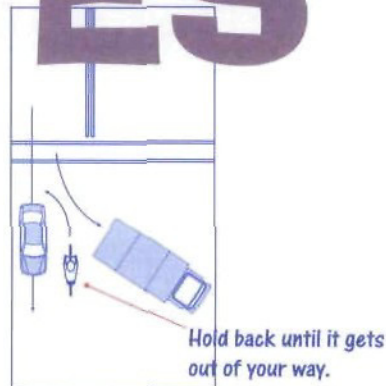


NO

YES



You can't see behind the big vehicle.



How to practice looking back

- 1** Find a parking lot or wide, quiet street with some kind of lane stripe.



- 2** Ride along the lane stripe in a straight line.



- 3** Keeping your left shoulder steady and your left arm relaxed, turn your head down and around to the left. Try to steer straight.



- 4** Turn your head forward.



- 5** Turn your head back again. Pick out something to look back at. Try to keep moving straight.



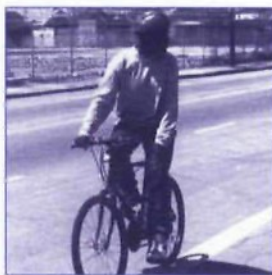
Looking back over your shoulder helps you move left or right fast—to avoid hazards, change lanes, or make a turn. And looking over your shoulder makes drivers pay attention to you. Even if you have a mirror, you should always turn your head to look before you move left or right—just as you would when driving a car.

**STOP
HERE
AND
READ**

- 8** Next, practice turning your head to the right. Then practice turning your head while moving faster.



- 7** If you can't turn your head without turning your handlebars, drop your left hand down to your thigh while you turn your head.



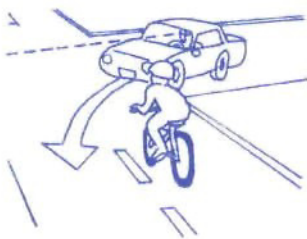
- 6** Turn your head forward.



USING **BODY** LANGUAGE

Will they yield?

- 1** When you're not sure a motorist will yield, look at where their eyes are. If they're not looking at you, slow down and prepare to get out of the way.



- 2** If the motorist or ped is looking at you, watch what they do next. If they don't move toward you, they'll probably yield.



- 3** To make sure they know what you want, use your hand to say "Wait!" Or "I'm going there."



As vehicle drivers, both you and motorists should follow right-of-way rules: At a four-way stop, the first to arrive goes first. (But when two vehicles arrive at once, the rightmost one goes first). And left-turning vehicles should yield to oncoming vehicles. To learn who should yield in every situation, get a copy of your state's or province's traffic rules. What if you or a motorist aren't sure the other will yield when they should? Here's what to do.



- 4** Wave thanks to the motorist or ped who yields.



Motorists at stop signs

COMMUNICATING WITH YOUR HANDS AND HEAD



I'm turning (for observers in front & behind)



I'm slowing (for observers behind)



I'm going there

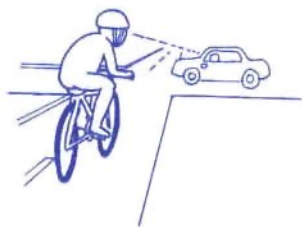


Wait!

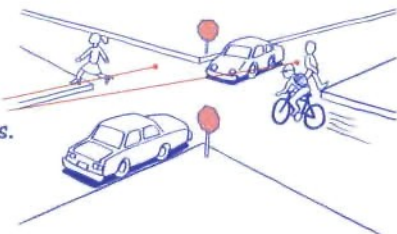


Go ahead

1 When approaching a cross street with a car stopped at a stop sign, make eye contact with the motorist.



2 If you think the motorist will yield to you, start going through the intersection.



Check for obstacles in your escape routes.

3

If the car suddenly moves to cut you off, make an emergency right turn (see page 147) parallel to the car.



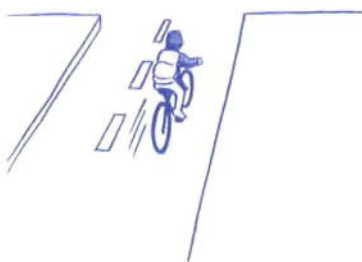
If a car approaches from the right and you have room, curve in front of it.



Danger
Motorists at stop signs who don't yield to cross traffic are one of the top causes of bike crashes!

Oncoming left-turning cars

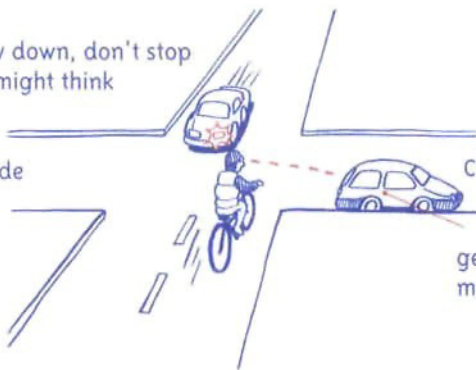
- 1** Where an oncoming car has signaled a left turn, you speed up to beat the car to the intersection. (And, to be obvious, you move to the middle of the lane.)



Danger
Motorists often turn left in front of oncoming bicycles. They either don't notice you or misjudge your speed.

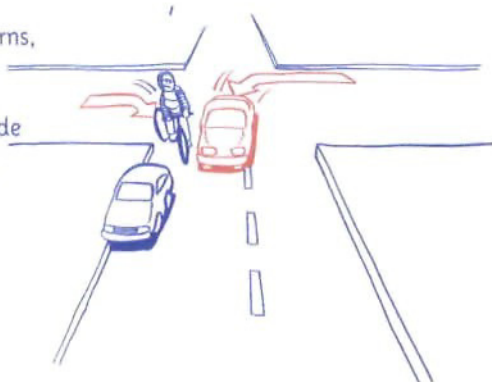
- 2** Looks like you've beat the car. But:

Even if you want to slow down, don't stop pedaling; the motorist might think you're going slow enough, or you're going to stop, and decide to cut you off.

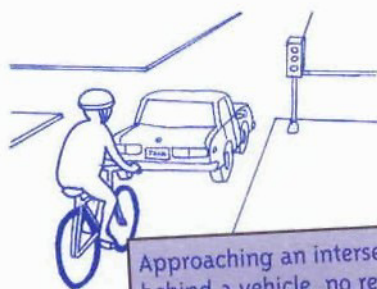


Check for obstacles on the cross street in case you have to make an emergency turn. Be ready to make the turn.

- 3** If the car suddenly turns, make the emergency turn (see page 147) that puts you alongside the car, avoiding any obstacles.



READING VEHICLES'



Approaching an intersection behind a vehicle, no red light.

The motorist slows down, or doesn't speed up to fill the space next to you.

Vehicle slows down or moves slightly to the right.

The motorist will let you merge into the next lane.

The car's about to turn.

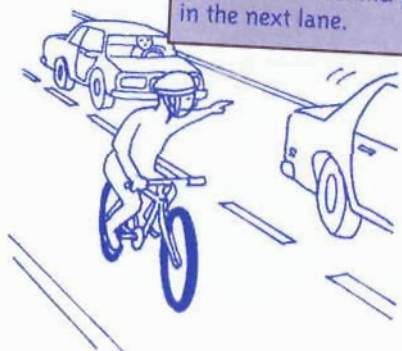
Merge.

Slow down, get directly behind, or pass on the other side.



You signal a lane change to a motorist behind you in the next lane.

The motorist speeds up, or continues going fast, to fill the space next to you.



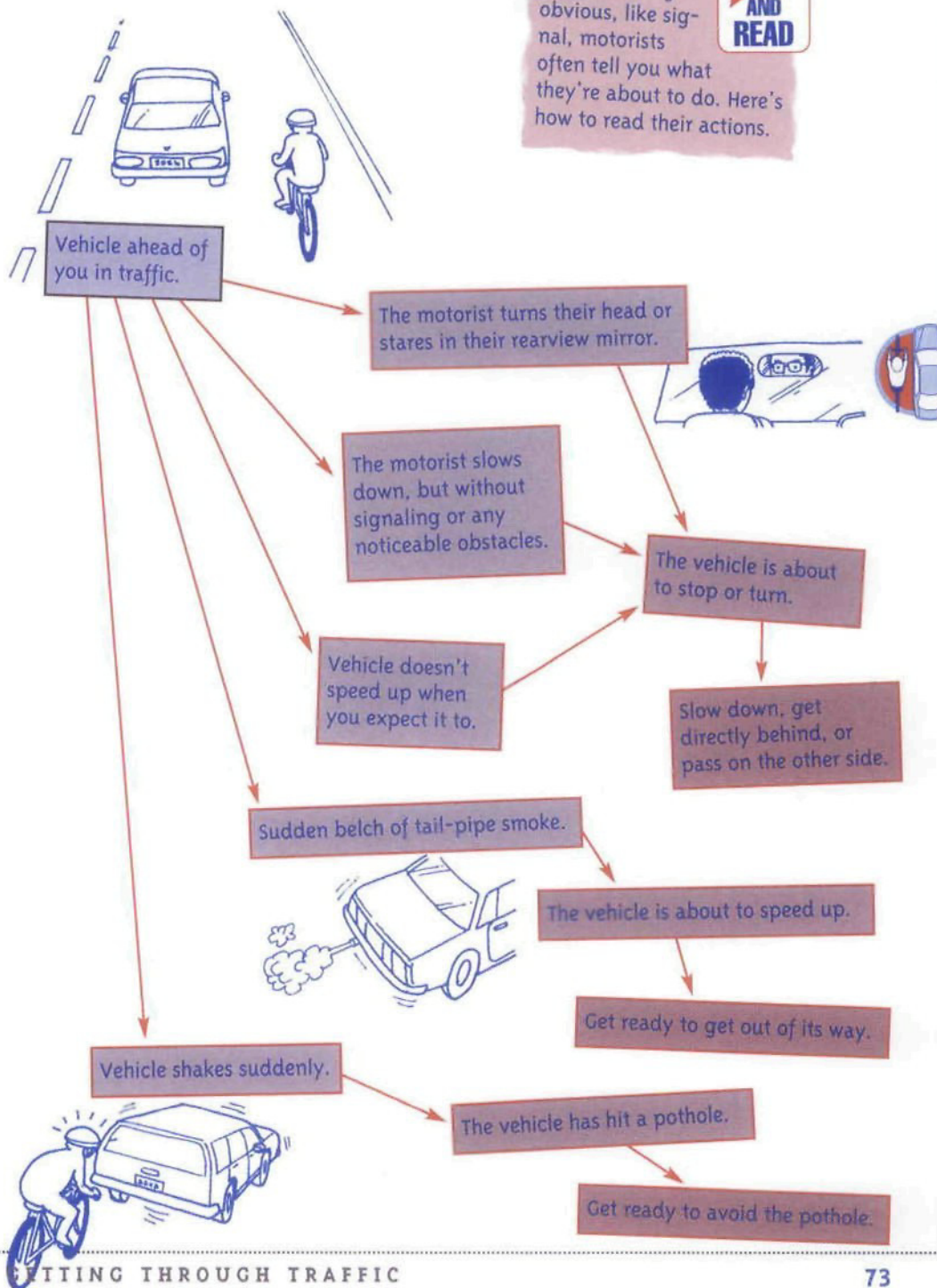
The motorist won't let you in.

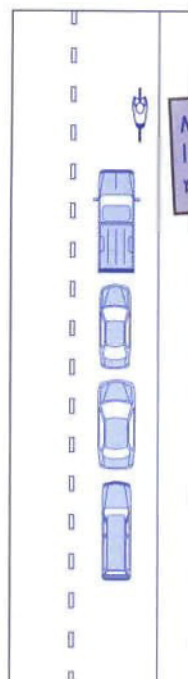
Don't merge in front of that car. Signal to one of the next motorists.

BODY LANGUAGE

Even when they do nothing obvious, like signal, motorists often tell you what they're about to do. Here's how to read their actions.

**STOP
HERE
AND
READ**





Motorists behind you in your lane. You move slightly to the right to let them pass.

The motorist doesn't pass.

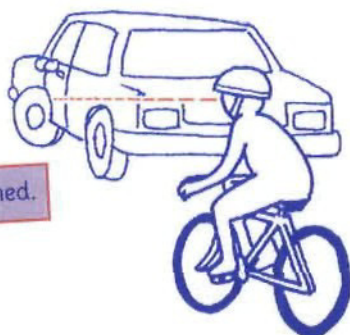
The motorist is afraid to pass, about to turn right, or is obeying your area's three-foot pass law.

Wave them through. If they won't go, keep moving—but watch for them to pass.



Smart Idea
Some places have a law forcing motor vehicles to pass bicycles no closer than three feet. Know whether your area has this law.

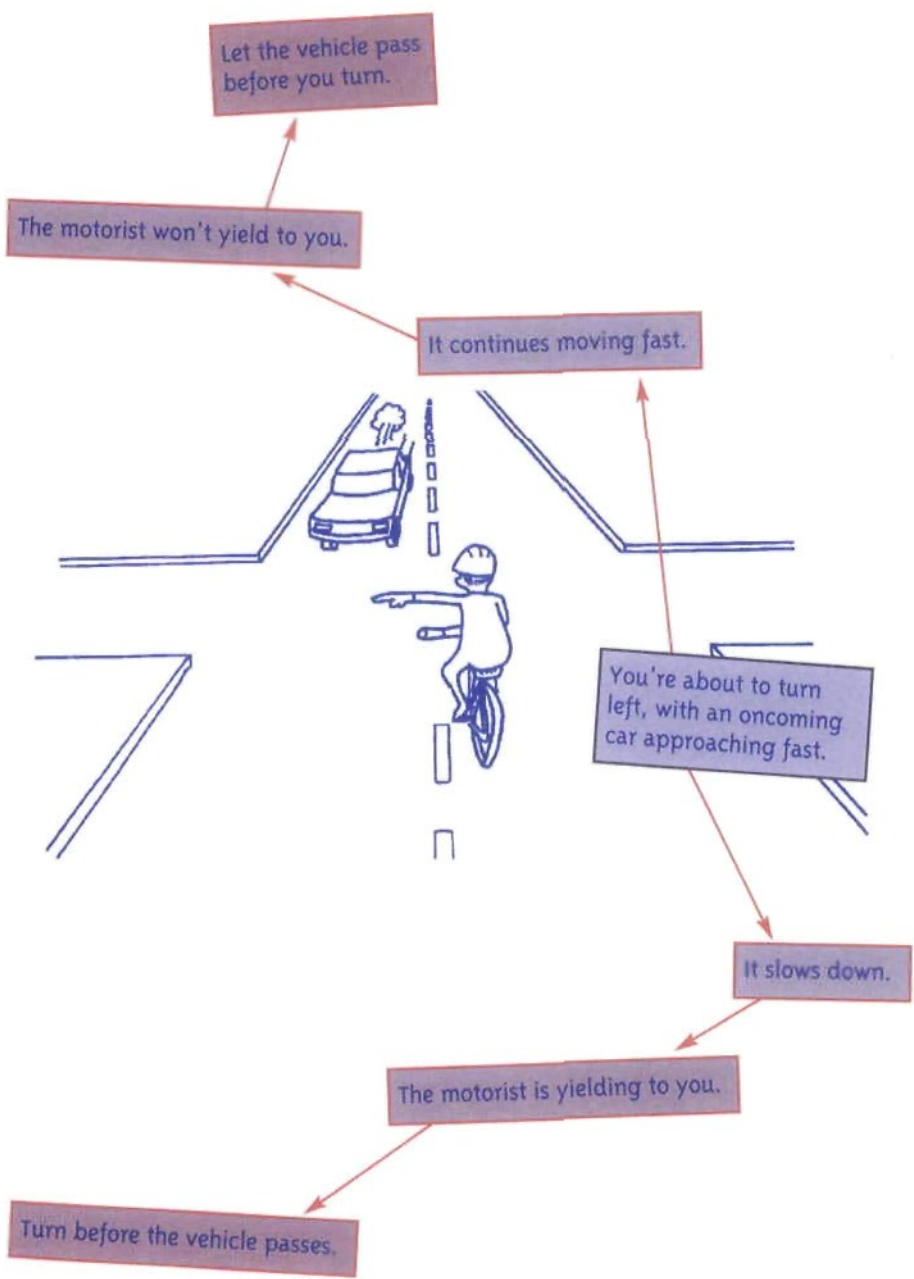
Car ahead stopped in traffic.






The front wheels are turned.

Slow down or pass on the other side.

The car is about to turn or change lanes.



WHEN & HOW

	voice	finger whistle	whistle
noise maker			
cost	none	none	low
likely rip-off	none	none	low
advantages	<ul style="list-style-type: none">➤ always available➤ can use it fast➤ wide range of tones	<ul style="list-style-type: none">➤ always available➤ louder than voice➤ can use it fast	<ul style="list-style-type: none">➤ can wear it around your neck➤ others mistake you for police
disadvantages	<ul style="list-style-type: none">➤ can't be heard over loud traffic➤ might not be heard by motorists with closed windows➤ freaks out pedestrians	<ul style="list-style-type: none">➤ must be learned➤ not everyone can learn it➤ often requires taking one hand off of handlebars	<ul style="list-style-type: none">➤ often requires taking one hand off of handlebars➤ can hold it between your lips, but gets messy



Kool-Stop "China Bell"

TO MAKE NOISE

"ping" bell



"dong" bell



low

low

low

medium

➤ amuses other cyclists

➤ loud at low price

➤ can't be heard in traffic

➤ breaks easily

➤ might not be heard by motorists with closed windows



Recommended Product

Storm whistle

Loud but inexpensive. Have your bike dealer order from All-Weather Safety Whistle, listed under "Bells, Whistles, & Gadgets" in Appendix B. (For more on Mr. Bike's Recommended Products, go to www.mrbike.com/products.)

**STOP
HERE
AND
READ**

Bikes are slower, quieter, and less visible than most other vehicles. Here's how to make noise that tells people to stay out of your way—especially when you're riding fast.

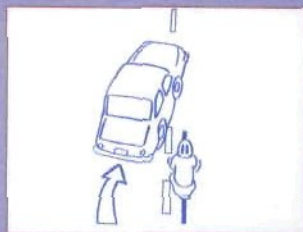
WHEN IT'S IMPORTANT TO MAKE NOISE






Emerging from between two buildings or large vehicles



Coming to pedestrians in a crosswalk



Riding where a motorist can't see you, and he's about to cut you off

	ball horn	air horn	electronic gizmo
noise maker			
cost	low	medium/high	medium/high
likely rip-off	medium	medium	high
advantages	<ul style="list-style-type: none"> ➤ loud at low price ➤ amuses other cyclists 	<ul style="list-style-type: none"> ➤ loud ➤ refill some types using air pump 	<ul style="list-style-type: none"> ➤ makes a variety of noises ➤ amuses other cyclists
disadvantages	<ul style="list-style-type: none"> ➤ often requires taking one hand off of handlebars ➤ ball wears out with frequent use 	<ul style="list-style-type: none"> ➤ whenever you leave your bike, you must remove it ➤ to avoid theft, must detach easily ➤ you're not sure when it's out of air and won't work 	<ul style="list-style-type: none"> ➤ requires batteries ➤ might break in extreme weather ➤ to avoid theft, must detach easily



I can make a noise like a police siren with my mouth. It gets just about anyone out of my way.

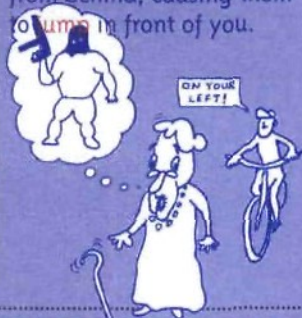
Derick Stevens
bicycles in New York City

APPROACHING PEDESTRIANS FROM BEHIND

Consider using a bell if you often encounter peds from behind.



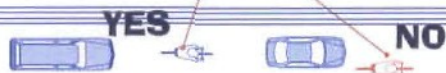
Many peds will freak out when you shout at them from behind, causing them to jump in front of you.



LANES & TURNS

When to ride left, when to ride right

When the lane's too small for cars to pass you safely, ride in the middle of the lane.



Ride as far from the curb as you can. This keeps cars from passing you on the left, then cutting you off when they turn right (the "right hook").



Danger
Cars turning right directly in front of bicycles are one of the top causes of bike crashes!

Ride to the right when you're going slower than traffic.

Ride in the middle of the lane (if the law allows) when you're moving at the same speed as traffic.

In traffic, slower vehicles usually stay right. But riding in the middle of a lane has advantages: It makes you easier to see. You can more easily avoid opening car doors. And when you ride in the middle, you're usually moving fast—so cars don't approach you as quickly as they would otherwise.

**STOP
HERE
AND
READ**

When there's no room to swerve around opening car doors or holes in the road, ride in the middle of the lane.

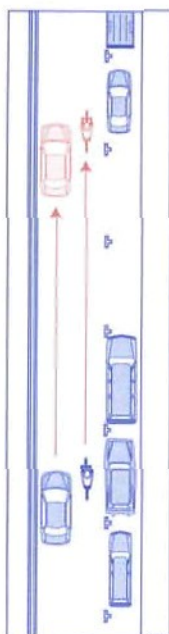
When the road's not quite two lanes wide, ride far to the left so that cars don't try to squeeze by you.



Passing on a narrow street

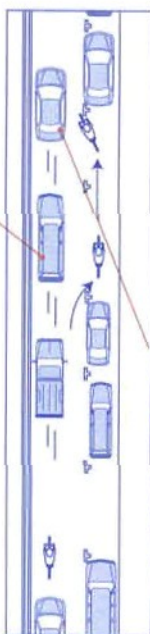
SAFE

Ride in a straight line.



SMART

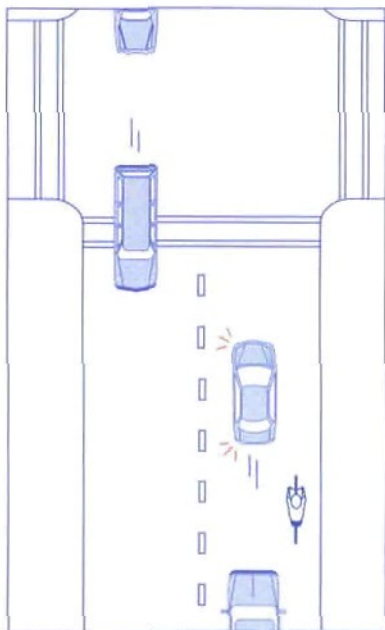
If you've blocked a bunch of cars on a narrow road, look for a safe place to move right and let them pass.



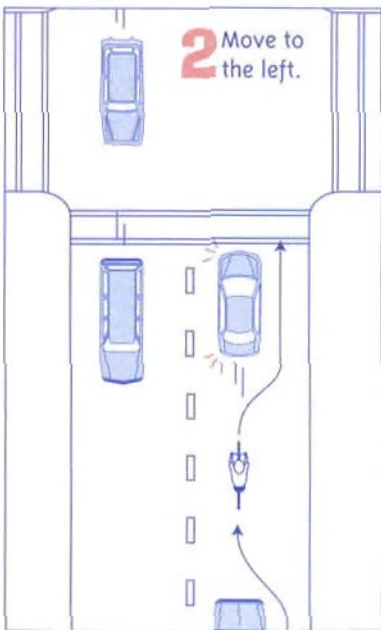
Before moving left, check traffic behind you. If traffic blocks you, wait for it to clear.

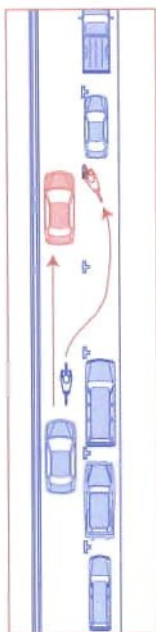
YES

1 While you're riding on the right, the car ahead signals a left turn.



2 Move to the left.





Don't weave in and out of parked cars, because motorists won't see you when you reenter the traffic lane.

HOW TO PASS ON THE LEFT

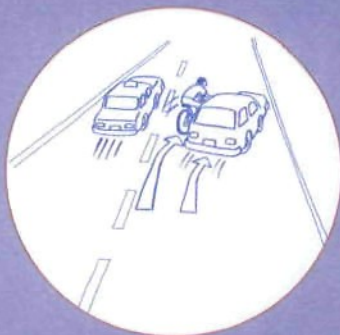
1 Look back.



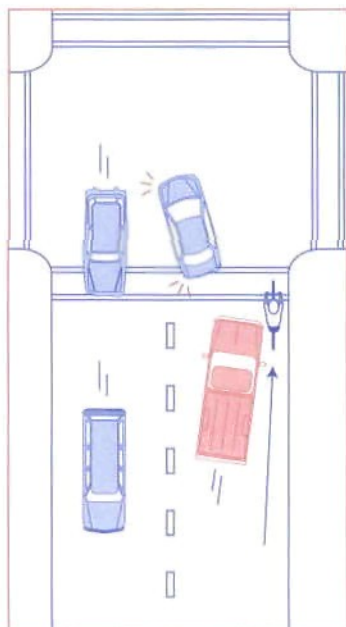
2 Move toward the car's left rear end.



3 Snake around the car to avoid other vehicles that might pass.



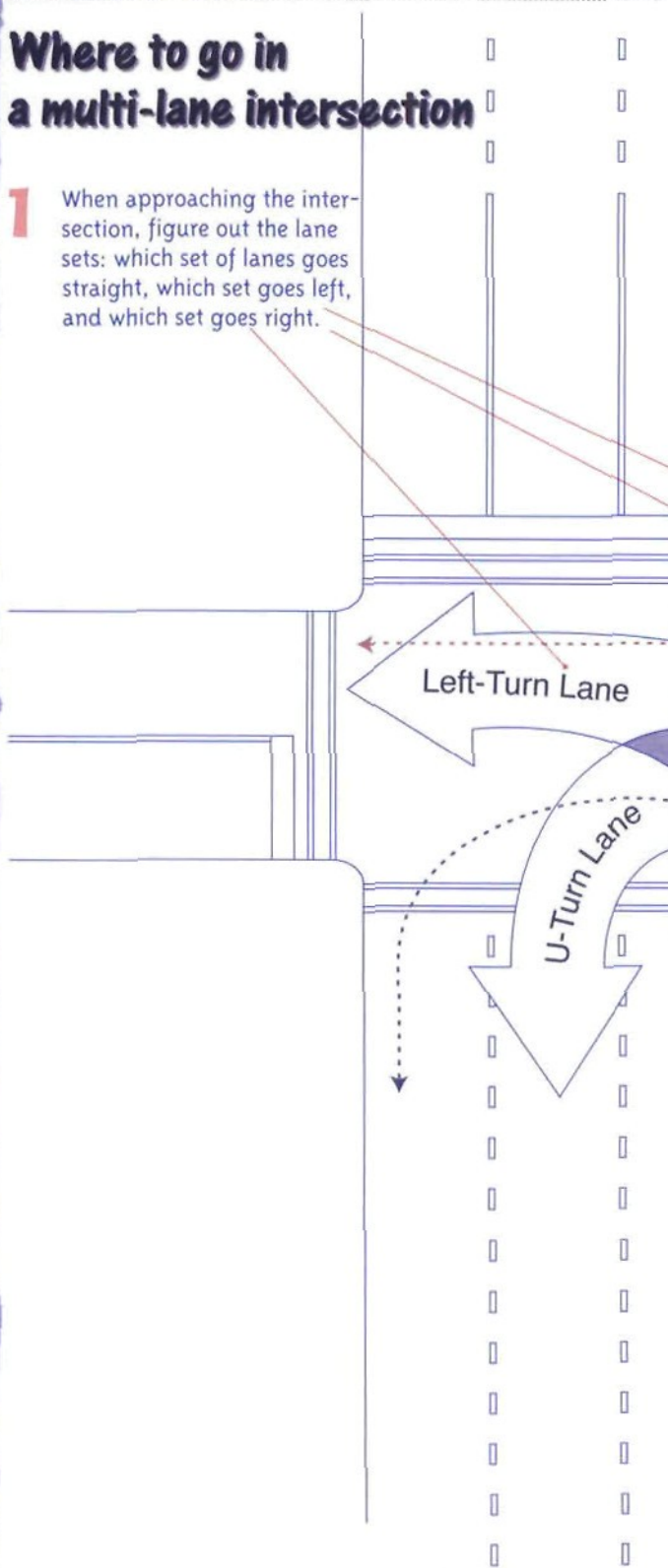
NO



Don't move to where you'll get squeezed by cars passing by the turning car.

Where to go in a multi-lane intersection

1 When approaching the intersection, figure out the lane sets: which set of lanes goes straight, which set goes left, and which set goes right.



STOPPING AT RED LIGHTS

CARS STOPPED IN BOTH LANES

SMART

If the right-lane car is waiting to turn right, stop on the left side of the right lane. Move to where motorists on both sides can see you.

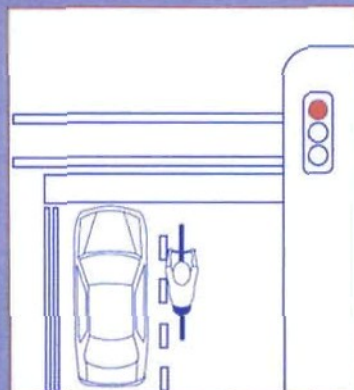


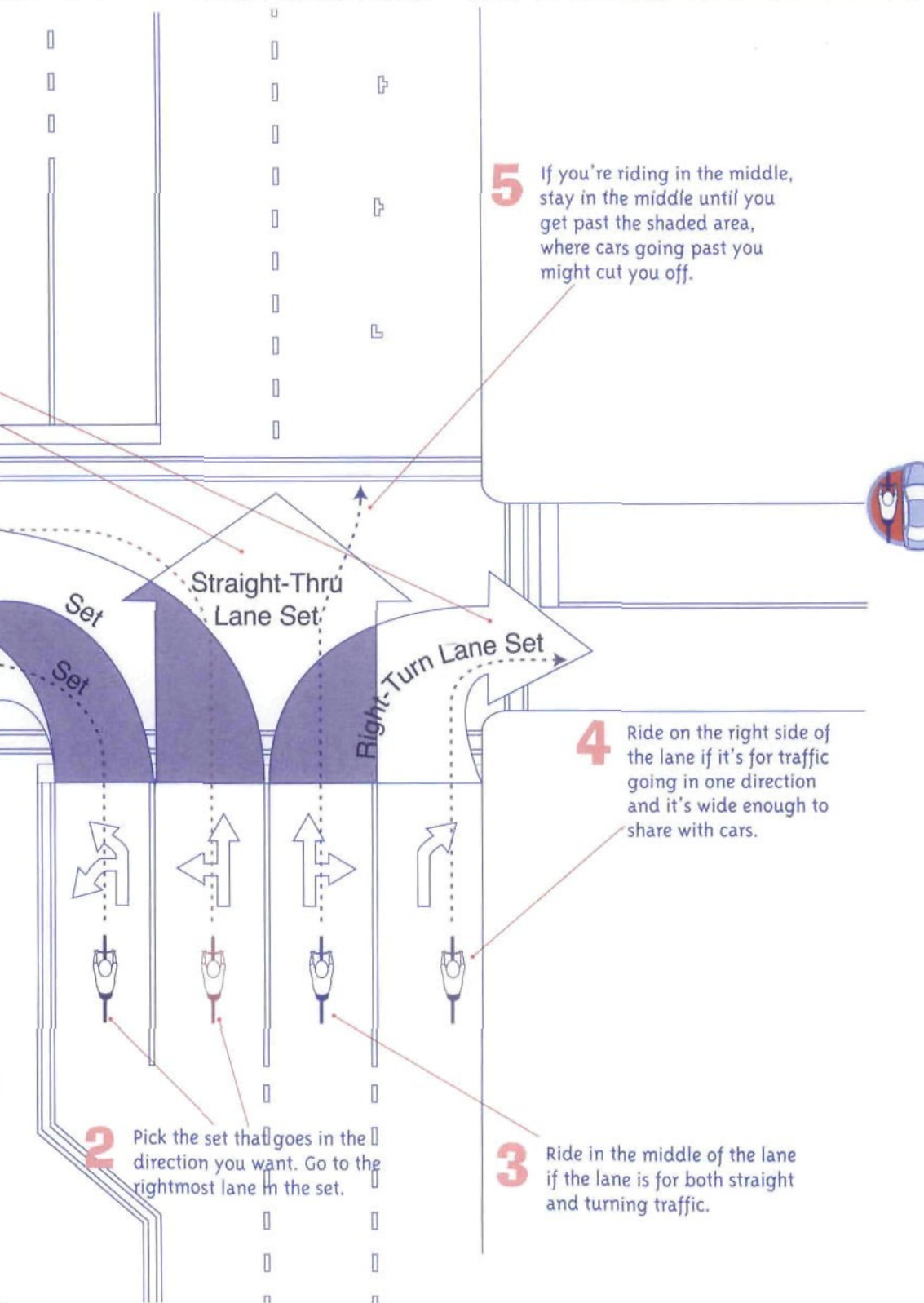
SAFE

Stop in the middle of the right lane.

WITH RIGHT ON RED ALLOWED

If there's room for right-turning cars, stop on the left side of the right lane so they can get past you. If a car's stopped in the left lane, stop where motorists on both sides can see you.





5 If you're riding in the middle, stay in the middle until you get past the shaded area, where cars going past you might cut you off.

4 Ride on the right side of the lane if it's for traffic going in one direction and it's wide enough to share with cars.

3 Ride in the middle of the lane if the lane is for both straight and turning traffic.

2 Pick the set that goes in the direction you want. Go to the rightmost lane in the set.

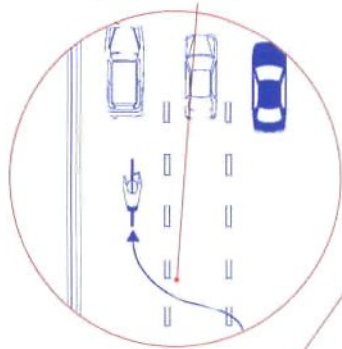
The basic left turn

- 1** Look behind you for a gap in traffic. When traffic allows, signal left and change lanes.

If you can't find a gap, get a driver to let you in by making eye contact and pointing.

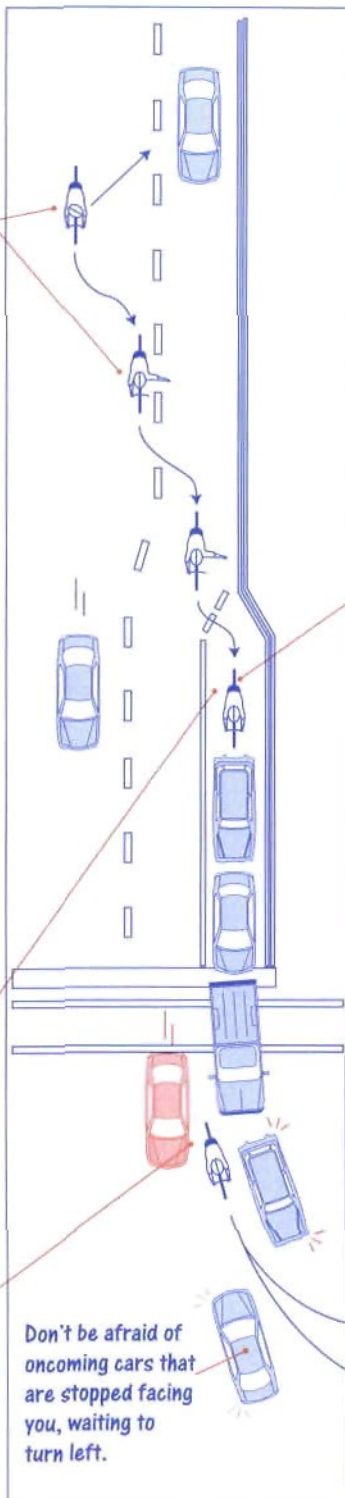
- 2** When you're turning left on a multi-lane street where traffic isn't much faster than you, merge left one lane at a time.

Where traffic moves much faster, wait for a gap in traffic and move across all the lanes at once.



- 4** **SAFE**
Get directly behind the last car waiting to turn left.

SLY
Get behind the right rear bumper of the first car in line, out of the way of cars in the next lane.



- 3** Get into the left-turn lane. More than one turn lane? Use the one farthest to the right—unless you're making another left turn immediately.

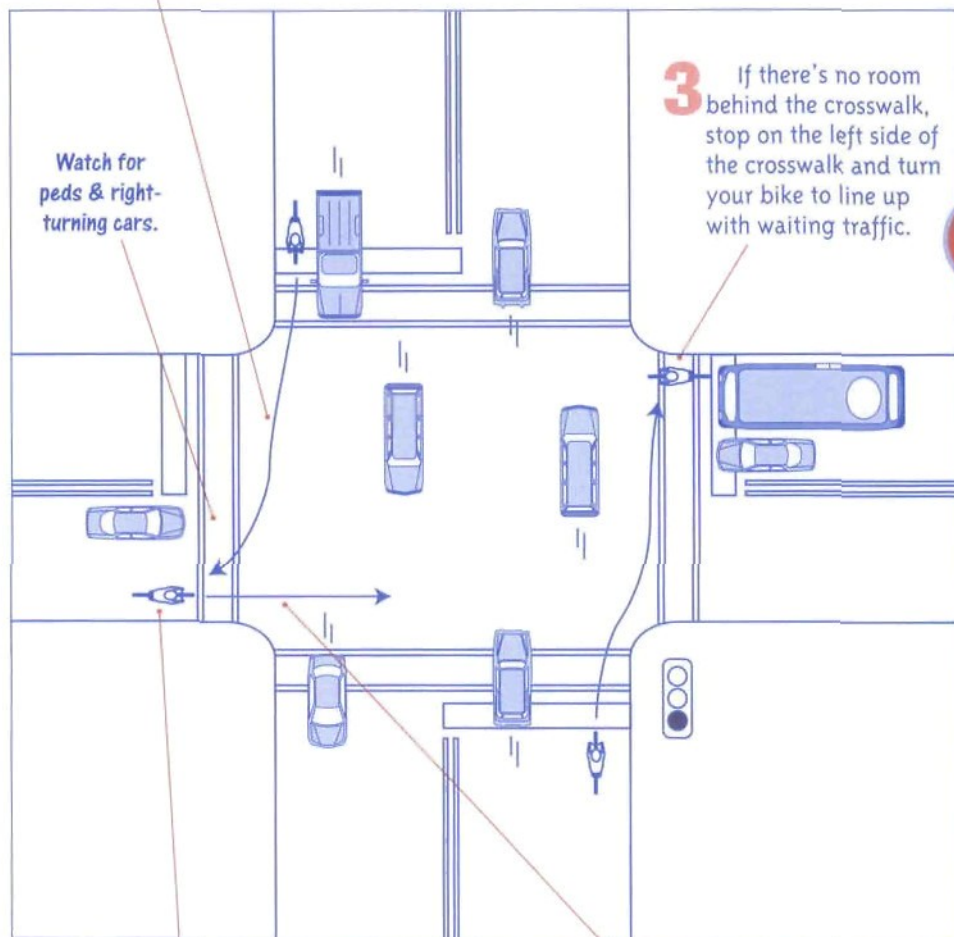
- 5** When there's a gap in oncoming traffic, finish the turn. Move into the right lane—unless another vehicle is there, or you're making another left turn right away.

Don't be afraid of oncoming cars that are stopped facing you, waiting to turn left.

The box left turn

- 1** Stay in the right lane and ride across the intersection on the left side of the crosswalk.

Use the box left turn if you can't merge left before you reach the intersection, or the left-turn lane is jammed.



- 2** Just before the opposite corner, check whether there's room for you in the traffic lane to the right of the crosswalk. If so, go there and turn your bike to line up with waiting traffic.

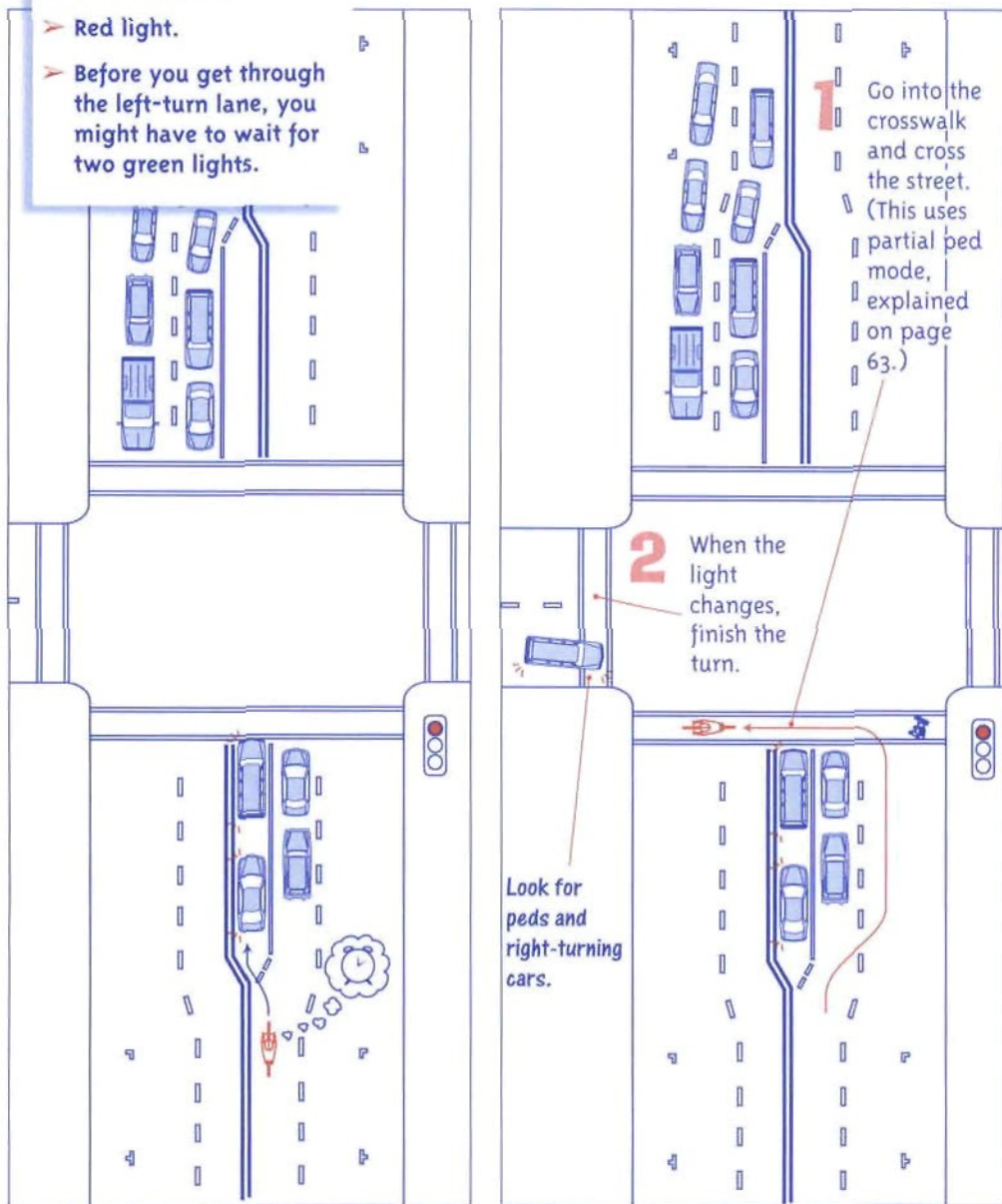
- 4** When the traffic light changes, move with traffic.

The impatient left turn



SITUATION:

- > Red light.
- > Before you get through the left-turn lane, you might have to wait for two green lights.

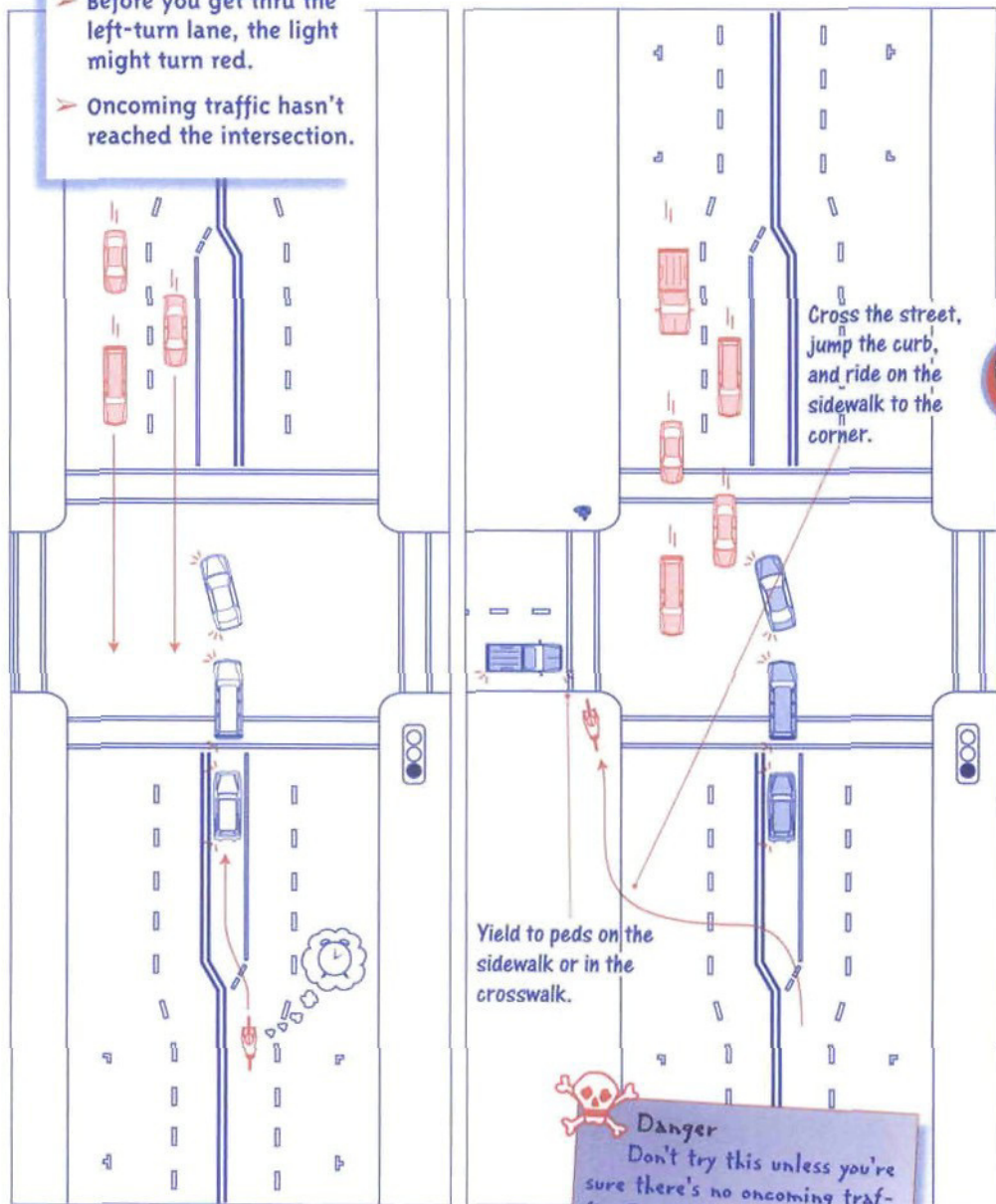


The shortcut left turn



SITUATION:

- > Green light.
- > Before you get thru the left-turn lane, the light might turn red.
- > Oncoming traffic hasn't reached the intersection.



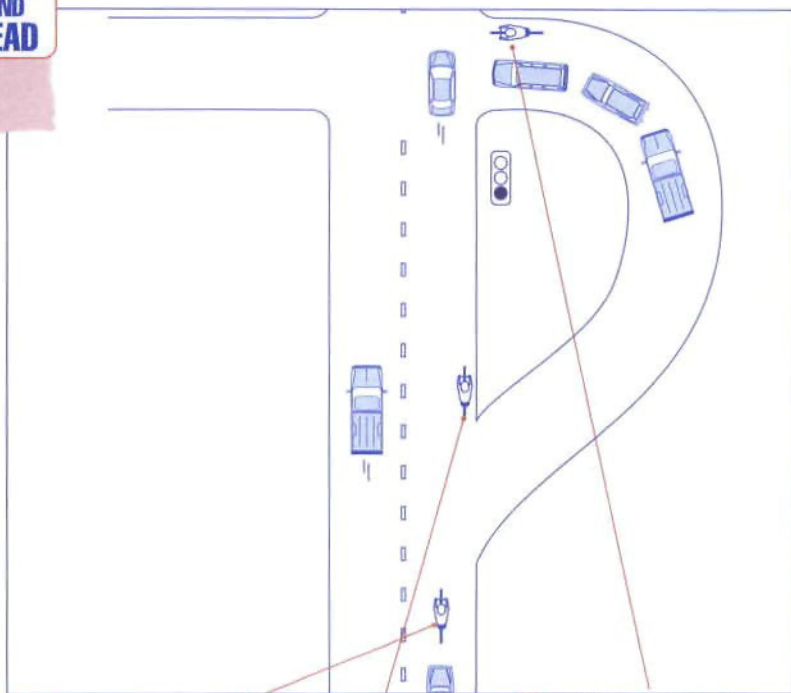
Special left-turn cases

Some places use right-hand exits for left turns. Use these tips to save time.

**STOP
HERE
AND
READ**

If the light for straight-through traffic is green

NEW JERSEY JUGHANDLES

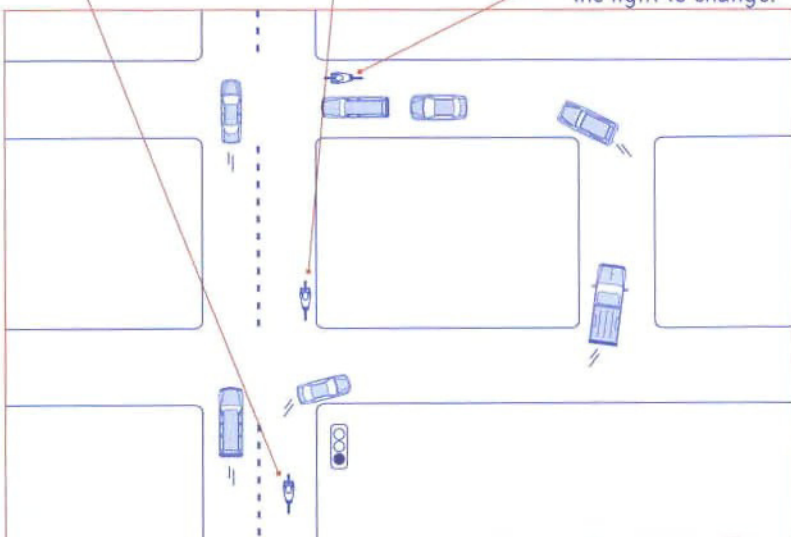


1 Get in the middle of the through lane.

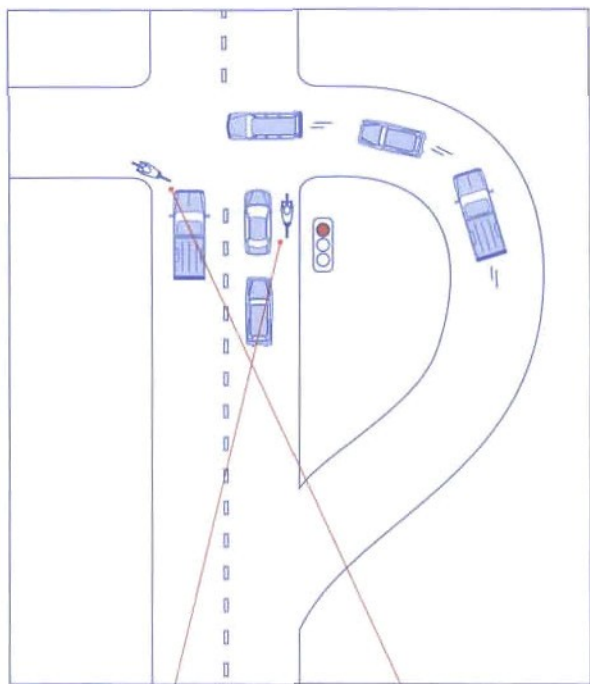
2 When you pass the exit, move to the right.

3 When you reach the cross traffic, move to the front and right of the traffic. Wait for the light to change.

MICHIGAN LEFTS

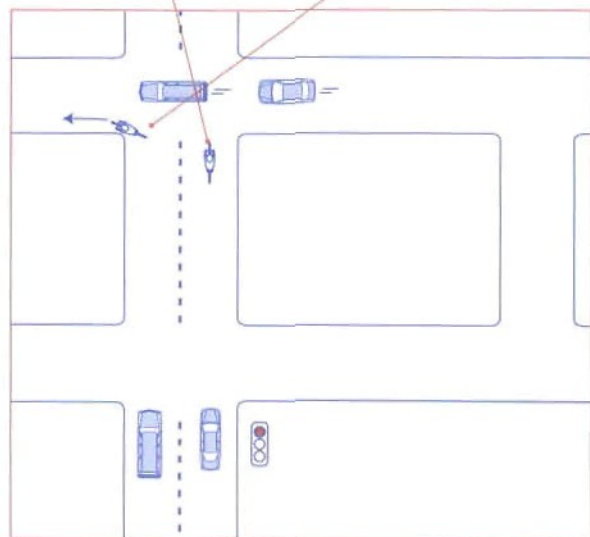


If the light for straight-through traffic is about to turn red



1 Ride straight to the cross traffic.

2 As the light changes, turn left and merge with the cross traffic.



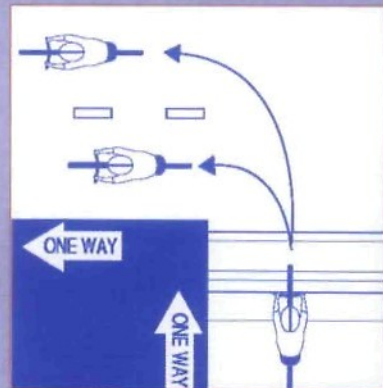
NO LEFT-TURN LANE

If there's no turn lane, ride at least three feet from the center stripe so a left-turning car behind you can't pass you on the right.



LEFT TURN ON RED

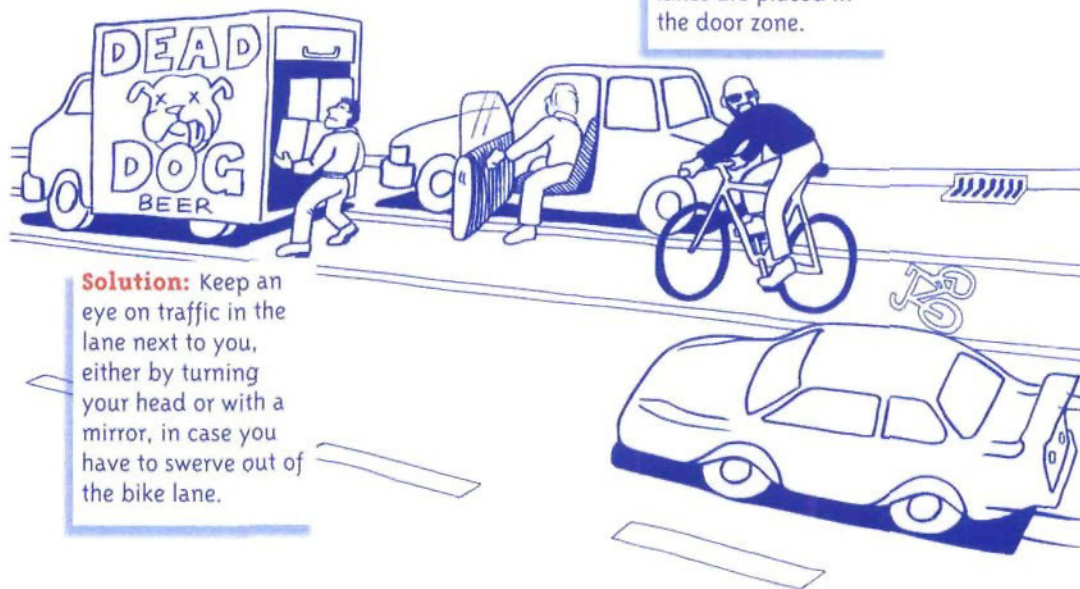
When turning left from a one-way street to another one-way, don't forget that many cities allow left turns on red. (After the turn, stay left if you're going left again.)



Obstacles in bike lanes

Problem:

Motorists often use bike lanes to double park. Also, some bike lanes are placed in the door zone.

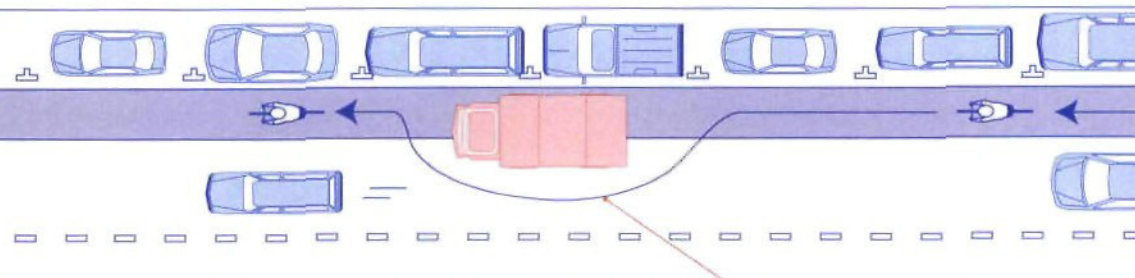


Solution: Keep an eye on traffic in the lane next to you, either by turning your head or with a mirror, in case you have to swerve out of the bike lane.



Sly Bikers Only!

Try to ride nearly as fast as the traffic in the adjacent lane. When obstacles arise, look back, signal if you can, and ride in the adjacent lane as far as you have to.

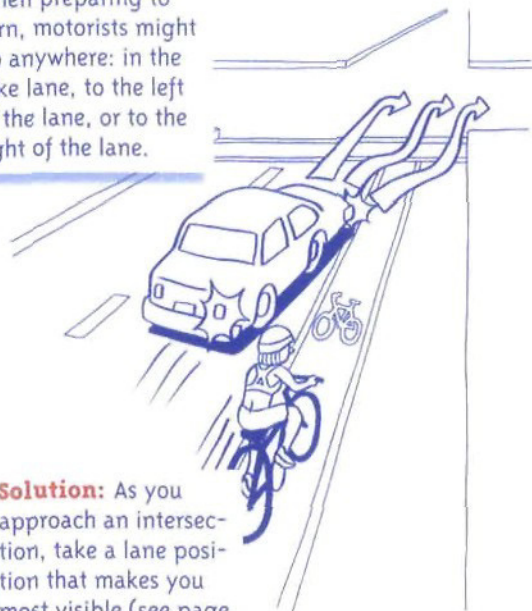


If it seems easiest, stay in the adjacent lane.

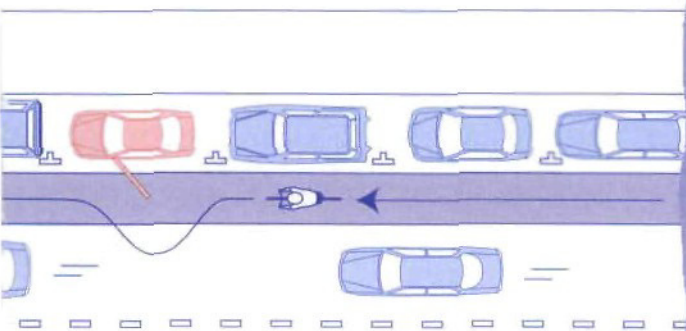
Bike lanes at intersections

Problem:

When preparing to turn, motorists might go anywhere: in the bike lane, to the left of the lane, or to the right of the lane.



Solution: As you approach an intersection, take a lane position that makes you most visible (see page 82). But be ready to avoid a motorist who might cut you off.



DRIVE-THROUGH LANES



In drive-through restaurants or banks, stay in the middle of the lane so cars don't pass you.



Crossing an intersection

SAFE

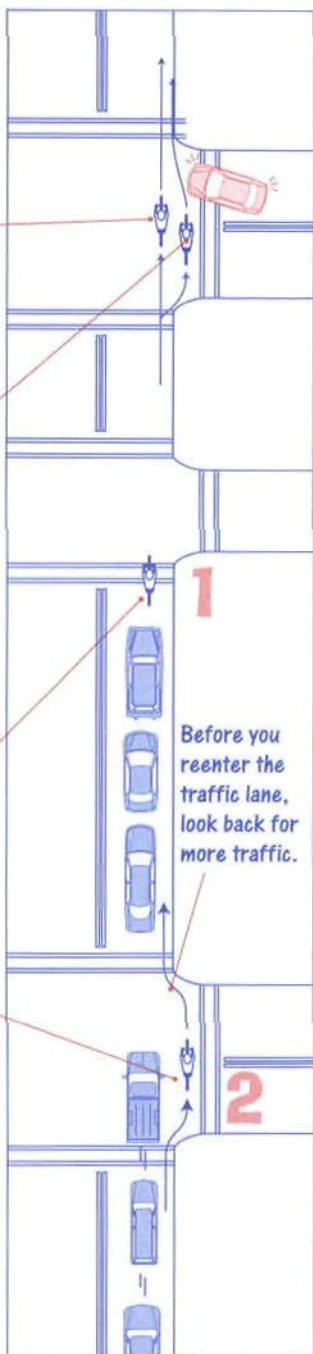
When you cross an intersection don't veer to the left or right. Ride in a straight line that tells motorists exactly where you plan to go.

Veering right makes it harder for cross traffic to see you.

SMART

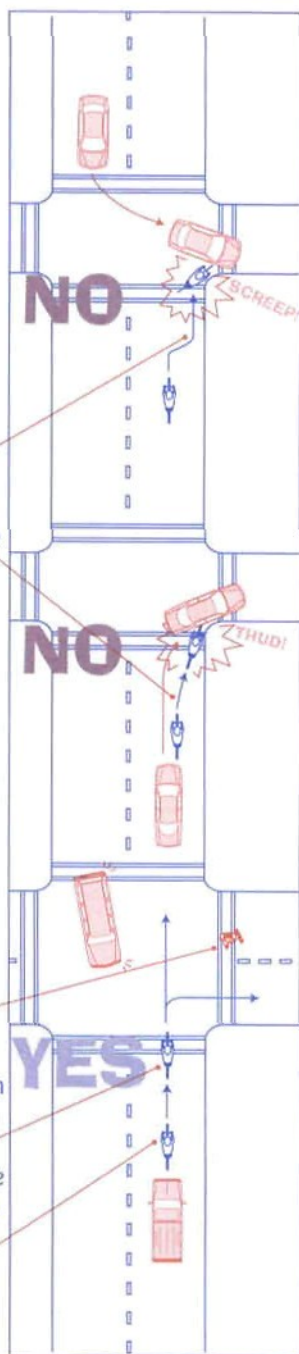
If you've blocked a bunch of cars on a narrow road:

When you cross an intersection move over to let them pass.



Before you reenter the traffic lane, look back for more traffic.

Setting up for a right turn



To avoid getting cut off by a turning car, don't move to the right of the lane.

Watch for peds

Instead, stay in the middle of the lane, to look like you're going straight.

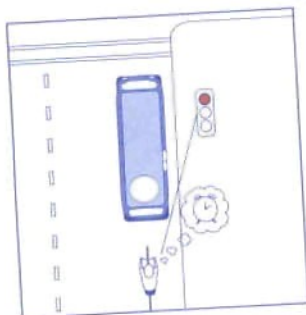
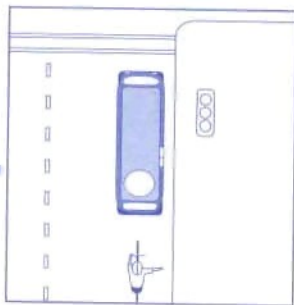
Don't signal a right turn

BUS TRAFFIC

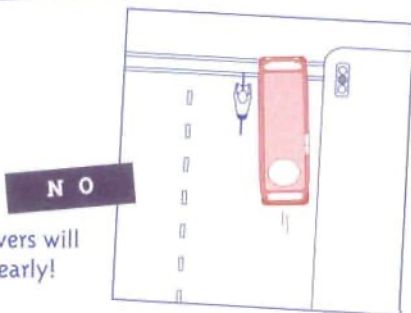
Turning right behind a stopped bus

SITUATION:

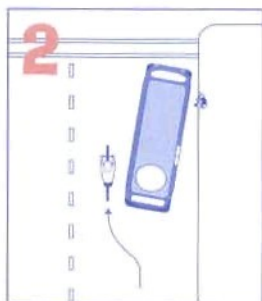
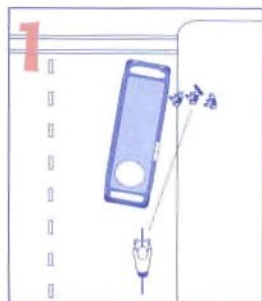
You want to turn right at a corner where a bus has stopped.



If your light is red, don't turn in front of the bus unless you know it won't change to green during your turn (see page 100).



Many bus drivers will start moving early!



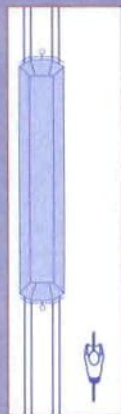
Don't turn in front of the bus unless you see passengers will still be boarding while you turn.

Buses are funny vehicles. They stop, spit out passengers, go, stop, spit out some more . . . easy to predict, right? Not for some cyclists: They get cut off by buses, or nearly get hit when they try to pass buses. But this doesn't have to happen to you. Learn the tricks on these pages and you can handle buses, no matter what they do.

**STOP
HERE
AND
READ**

PASSING A STOPPED TROLLEY

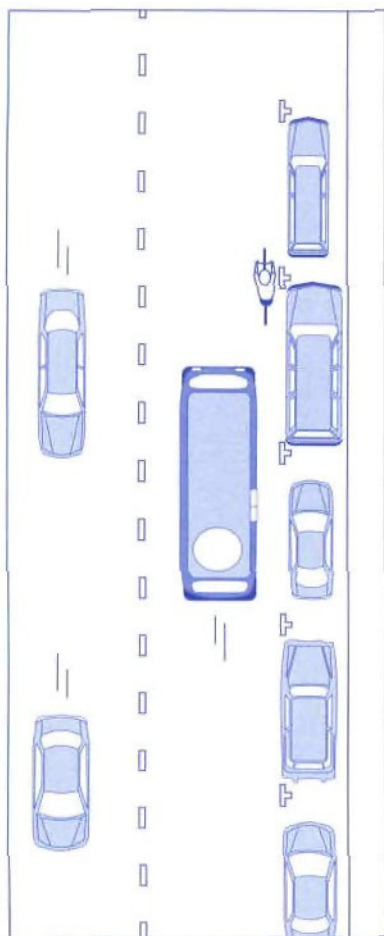
You're about to come alongside a trolley or light-rail train that has just stopped.



Slow down or swing wide to avoid passengers.

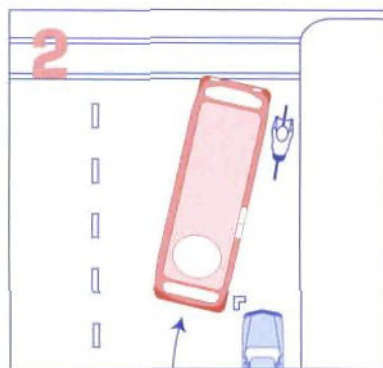
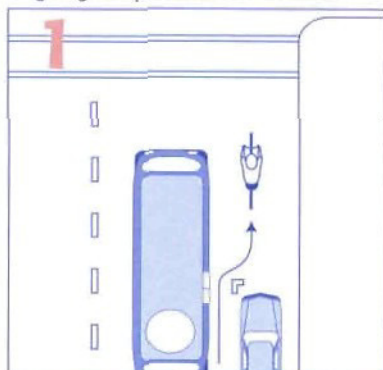


Bus follows you, but doesn't pass



NO

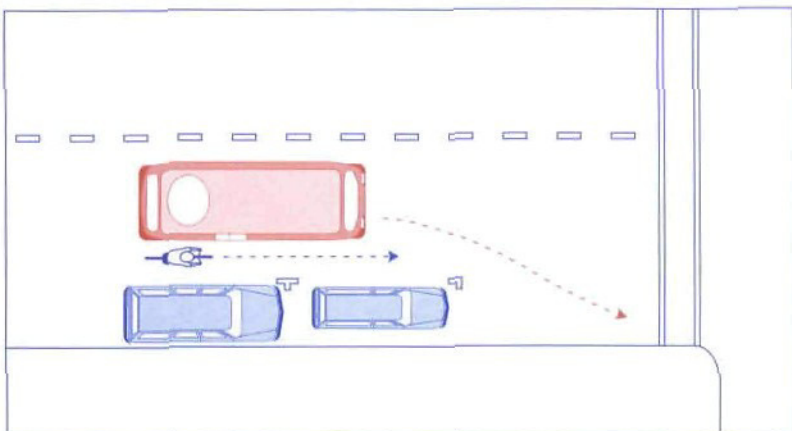
Don't move to the right, else you might get squeezed to the curb.



Bus starts to pass just before a bus stop

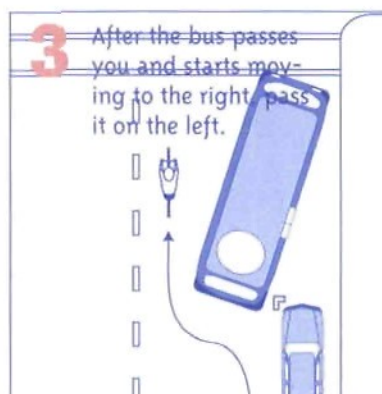
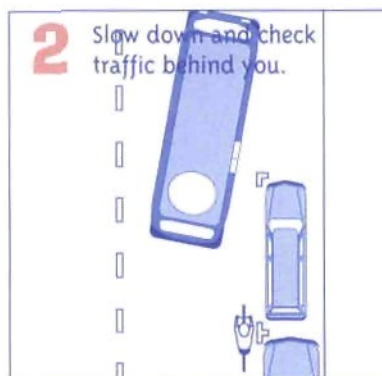
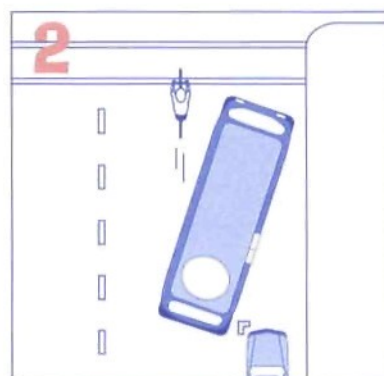
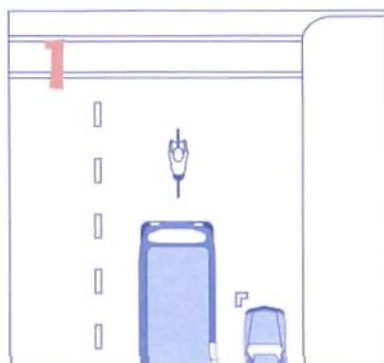
Prepare for the bus to cut you off:

- Slow down and check traffic behind you.
- Get ready to move left and pass the bus, or to stop suddenly.



YES

Keep your speed up and ride in a straight line.

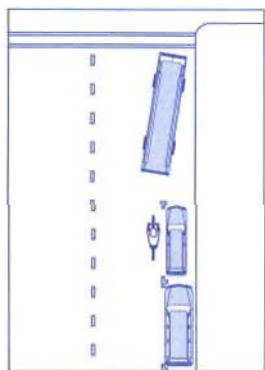


Smart Idea

If you continually get harassed by a particular bus driver, note the bus number and time. Each time you get harassed, report it to the bus agency. Also report drivers who you think drive very well around cyclists.

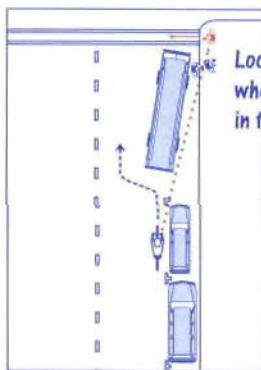
Passing a bus stopped at a bus stop

Pass left



SITUATION:

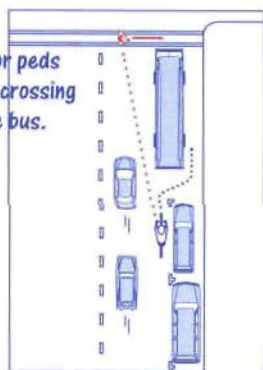
You approach a bus stopped at a bus stop.



Look ahead for peds who might be crossing in front of the bus.

Pass left if: Passengers will still be getting on by the time you reach the bus.

Pass right

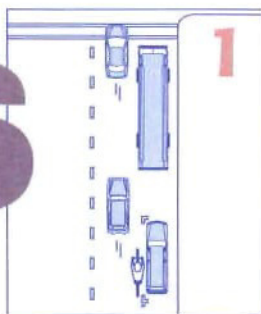


Pass right if:

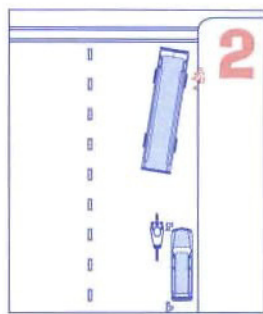
- There's room.
- You don't want to slow down.
- You can see that all passengers have finished getting on or off.

Wait

YES

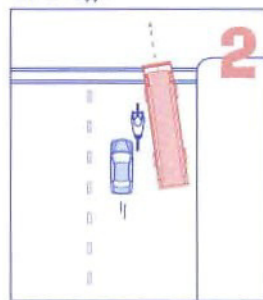
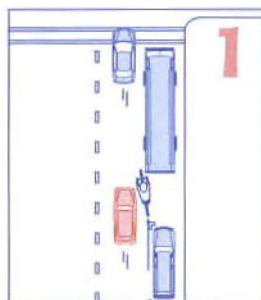


Wait if there's no room.



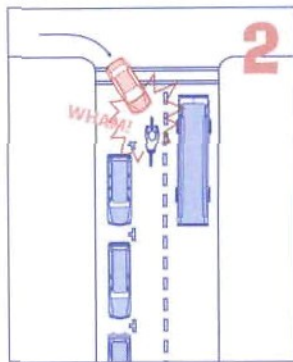
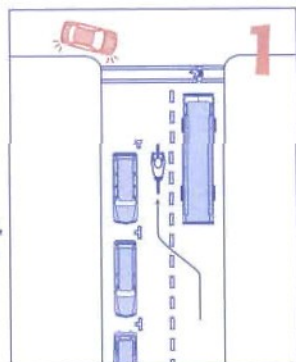
Wait if by the time you reach the bus, passengers will finish getting on or off.

NO

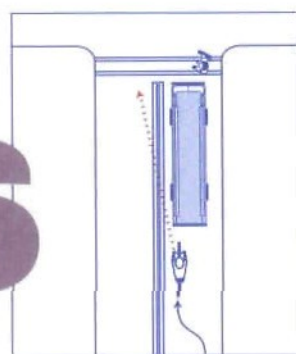


NO

With a single lane in each direction, don't pass if you can't escape from surprise traffic.



YES



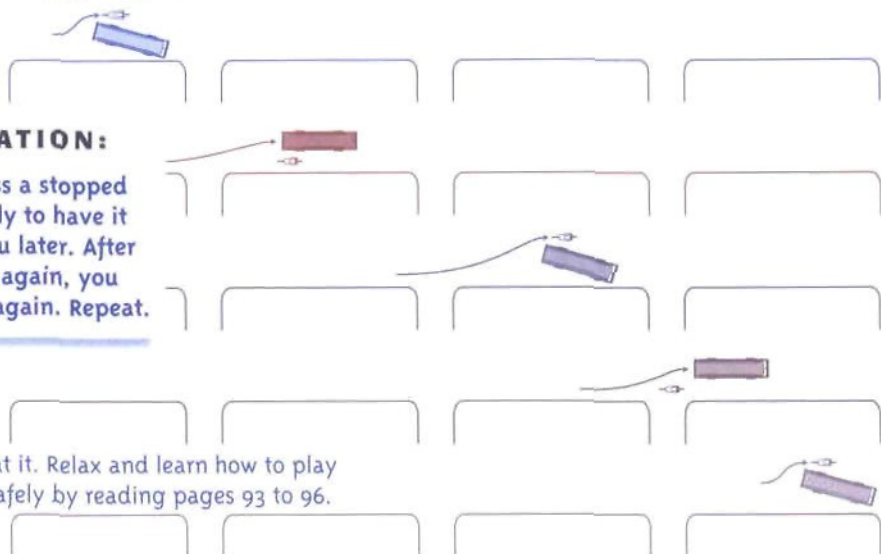
1 Move to the left of the lane and look into the oncoming lane.

2 Pass left if there's room.

Leapfrogging buses

SITUATION:

You pass a stopped bus, only to have it pass you later. After it stops again, you pass it again. Repeat.

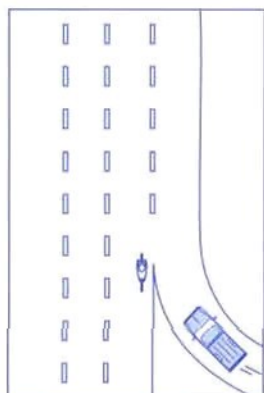


Don't sweat it. Relax and learn how to play leapfrog safely by reading pages 93 to 96.

RAMPS

Two ways to pass entrance ramps

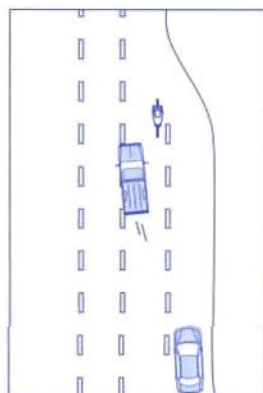
Move straight



1 Look over your right shoulder to see what's coming.



2 If you see a lot of vehicles, stay straight so the vehicles in front pass you on the right.



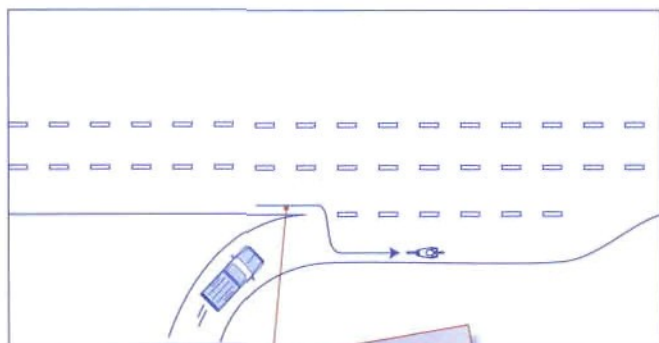
3 As you move farther, the rest of the vehicles will pass behind you and on your left.

Cut right

1 Look over your right shoulder to see what's coming.

2 If you see a break in the ramp traffic, move right.

3 Vehicles will pass you on your left.

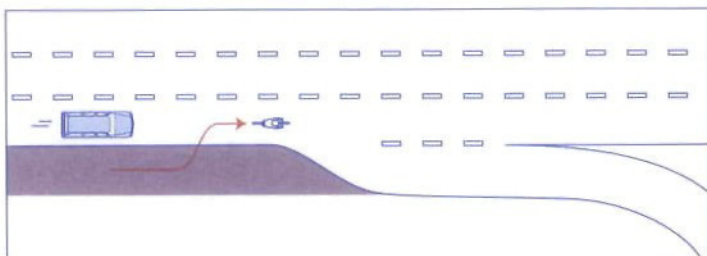


Danger
Sometimes traffic around ramps is too fast or heavy to pass safely. In these cases, stop **here** and wait for a break in traffic.

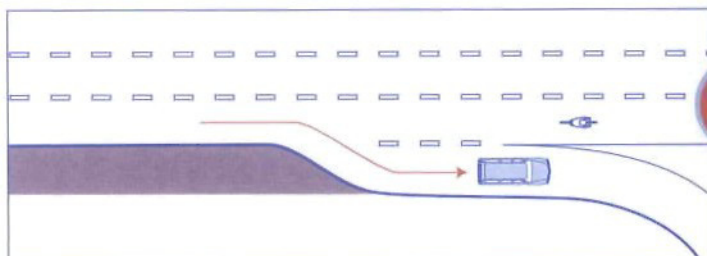
Two ways to pass exit ramps

Stay in the through lane

1 Look over your left shoulder to see what's coming.



2 If traffic looks light or slow-moving, signal left and move to the middle of the through lane.

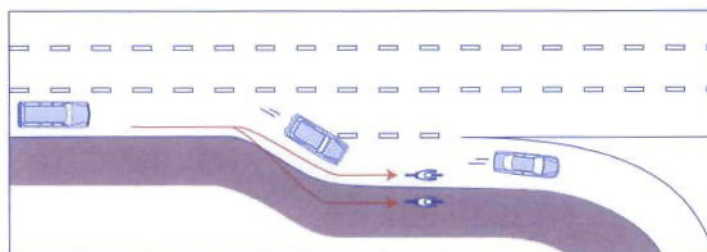


3 Traffic will pass you on the right.

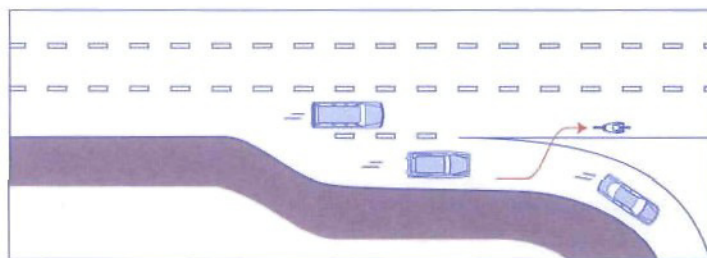


Move right, cut left

1 Look over your left shoulder to see what's coming.



2 If you see a lot of vehicles, move to the right side or shoulder of the exit lane. Vehicles will pass you on your left.



3 When you reach the exit ramp, look back. If there's no break in traffic, stop and wait. Then cut left across the exit ramp.

If motorists don't seem to know what you'll do, wave them on. Then cross the ramp behind them.

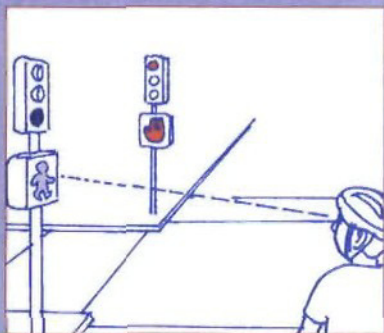
TIMING

LEARNING TO TIME TRAFFIC LIGHTS



THE PROBLEM:

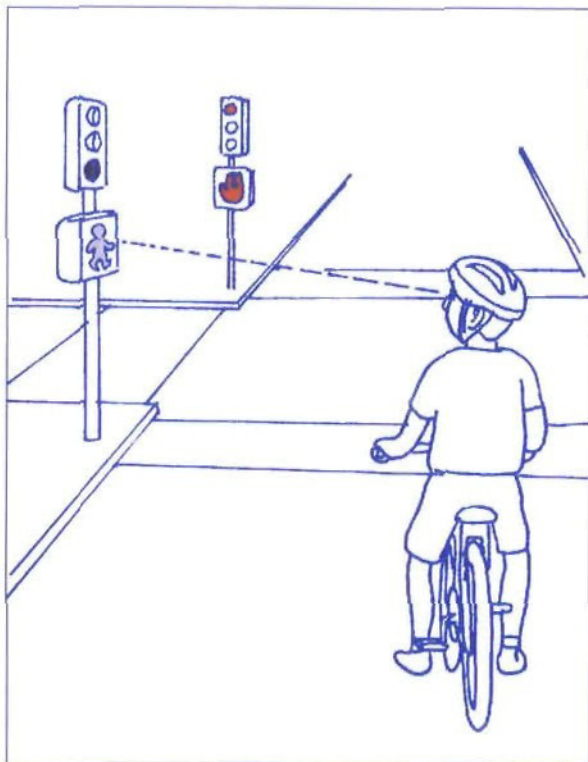
Just when you speed up to get through an intersection, the light changes—so you have to stop.



THE SOLUTION:

Learn to guess when a green light will change by watching the DON'T WALK signal.

Learning how to use the DON'T WALK signal



1 WATCH

Stop at red lights (if you don't already) and watch the DON'T WALK signal facing traffic in the cross street. Wait for it to change from WALK to DON'T WALK.

TRAFFIC LIGHTS

2 COUNT

Count the seconds the DON'T WALK signal stays on before the traffic light turns red. If the signal flashes, count the number of flashes before the signal turns green.

Examples

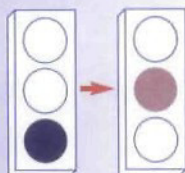
1 WALK signal



1 WALK signal



2 DON'T WALK signal flashes 14 times



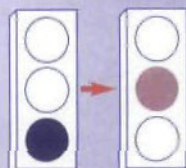
2 DON'T WALK signal flashes for 8 seconds



3 DON'T WALK signal stays on



3 DON'T WALK signal stays on for 3 seconds



4 DON'T WALK signal stays on



CHICAGO

NEW YORK CITY

NUMBERS SHOWN HERE ARE TYPICAL, BUT DIFFER ON SOME STREETS.

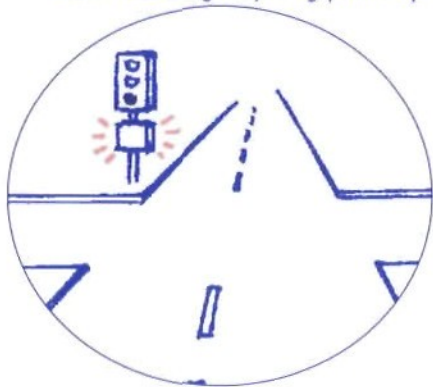
3 REMEMBER

You'll find that many intersections use the same DON'T WALK signal timing. Remember the timing for the intersections you use often.

Using traffic-light timing

1 LOOK

The first thing you should do when you approach an intersection is look for the DON'T WALK signal facing your way.



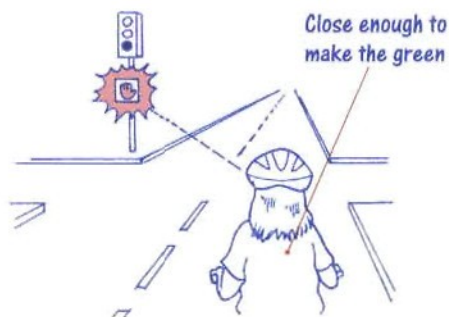
2 COUNT

When the signal changes from a steady WALK signal, start counting, according to the timing you've already figured.



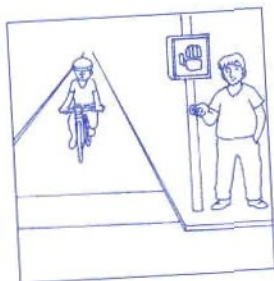
3 DECIDE

Decide whether you can get through the intersection before your light changes from green. If not, slow down.



Pedestrian-controlled signals

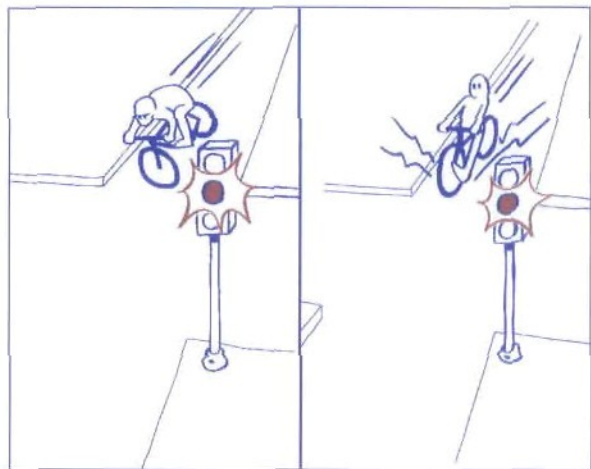
At intersections with pedestrian-controlled signals, watch for a ped pressing a button to make the traffic light turn green. The DON'T WALK signal might flash longer than usual.



GOING THROUGH YELLOW LIGHTS

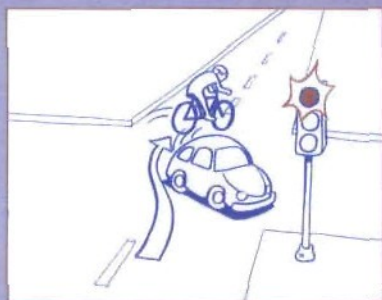
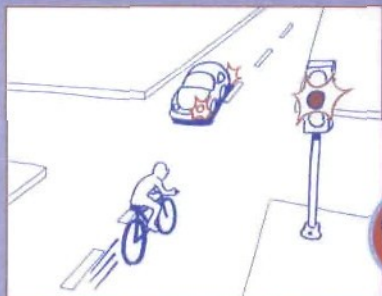
YES

If the traffic light turns yellow just before you reach the intersection, keep your speed up or stop.



Sly Bikers Only!

If an oncoming car's waiting to turn left, maintain your speed—but get ready to go around the car, stop, or make an emergency turn (see page 147).

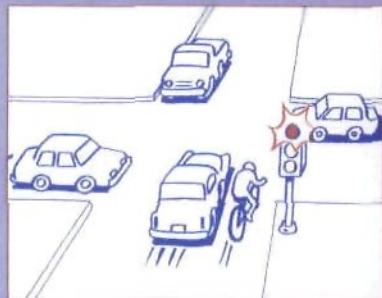


NO

Don't slow down while going through the intersection. You make yourself a target.



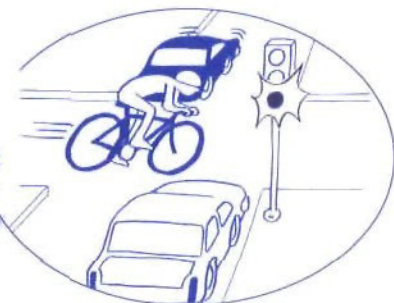
If the light will turn red while you're crossing the intersection, try to "shadow" (ride alongside) a car that's also crossing the intersection. Shadowing lets you keep your speed up.



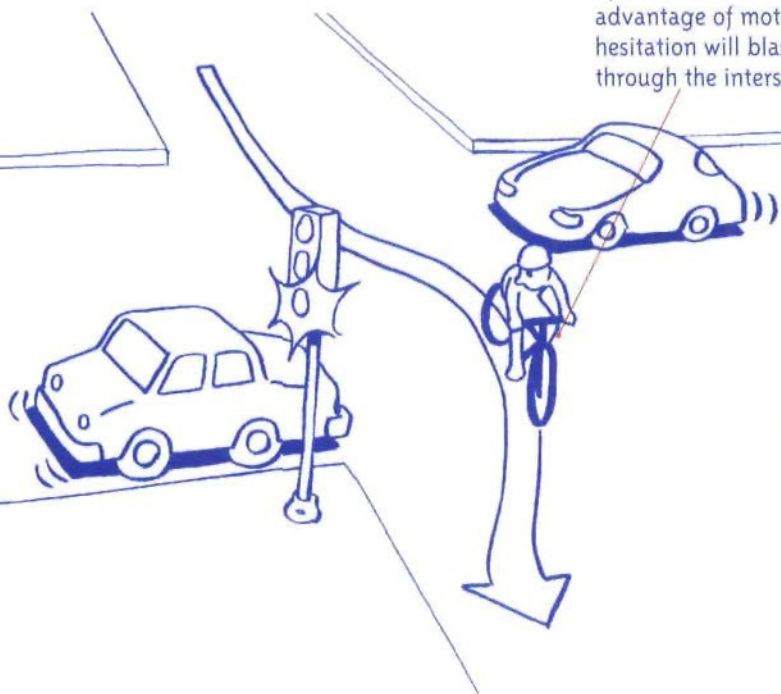
RED LIGHTS

SITUATION:

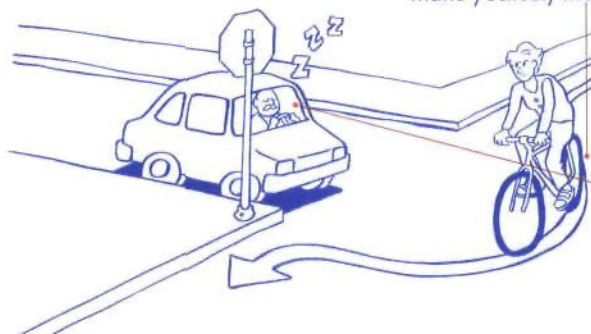
Cross traffic has just gotten the green. Motorists take a second or two to start moving.



Cyclists who take advantage of motorists' hesitation will blast through the intersection.



As you go through the intersection, swing out to your left to avoid motorists who begin to move, and to make yourself more visible to them.

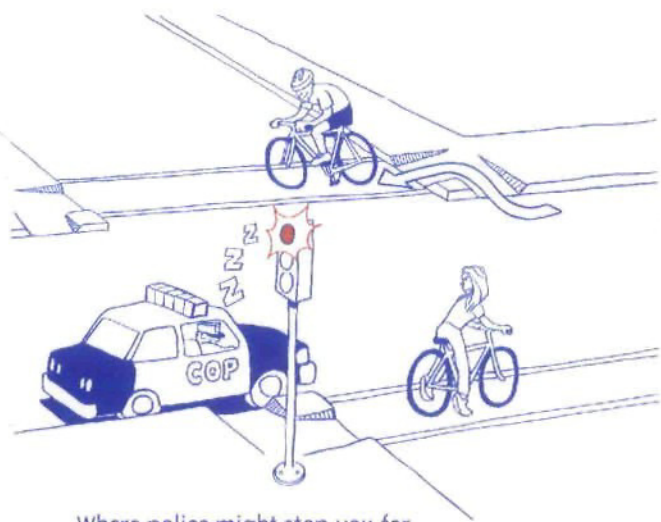


Also use this technique when motorists at stop signs might not see you.



Danger

Many cyclists who run red lights get hit. The ones who don't get hit have a lot more close calls (and, in some cities, are fined). If you don't want to take chances, don't run red lights. Methods shown on these pages might cut your risk, but not enough to make you safe.

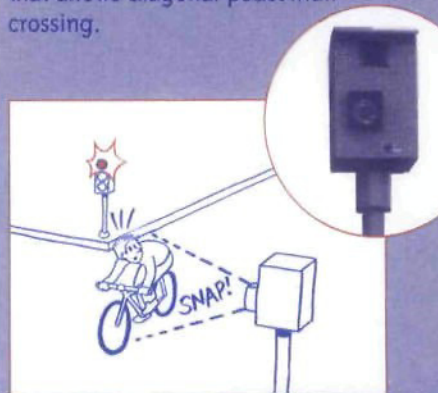


Where police might stop you for running a red light, go into ped mode: use the crosswalk.

WHAT TO WATCH OUT FOR



Intersections with a 4-way red light that allows diagonal pedestrian crossing.

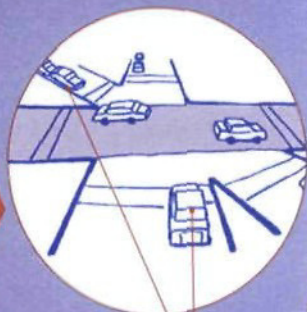


Intersections that have red light cameras. (To learn what U.S. towns use them go to www.hwysafety.org/safety_facts/rlc_cities.htm.)

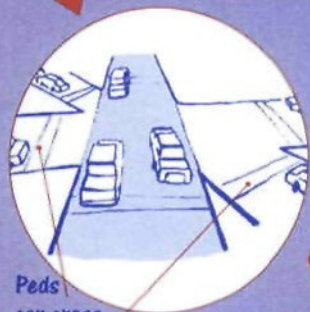
Before you run lights, make sure your bike's in good shape. When you run lights, you often must move or stop suddenly—and a bike with bad brakes or a bad drive train (chain, gears, and hubs) will choke.

THE 3-STREET

HOW LIGHTS CHANGE AT 3-STREET INTERSECTIONS



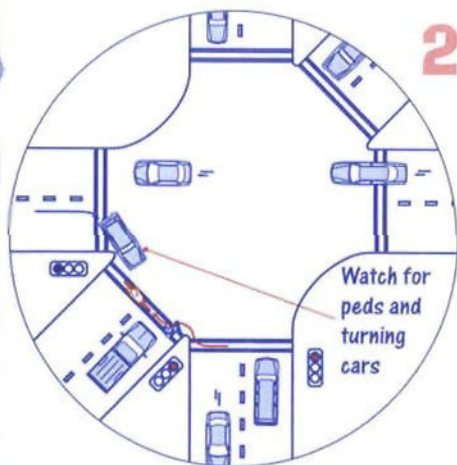
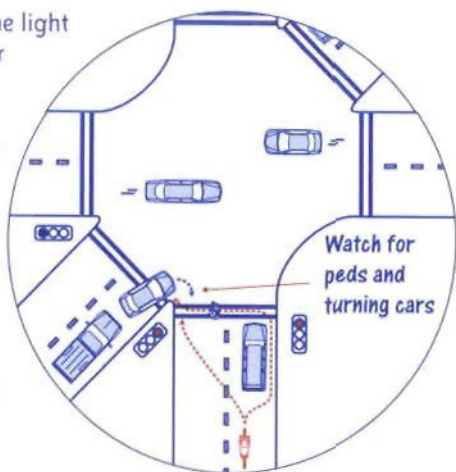
Stopped traffic



Peds can cross on either of the two streets that don't have the green.

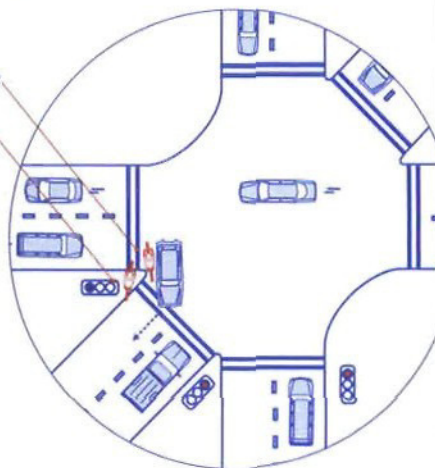


- 1 After the light on your street turns red, go to the crosswalk and turn left (in ped mode).



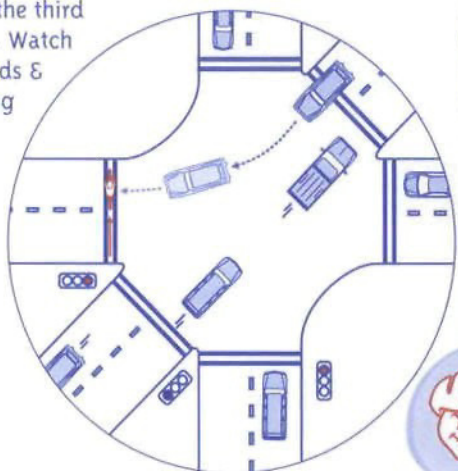
- 2 Cross the next street and wait on the corner.

- 3 Wait here or here so turning cars don't hit you.



RUN-AROUND

- 4** When the light changes, cross the third street. Watch for peds & turning cars.



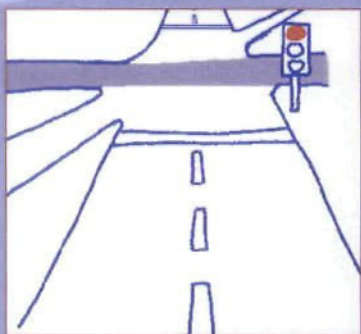
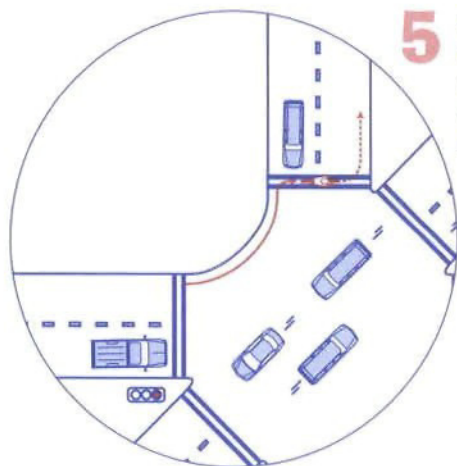
When the light turns red at the intersection of three streets, you have to wait twice as long for the green. If you don't want to wait, you can use the 3-street runaround to cut your wait time in half. You do it by going into ped mode, and using the crosswalk on the cross street where traffic is stopped.

**STOP
HERE
AND
READ**

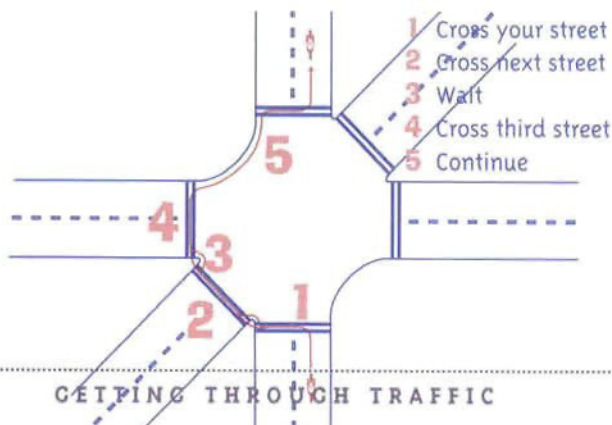
Sly Bikers Only! At least a block ahead, keep track of when your light changes.



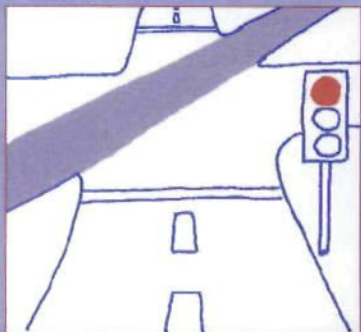
- 5** Go through the crosswalk on your original street, turn left into your lane, and continue your ride.



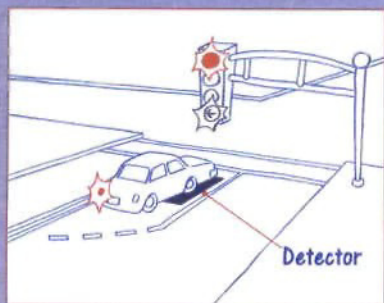
If your light turns red too soon, by the time you reach the intersection it'll be too late to do the 3-street runaround.



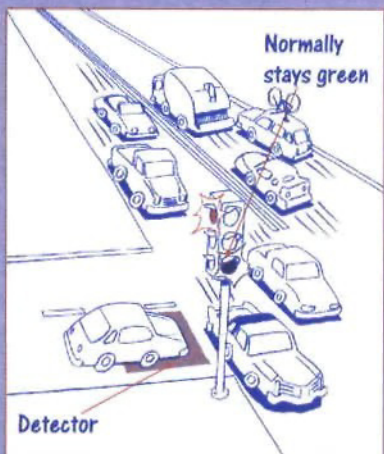
- 1 Cross your street
- 2 Cross next street
- 3 Wait
- 4 Cross third street
- 5 Continue



WHAT DETECTORS DO



- Activate a left-turn signal



- On a busy street, change a green light to red so traffic on a quiet cross street can go
- Make a green light stay green longer



Recommended Product Green Light Trigger

A magnet that straps to the bottom of your bike's pedal or crank to trigger detectors. Order from Kauffman Marketing, listed under "Bells, Whistles, & Gadgets" in Appendix B. (For more on Mr. Bike's Recommended Products, go to www.mrbike.com/products.)

MAKING

Some traffic lights change the same way all the time—for example, every 30 seconds. But other ones will stay green longer—or turn green sooner—when there's more traffic. How? They use a piece of wire, called a **detector**, buried under the street. The detector can tell when a vehicle is stopped on the street on top of the detector. Then it can make a traffic light stay on until the vehicle has passed.

**STOP
HERE
AND
READ**

What to look for

Square cut in the pavement



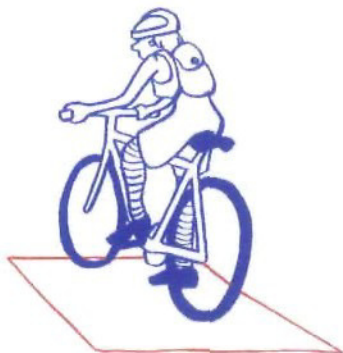
Round cut in the pavement



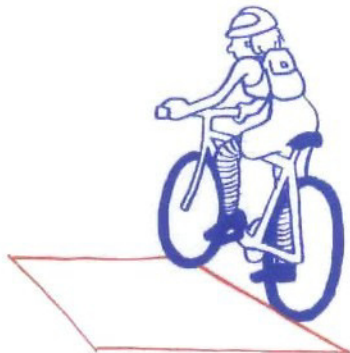
TRAFFIC LIGHTS TURN GREEN

Where to stop

Try both ways (at different times) to see which works better.



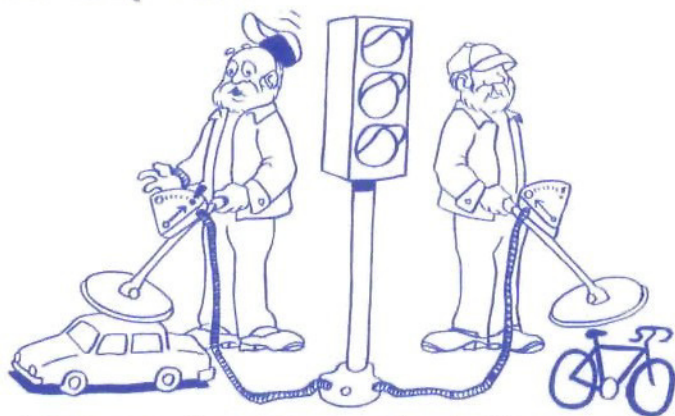
Some detectors work best when you stop over the middle. If you see pavement cuts in the middle, stop over the cuts.



Others detectors work best when you stop on the edge.



How they work

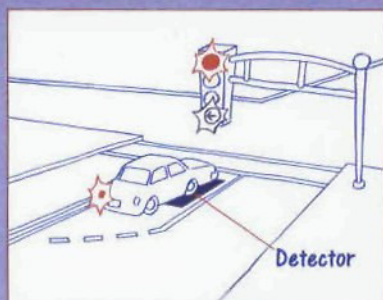


Detectors sense the metal in a vehicle.

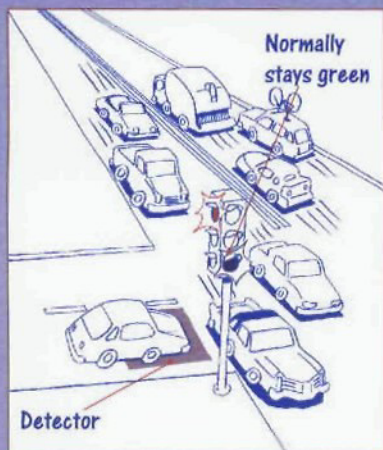
Bikes don't have enough metal to trip the detectors in many places. The only way to tell whether your bike will activate a detector: Try it!

Detectors marked for bikes

WHAT DETECTORS DO



- Activate a left-turn signal

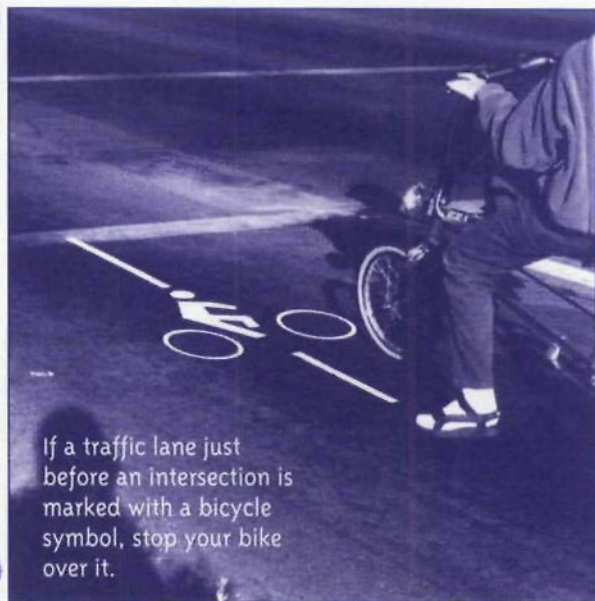


- On a busy street, change a green light to red so traffic on a quiet cross street can go
- Make a green light stay green longer

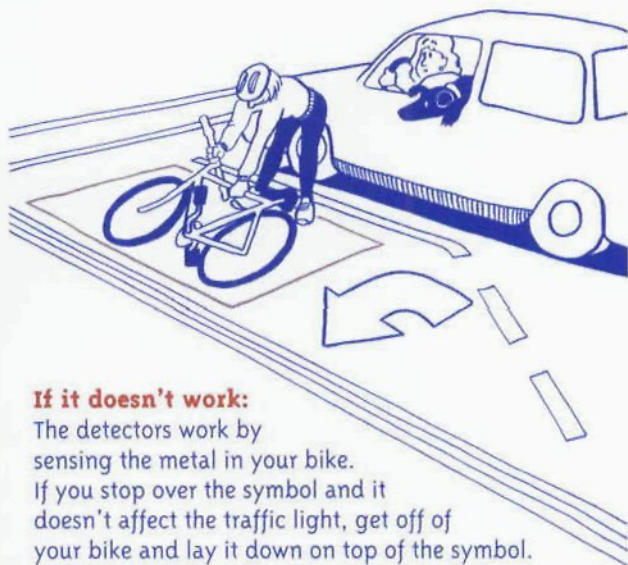


Smart Idea

If your bike never makes the detector work, the detector might need repair or adjustment. Call your local department of transportation to report it. (Traffic engineers call the detectors "detector loops.")



If a traffic lane just before an intersection is marked with a bicycle symbol, stop your bike over it.



If it doesn't work:

The detectors work by sensing the metal in your bike. If you stop over the symbol and it doesn't affect the traffic light, get off of your bike and lay it down on top of the symbol. This gives the detector more metal to detect. (Also see the "Recommended Product" on p. 108.)

Detector left vs. shortcut left

SITUATION:

You approach a red light with many cars stopped in both directions, and you want to make a left turn.

Normally, you:

Make a shortcut left turn (see page 86) so you don't get stuck waiting for oncoming traffic to pass.

But you notice:

Cars waiting in your left-turn lane will make the detector activate a left-turn signal.

So you:

Get into the left-turn lane for a standard left turn, beating all the oncoming traffic.

If you don't:

You'll have to wait for all the left-turning cars to pass

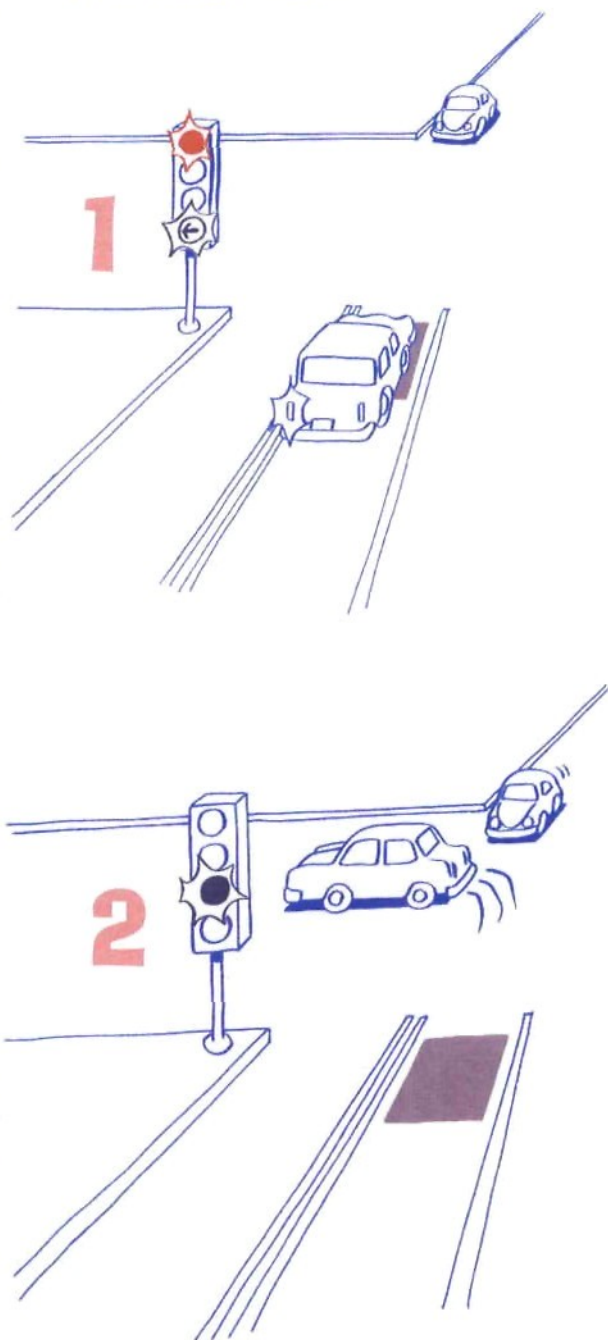
TIMING

RIDING SINGLE FILE

Some traffic lights will stay green as long as vehicles pass over the detectors. When you ride through such intersections with other bicyclists, you should ride single file so the light stays green for everyone.

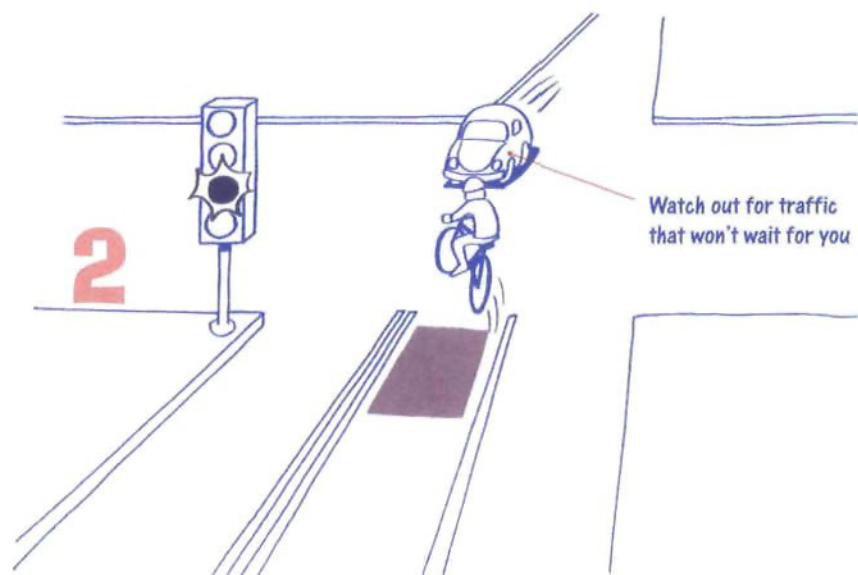
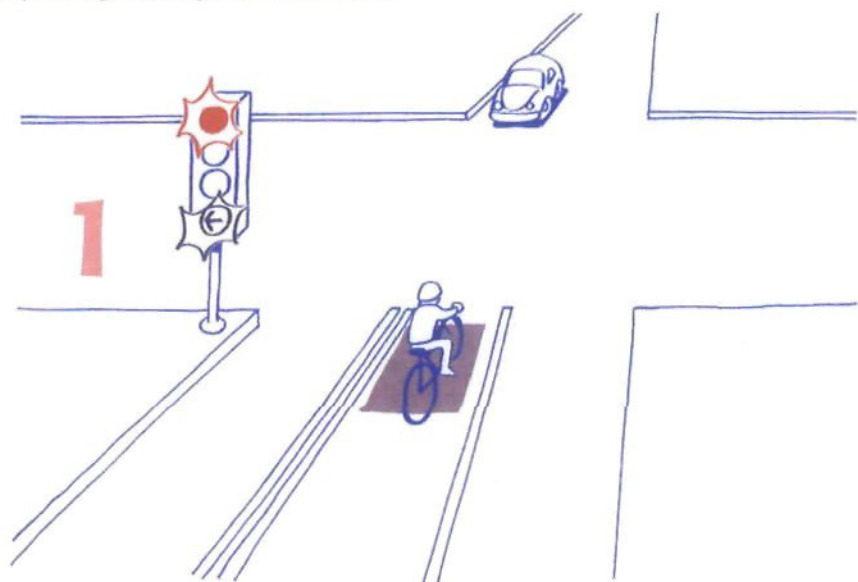


Where traffic lights aren't timed for bikes, a detector might keep the light green long enough for a car to get through.



PAVEMENT DETECTORS

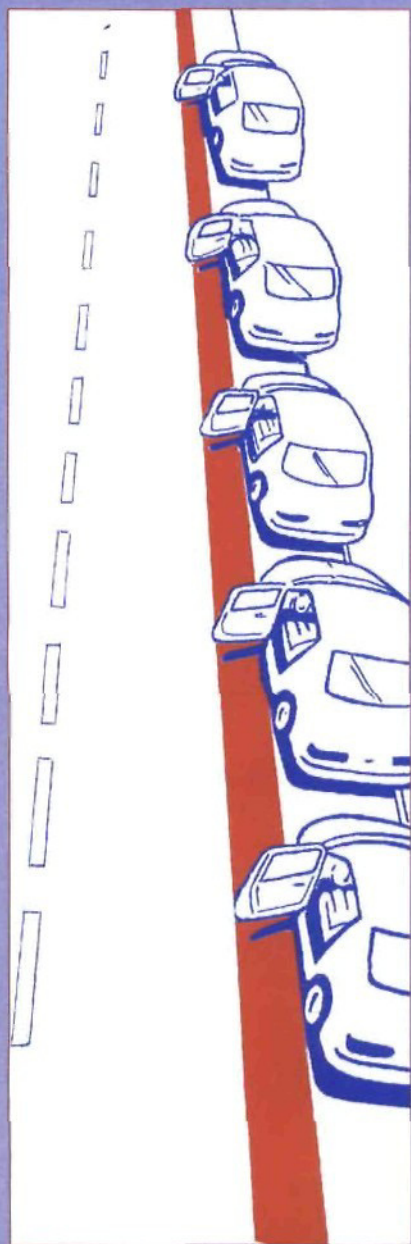
Where traffic lights aren't timed for bikes, a detector might not keep the light green long enough for a bicycle to get through the intersection.



RIDING IN

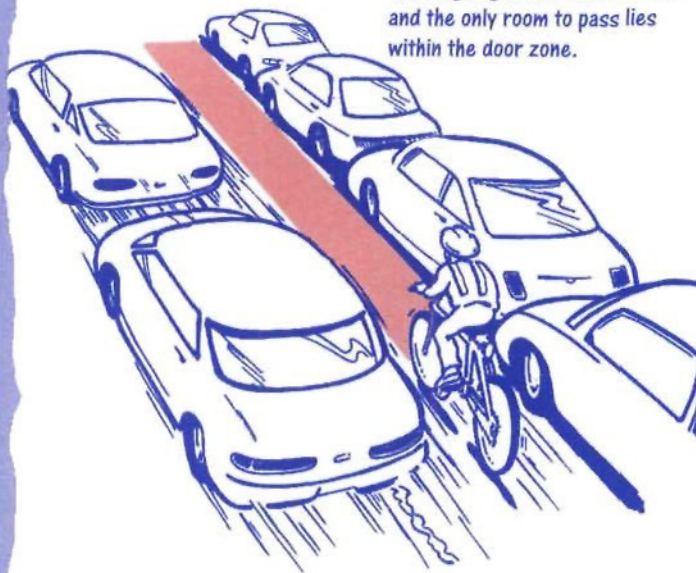
THE DOOR ZONE:

The three or four feet next to parked cars in which you could get hit by an opening door.

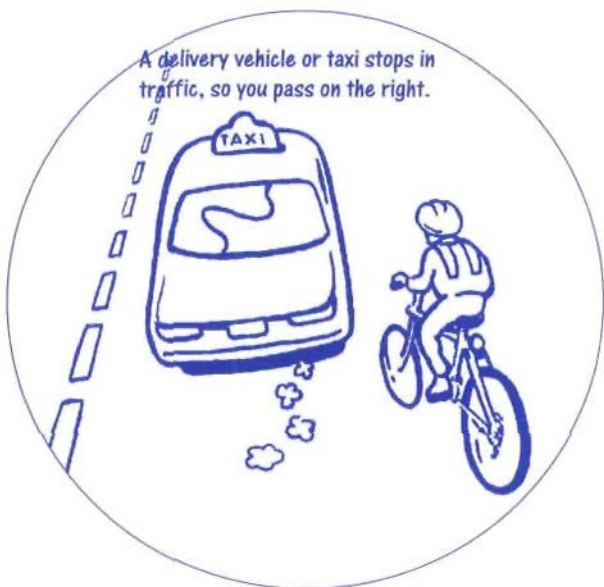


Why ride in the door zone?

You're going faster than traffic, and the only room to pass lies within the door zone.



A delivery vehicle or taxi stops in traffic, so you pass on the right.



THE DOOR ZONE

How to avoid getting doored

- 1 Pass no closer than four feet from parked cars, especially in bike lanes.



- 2 While riding in the door zone: If you hear the click of someone starting to open their door, swerve outside the door zone.

- 3 Look inside each parked car before you pass it.

Can see inside, no one in the car:

Pass in the door zone.

Can't see inside or someone is inside:

Move outside the door zone or slow down and pass carefully.



Danger

Getting hit by car doors is one of the top causes of biking injuries. If you must ride in the door zone, ride slowly so you can stop suddenly—and keep your hands over your brake levers.

Watching behind you in the door zone

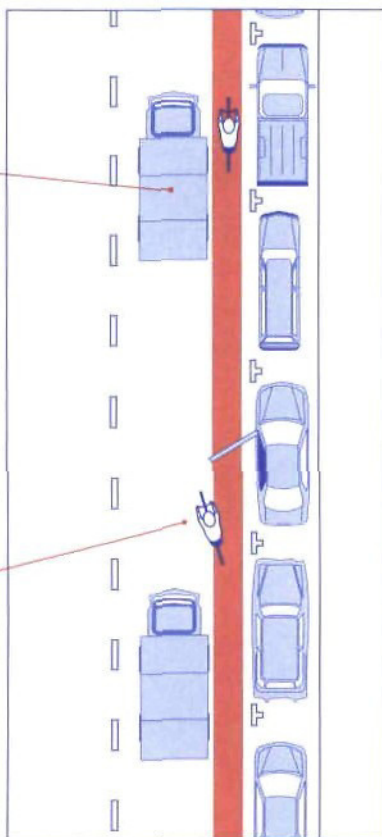
In the door zone, keep track of what's behind you: If you have to swerve suddenly, you could get hit by traffic. Also, look for stretches where you can ride out of the door zone.



LISTEN FOR TRAFFIC COMING

You know that this truck doesn't give you room to swerve out of the door zone.

So the next time you hear it behind you, you move out of the zone before the truck can pass.

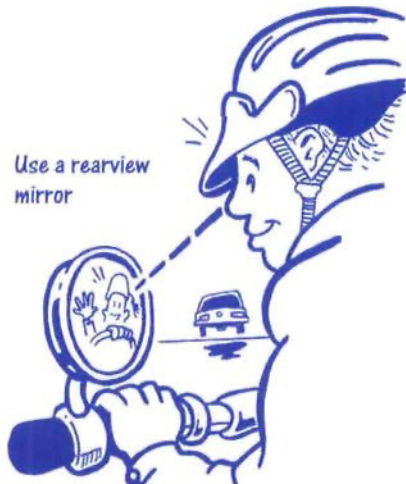


LOOK BEHIND YOU A LOT

Look over your shoulder frequently



Use a rearview mirror



TRAFFIC JAMS

Squeezing between stopped cars

Watch for peds emerging from between cars. They don't expect you to come zooming past.

Look ahead into cars on both sides for passengers who might suddenly open their doors. (See page 115.)

As you approach large vehicles, a ped you can't see might emerge. Slow down or make noise.

Keep your hands on your brake levers.

If a space opens up near a cross street, driveway, or alley, get ready for an oncoming car turning into your path.

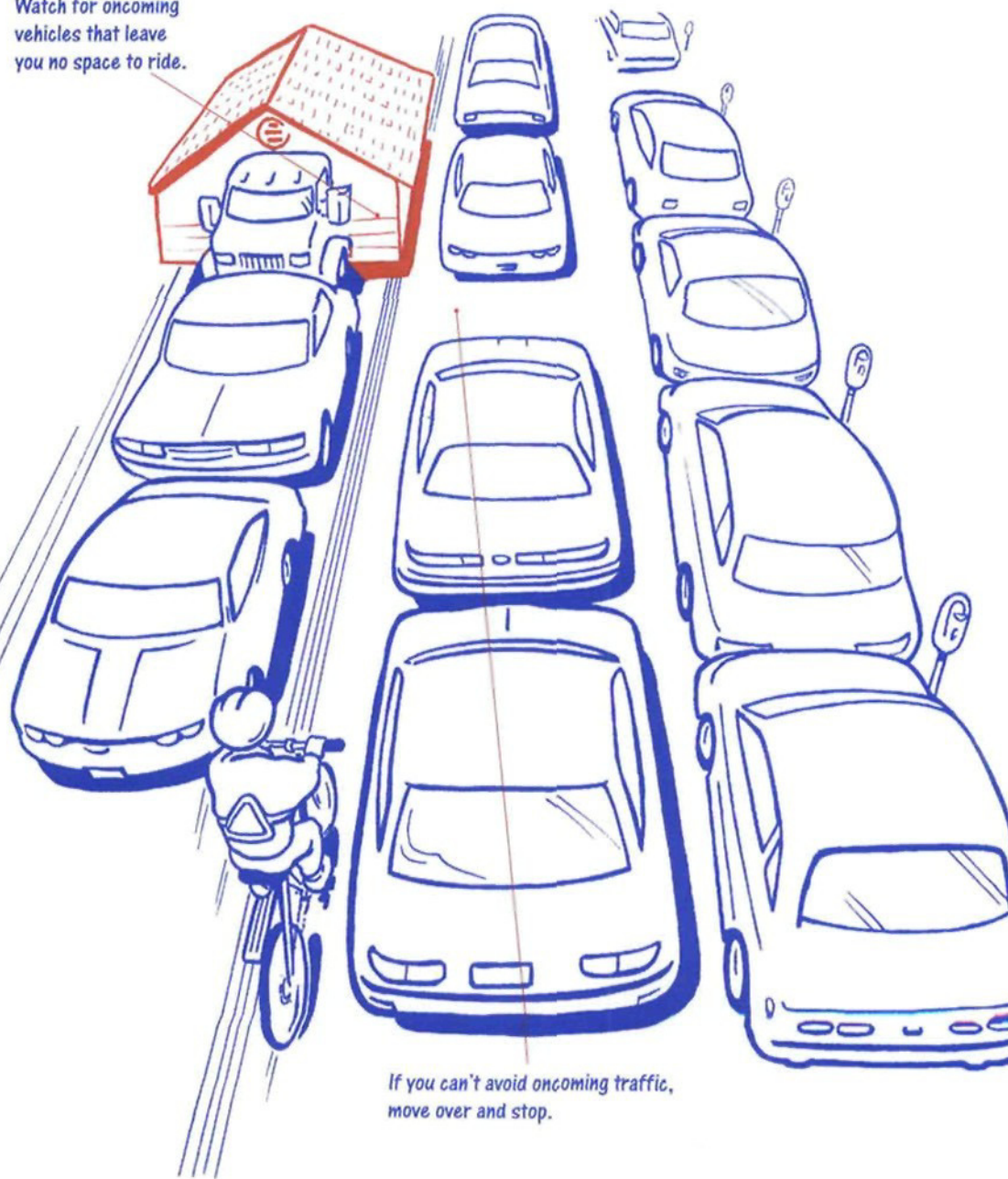
Your bike gives you the best way to get through traffic jams. But when you're moving fast through a bunch of stopped cars, a car or ped can jump out from any direction.

**STOP
HERE
AND
READ**

Riding the center line

If traffic in your direction is completely jammed, and you've no room in the door zone, ride on the center line or on the lane stripe between lanes.

Watch for oncoming vehicles that leave you no space to ride.



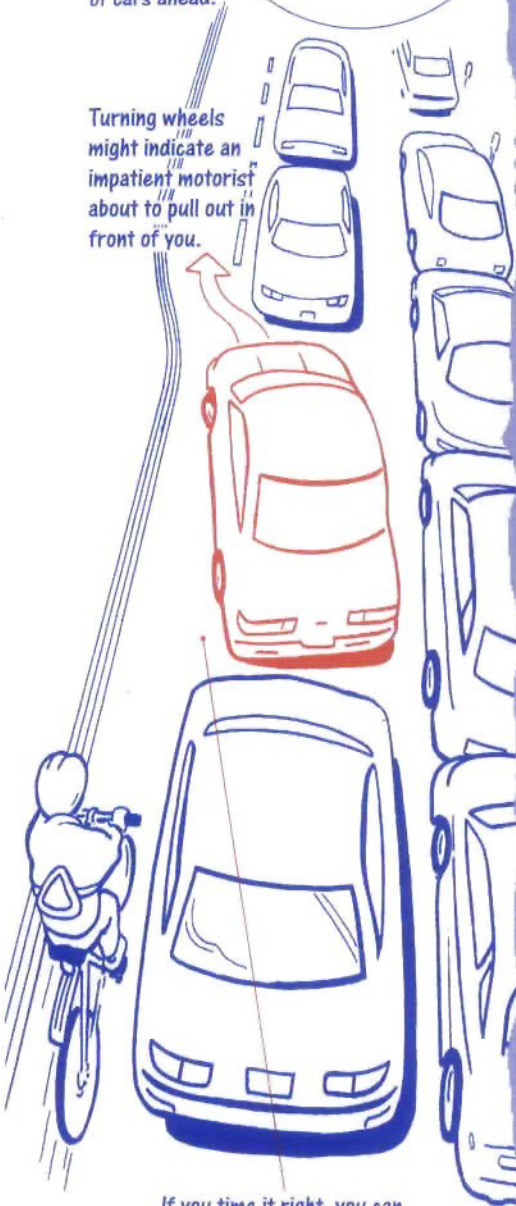
If you can't avoid oncoming traffic, move over and stop.

GETTING INTO A LANE FROM THE CENTER LINE

If there's no oncoming traffic, watch the front wheels of cars ahead.



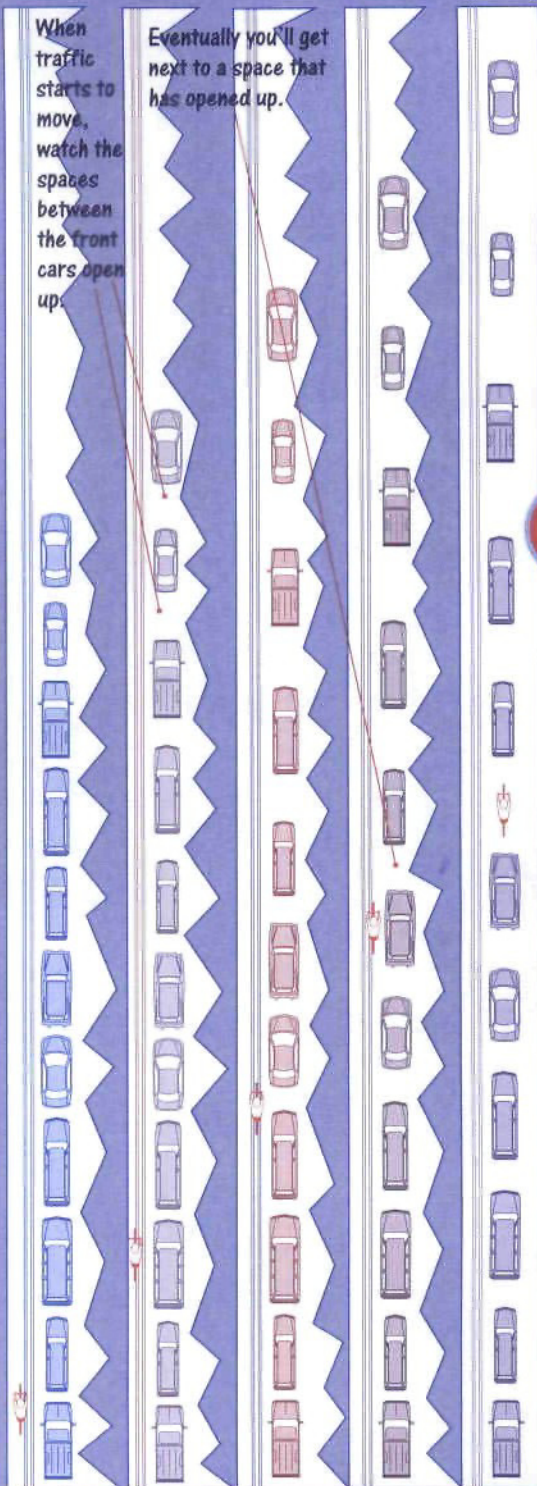
Turning wheels might indicate an impatient motorist about to pull out in front of you.



If you time it right, you can ride into the space (without slowing down) before the car behind closes the space.

When traffic starts to move, watch the spaces between the front cars open up.

Eventually you'll get next to a space that has opened up.

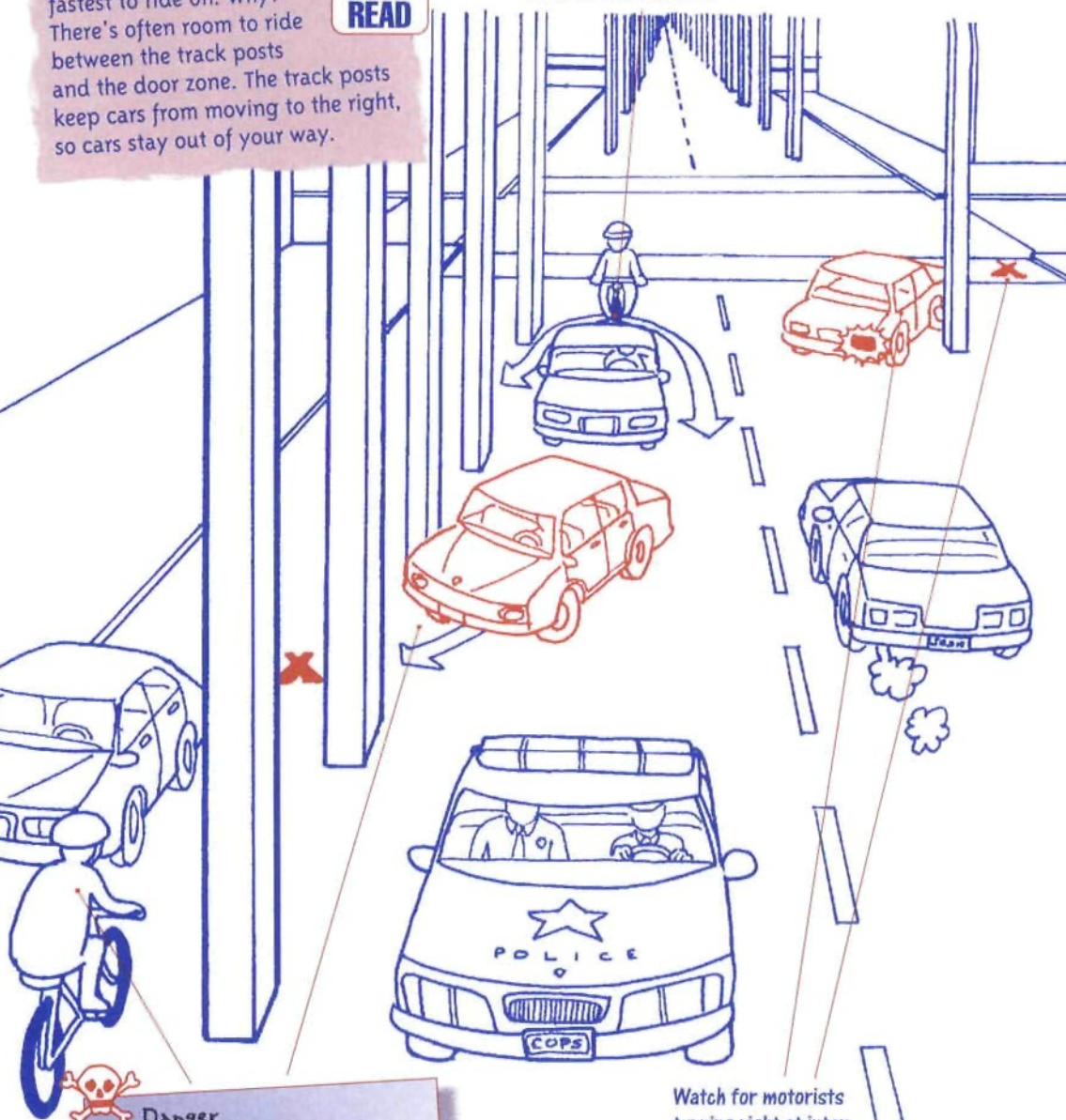


RIDING UNDER

**STOP
HERE
AND
READ**

Streets underneath elevated rail tracks can be the fastest to ride on. Why? There's often room to ride between the track posts and the door zone. The track posts keep cars from moving to the right, so cars stay out of your way.

When cars jam up, pass on the other side of the posts, or on the motorists' left.

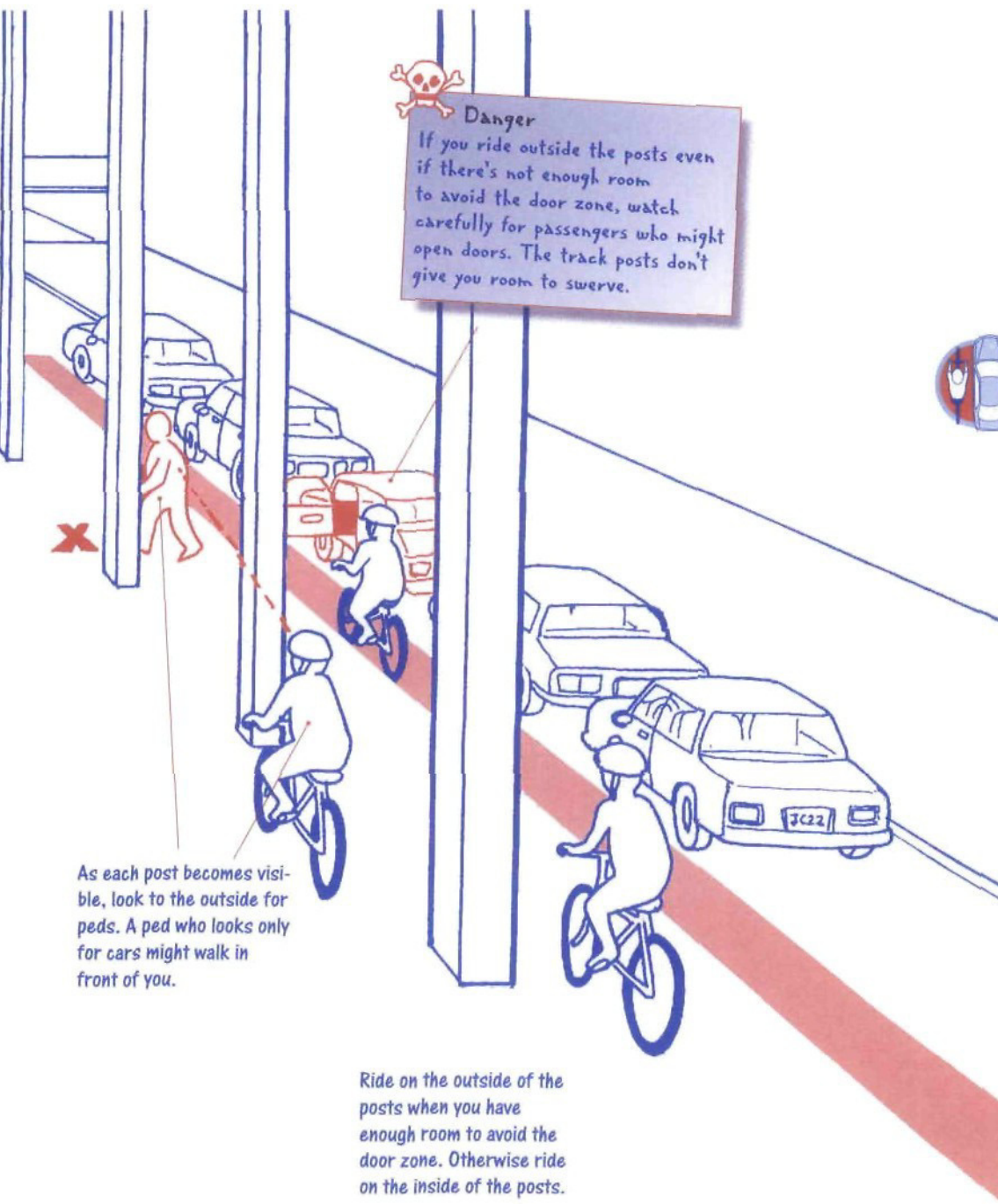


Danger

Riding against traffic is always dangerous. Elevated tracks make it worse, because you and motorists can't see each other until the last second.

Watch for motorists turning right at intersections. They often turn from the outside lane, where track posts block their view of you.

ELEVATED RAIL TRACKS

















Danger

If you ride outside the posts even if there's not enough room to avoid the door zone, watch carefully for passengers who might open doors. The track posts don't give you room to swerve.

As each post becomes visible, look to the outside for peds. A ped who looks only for cars might walk in front of you.

Ride on the outside of the posts when you have enough room to avoid the door zone. Otherwise ride on the inside of the posts.

SHORT ATTENTION

Rating (5 = most danger)	Action	
	Ride against traffic on street 	
	Ride on a sidewalk against traffic	
	Ride on a sidewalk in the direction of traffic	
	Fail to yield 	
	Ride at night without lights	
	Run a stop sign or red light	
	Turn left from wrong position 	
	Swerve unexpectedly	
	Ride too close to a parked vehicle	
	Proceed straight from a right-turn lane	
	Pass vehicles on right near intersection	

SPAN SAFETY GUIDE

**STOP
HERE
AND
READ**

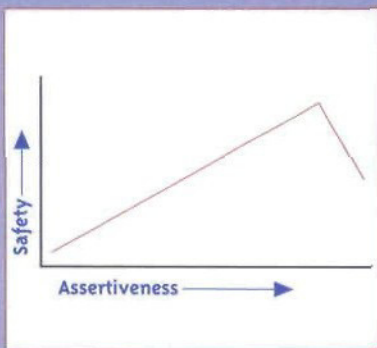
Most cyclists involved in crashes get hit from ahead, not behind. And often, cyclists get hit from behind because they swerve into the motorist's path—so you're pretty safe if you ride in a straight line. But what moves do put you most at risk? Different studies don't agree exactly. So we've condensed a bunch of the studies into this table.

Possible result
Get hit by a vehicle going straight, turning, or leaving a parking space, from any direction
Get hit by a vehicle turning into or emerging from a cross street, alley, or driveway
Hit or get hit by a pedestrian, or hit an object while avoiding a pedestrian
Get hit by a vehicle turning into or emerging from a cross street, alley, or driveway
Hit or get hit by a vehicle going straight, left, or right
Get hit by a vehicle going straight, turning, or leaving a parking space, from any direction
Get hit by a pedestrian
Hit or get hit by a vehicle turning into or traveling down a cross street
Get hit by a vehicle traveling straight, from behind or in front of you
Vehicle rear-ends or sideswipes you
Get hit by an opening vehicle door
Get hit by a vehicle turning right
Get hit by a vehicle turning right



Sly Bikers Only!

In heavy traffic, if you act like a wimp and hesitate a lot, motorists will become impatient, and even run you off the road—accidentally or not. Riding less like a wimp makes you safer in traffic, according to something called Komanoff's Rule.



Graph of Komanoff's Rule

Komanoff's Rule says the more assertively you ride, the safer you become. In other words, when you act like the vehicles around you, motorists see you as one of them—so neither of you will surprise the other.

But if you get *too* assertive, you become reckless. Then nobody can predict what you'll do next—meaning there's a better chance you'll get clobbered.

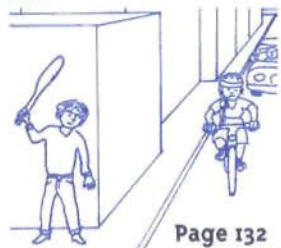
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TROUBLE SITUATIONS



Page 145

Out on the street, trouble's waiting for you. Trouble might look like man's best friend, the dog. It might look like a car with a bad muffler. Or some dude staring at you from the curb. Or just a pothole.



Page 132

Maybe you've never met up with trouble on your bike. But one day, you might: You'll get a scrape, get mugged, or even crash. What can you do? This chapter tells you.



Page 126



Page 143

The first time trouble kicks your butt, you won't have time to think. You might freak out—maybe freak out so much, you might not want to get back on your bike. This chapter tells you how to deal with that.



When trouble hits, maybe you'll get mad. You might want to hit back. This chapter tells you about that too.



Page 136



Page 148

You might never need this chapter. But it has some tips that can save you time, money, or even injury if you run into trouble. Have a look.

WHEN A MOTORIST

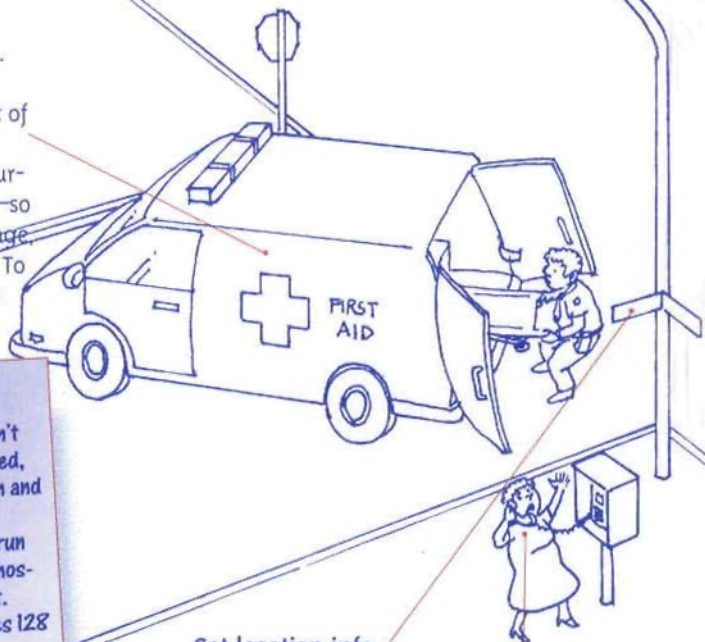
At the crash site

Get treated

Don't stop paramedics from examining you or taking you to the hospital.

Why?

- After a crash, you get very excited. You might not notice that you've bruised, broken, or torn some part of your body—until later.
- Sometimes, the motorist's auto insurance will cover your medical costs—so even if you have no medical coverage, you can still afford a hospital visit. To learn more, contact your local bike advocacy group (see Appendix A).



Hit and Run

- If a motorist hits you and doesn't stop, unless you're badly injured, go to the nearest police station and ask to make a report.
- If you're injured by a hit-and-run motorist, call police from the hospital and ask to make a report.
- Then follow the steps on pages 128 and 129.
- **Why make a police report?** You or police might later identify the motorist. Then you can take action.

Get location info

Write down the nearby street names, nearest street address, time, date, weather conditions, and the direction of travel taken by you and the other involved vehicles.



Smart Ideas

- Sometimes cops don't make police reports for bike crashes. You need one to support your claims. If police aren't making a report, politely explain that you'll need one when you take the motorist to court.
- Some cops are on power trips. Address them as "sir" or "ma'am," and if you argue, don't yell. Also, refer to police as "officers," not cops.

Call police

Have someone call police. If you're hurt, have them call for an ambulance or paramedics.

HITS YOU

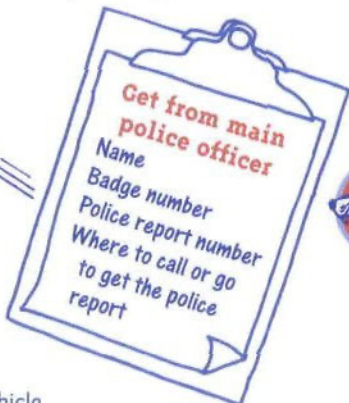
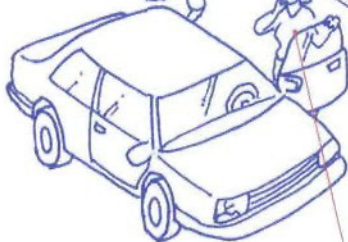


Get police info

After police arrive, look for the officer asking most of the questions. Get this info from him or her.

Get witness info

- Call out, "Did anyone see what happened?"
- If anyone comes forward, get their name, address, and phone number.
- Don't ask them to describe the crash now.
- Try to get their names before police arrive. They might not want to talk to police.
- Sometimes you can get addresses and phone numbers of witnesses from police reports.



Get motorist info

For the driver of every vehicle involved, get the information listed here. If you're injured, have a companion do it for you. Otherwise, wait to get it from the police.

Don't lose your bike

If you can't ride your bike from the scene, lock it well (see page 48) and come back for it later.

Stay down

If you're knocked down, stay down if it's safe. Don't get up until police arrive.

Why?

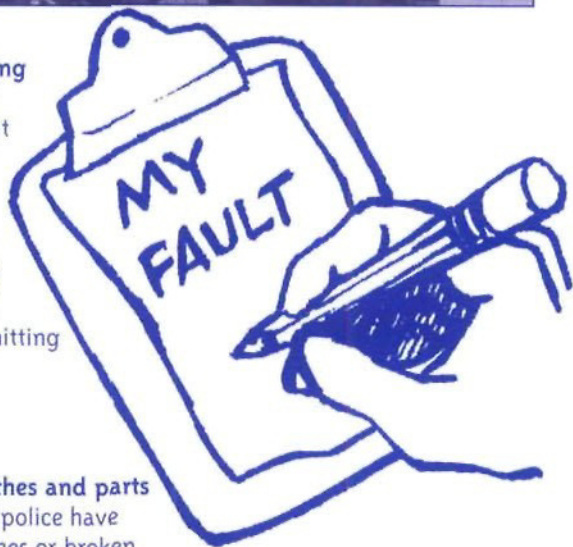
If you get up right away, the motorist might not stop. And witnesses might not come forward.



At the hospital



- 1 Don't sign anything**
A police officer or other official might ask you to sign an accident report "just as a formality." Don't do it—especially if you're shaken up. You might be admitting blame.



- 2 Get damaged clothes and parts**
If hospital staff or police have removed torn clothes or broken parts of your bike, get them back. You might need them later to prove what happened.



After you get home



- 1 Write stuff down**
Write down everything you can remember about the crash.

- 2 Record damage**
- Take photos of any clothes or bike equipment that got damaged.
 - Get a repair estimate for your bike from a bike-repair shop. And if your clothes were damaged, find out the replacement cost.



- 3 Look for witnesses**
The next day, go back to the scene of the crash and look for witnesses. Look for building lobbies, stores, newspaper stands, and taxi-cab waiting areas. Go to these and ask people if they saw the crash. If they did, ask them if they'd like to help you prove your case.



Smart Idea
Police reports often list witnesses and how to reach them.



- 4 Ask for statements**
For each witness:
- Call or meet with them. Get them to describe what happened. Use a tape recorder or take written notes. (Don't coach them!)
 - Type up what each witness said, and show it to them. Correct the parts they have problems with.
 - Ask them to sign the statement.

Asking for money after a crash

When should you ask the motorist or their insurer for money?

- 1** You want your medical bills paid.
- 2** You want someone to pay for your damaged bike.



What insurance companies usually pay for

- Medical costs
- Damaged property (clothes, bicycle, glasses)
- Wages you lost due to time off
- "Pain & suffering" (two to three times your medical costs)

Lawyers

YOU MIGHT NOT NEED A LAWYER IF:

- Police have clearly cited the motorist (and not you) for doing something wrong.
- The motorist is insured.
- You're willing to negotiate with the insurance company.
- Your area has no-fault insurance: The motorist's insurance automatically covers your medical expenses.

YOU MIGHT NEED A LAWYER IF:

The motorist tries to get you to pay for vehicle damages. The motorist might back down if you have a lawyer.



HOW TO FIND A LAWYER

You can find lawyers in your city who handle bicycle cases. They often charge nothing unless they help win your case, and then charge only a part of your settlement. In the U.S., your local bike-advocacy group might know bike-smart lawyers to whom they can refer you. See "Local advocacy groups" in Appendix A.

WHAT A LAWYER SHOULD CHARGE YOU

- 1** If a lawyer helps you get money ("a settlement") from the motorist or insurer, they should get a percentage of the money. If you receive no money, a lawyer should not charge you.
- 2** Some lawyers charge extra for certain items, such as deliveries. Make sure they take those charges out of *their* percentage of the settlement so you don't pay extra.
- 3** Some lawyers charge one percentage to negotiate with an insurer, and charge a higher percentage if your case goes to court. Ask about that up front. Ask your lawyer to charge the same in both situations.
- 4** Before you hire any lawyer, always ask them to put their charges in writing.

Making a demand package

WHAT IT DOES

- It's what lawyers send and insurance companies expect—but you can do it yourself.
- Goes to insurer or motorist (if not insured).
- Proves why they should give you money.
- Tells exactly what happened.
- Shows what you lost that you want to get paid for.
- Send it after you've gotten all your medical bills—especially if treatment takes a long time.

COVER LETTER EXAMPLE

motorist's name &
policy number

crash date

all your bills

2 to 3 times your
medical costs

Jenny B. Leegerd
329 Sixth Street
Los York, Calibraska 72303

July 3, 2007

Claims Department
All Farm Insurance
666 Paved Road
Los York, Calibraska 70000

To Whom It Concerns:

This is to request a settlement regarding the crash I had with your insured, Terb O'Charged, policy #3224196BO, on June 1, 1999.

I've enclosed material showing that your insured is at fault in the crash. The material also shows that I've incurred \$7,620.42 in damages, to wit:

Medical care	2,319.22
Equipment replacement	\$614.05
Clothing replacement	48.71
Pain and suffering	4,638.44
Total	7,620.42

Although you are liable for \$7,620.42, I am willing to settle for three-quarters of your liability, \$5,715.00. If you don't agree to settle for this amount, I will file a complaint with the clerk of the Manadian County Criminal Court.

Jenny B. Leegerd

Enclosures

how much you'll settle for

if you don't get it, you'll sue

WHAT'S IN IT

Demand package contains copies (not originals) of:

- Cover letter
- Police report
- Written, signed statements of one or more witnesses
- Repair or replacement bills (or estimates) for your bike and clothes
- Photographs of your damaged bike and clothes

How to PREVENT ATTACKS

Know your route

If you don't know an area you're going to ride in:

- Ask other cyclists about it.
- Ride it with a companion.
- Examine a map.

Watch for ambush

- If a large object blocks your way, turn around quickly. Look for another way to go, or wait until someone else comes by before you pass the object.
- Watch buildings, trees, or objects for someone hiding behind them. Swing wide of these wherever you can.
- If someone comes at you on the street, ride at them as shown on page 141.
- When nearing a possible attacker, pretend you're a cop: Act like you have a radio inside your jacket, and talk into it. Or wear a small speaker or microphone near your shoulder.

Vary your route

If you ride through a bad neighborhood, don't go down the same streets every day at the same time. Bad guys will learn to expect you.

Bridges

Don't ride alone at night on long bridges, like some in New York City, San Francisco, and Vancouver. Bad guys can trap you easily.

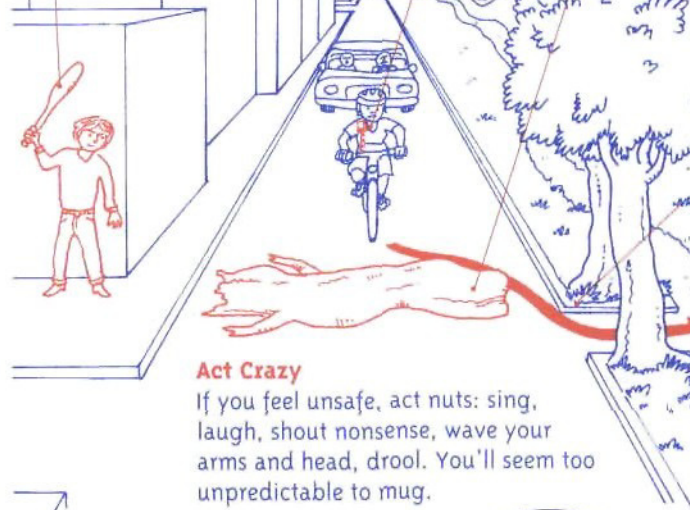
Learn escape routes

If you ride a road often, look for escape routes. What to think about:

- If you're chased by a car, where could you ride (gangways, tunnels, curbs, trees) that a car couldn't? Can you get somewhere with lots of people around, such as a store, to scare your attacker away?

Act Crazy

If you feel unsafe, act nuts: sing, laugh, shout nonsense, wave your arms and head, drool. You'll seem too unpredictable to mug.



Women: look like a guy

It helps to look male from the rear.

- Put your hair up under your helmet. Or tuck your hair inside your jacket and turn your collar up.
- Wear loose-fitting clothes.



BEFORE

AFTER

MOTORIST ADVISORY


BICYCLES BELONG ON THE ROAD!

Traffic rules that apply to motorists also apply to bicyclists.

Because laws in every state and province say bicyclists should act as the drivers of vehicles, motorists should treat them as such. Specifically, motorists should:

- Let bicyclists use an entire lane when they have to
- Not pull ahead of a bicyclist, then turn in front of them
- Pass bicycles with plenty of clearance
- At stop signs, yield to bicycles as they would any vehicle
- When turning left, yield to oncoming bicycles
- Check behind for bicycles before opening a car door

Cyclists should reproduce this message and use it to teach motorists.



Every person propelling a vehicle by human power or riding a bicycle shall have all the rights and all of the duties applicable to the driver of any other vehicle.

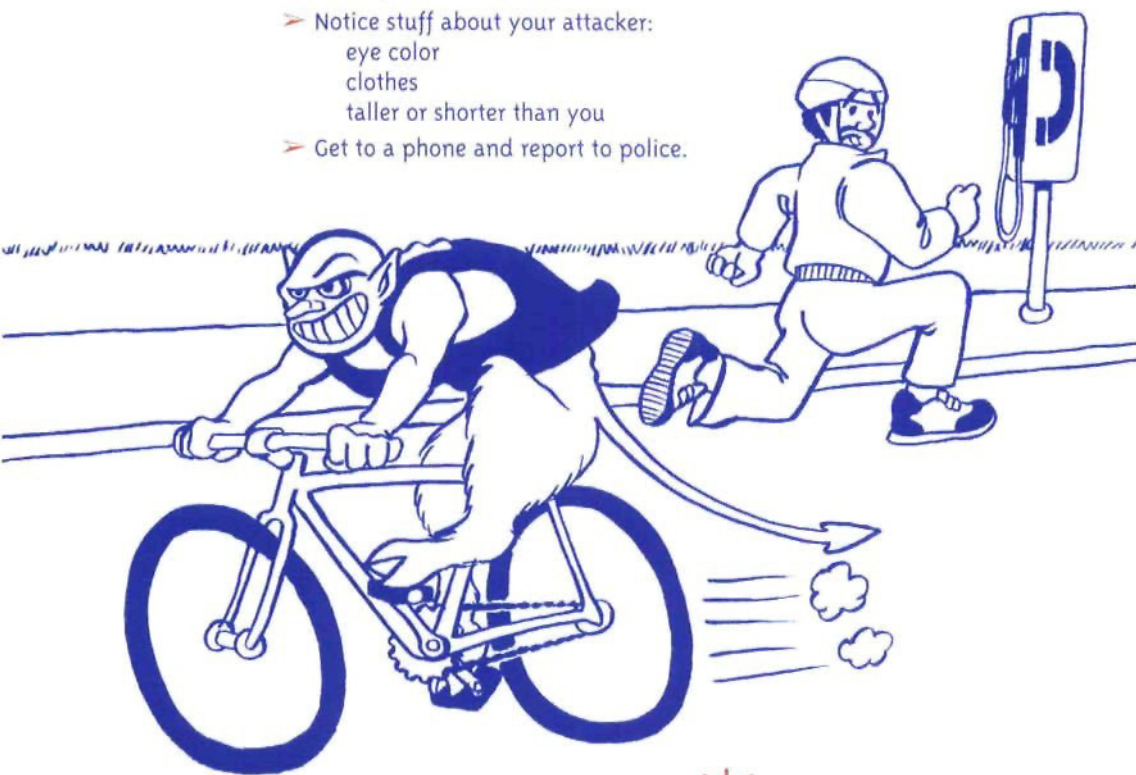
Section 11-1202 of the Uniform Vehicle Code

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WHAT TO DO

PASSIVE

- Don't fight.
- Leave your bike and run.
- Notice stuff about your attacker:
 - eye color
 - clothes
 - taller or shorter than you
- Get to a phone and report to police.



Smart Idea

Don't resist a bad guy who threatens you with a gun or knife. Whatever he wants to take isn't worth your life.

WHEN ATTACKED

VOCAL

- > Make as much noise as you can.
- > Scream, yell "thief" and "help," or use a whistle.
- > Keep making noise until the bad guy is out of sight.

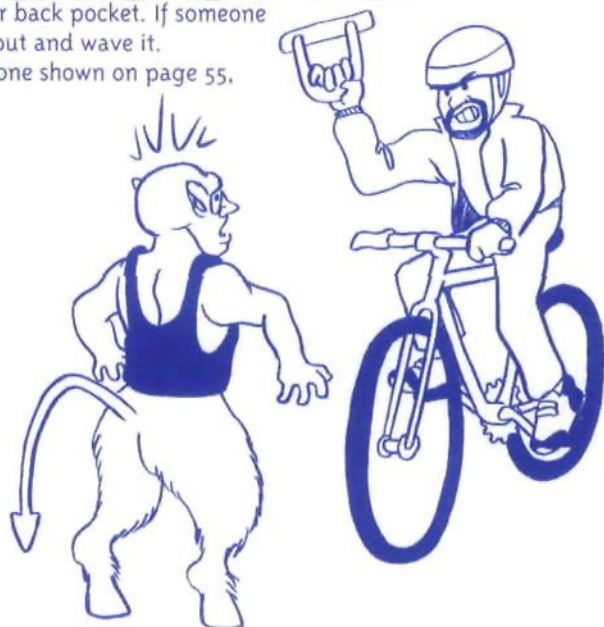
Why?

- > The bad guy might get scared and run without taking anything.
- > Other people might notice and capture the bad guy.



AGGRESSIVE

- Carry and use pepper spray (see page 36).
- > Carry your U lock in your back pocket. If someone comes near you, pull it out and wave it. (A mini-U lock, like the one shown on page 55, works well for this.)



USING PEPPER



Danger

Pepper spray is dangerous stuff. If you use it while being attacked, you shouldn't spray into the wind because the spray will hit you. You can't, however, think about wind direction during an attack. So you shouldn't use pepper spray! But if you do, learn this stuff.



What it does

When sprayed in a person's face, pepper makes their eyes burn and water so they can't see. And it makes their nose, mouth, and throat burn so it's hard for them to breathe.



Where to carry

Don't mount the sprayer on your handlebars. You won't have it if a bad guy knocks you off your bike. Carry it on your belt or in your pocket.

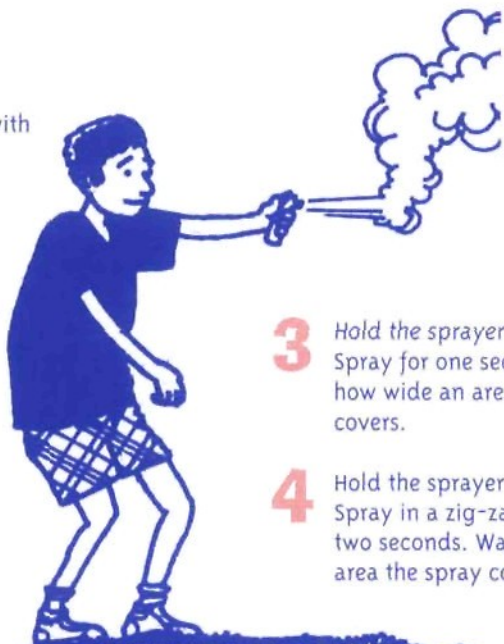
How to Practice

1 Go to an outdoor area with no one else around.

2 If it's cold outside, exhale. If the wind is blowing, your breath will go in one direction. Face in that direction.

OR

If it's warm outside, wet your finger and hold it over your head. If the wind is blowing, it'll cool one side of your finger. Face the direction opposite that side.



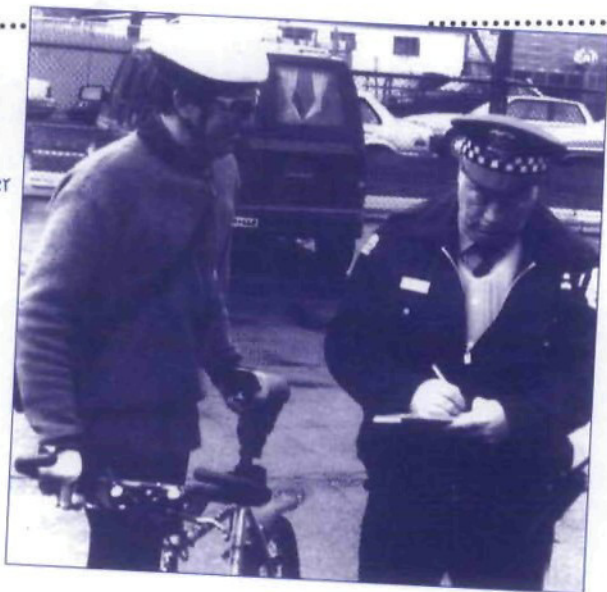
3 Hold the sprayer at arm's length. Spray for one second. Watch how wide an area the spray covers.

4 Hold the sprayer at arm's length. Spray in a zig-zag pattern for two seconds. Watch how wide an area the spray covers.

SPRAY

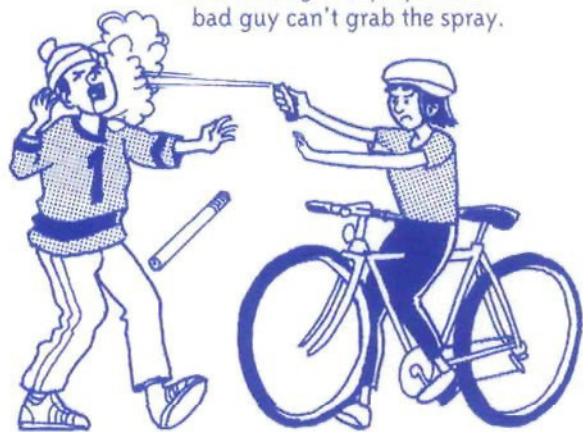
You could get busted

A person you spray could charge you with assault. Also, in some places it's a crime to carry pepper spray without a license.



Spraying while on your bike

Don't spray in front of you while riding your bike; it'll blow right into your face. Stop your bike first. If you can, hold one hand slightly in front of the hand holding the spray so the bad guy can't grab the spray.



Get his shoes

If you disable a bad guy with pepper spray, try to take his shoes. While you're calling police, he won't get as far—and he'll be easier to identify.

On your hands

Don't touch the nozzle of the sprayer after you've used it.



CONFLICTS

CONFLICTS WITH MOTORISTS

How should you respond to a motorist who hassles you? Some bicyclists follow these three rules:

- 1 Respond in a way that teaches people the right way to treat bicyclists.
- 2 Punish the really big jerks.
- 3 If you can't do (1) or (2) effectively—and in traffic, you usually can't—do nothing.



What about the motorist who really ticks you off? Some bicyclists never fight back for a simple reason: A car can really hurt you. Others have a better reason: The motorist you annoy will take it out on the next bicyclist they see.

CONFLICTS WITH PEDESTRIANS

Peds can put you in as much danger as cars. Peds and bicyclists usually look for cars, not each other—so they often surprise each other. But peds usually don't mean you harm. So go easy on them.



How to respond to conflicts

Motorist or ped	
Type	What they do
Ignorant	Cut you off because they don't see you or don't think they'll get in your way
Abusive	Yell or blow their horn at you
Evil	Hit you with their hand or throw something at you
Violent	Try to run you down or knock you down

WHAT TO DO

Nothing







Ignore them. If you have trouble doing this, remember that you don't have to prove you're better than them. You are on a *bicycle*.



Smile at those motorists. Remember, you're having a better time than they are.

Karen Mecey
bicycles in Portland OR

WITH MOTORISTS & PEDS

What to do			
Nothing	Teach	Fight back	Act sly
 page 138	 page 139	 page 140	 page 142
✓	✓		
✓	✓		
✓		✓	✓
		✓	✓

Teach

When the motorist has stopped in traffic, gesture for them to open their window.



A motorist or pedestrian might hit you some day, if they haven't already. What should you do? It depends on how you want to make them feel. If you plan to get tough, know the best ways to stay out of trouble.

**STOP
HERE
AND
READ**

EASIEST

Give a printed message

Say, "Can I give this to you?" and hand them a copy of the advisory on page 133. Then ride away.

HARDEST

Tell them what they did wrong

This usually will get you into an argument. But you can try saying one of the following.

"Excuse me, do you know you cut me off back there?"

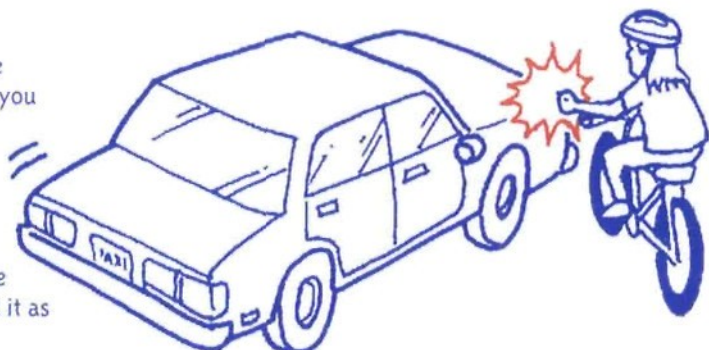
"Excuse me, why did you blow your horn at me?"

If they get mad, ride away. You've done all you can.

What to do about conflicts: Fight back

Use your fist

- 1 Do this if you don't have much time to think and you don't want to stop.
- 2 Smack the hood or side of the car.
- 3 Another option: Grab the radio antenna and bend it as you go by.



Water to the face

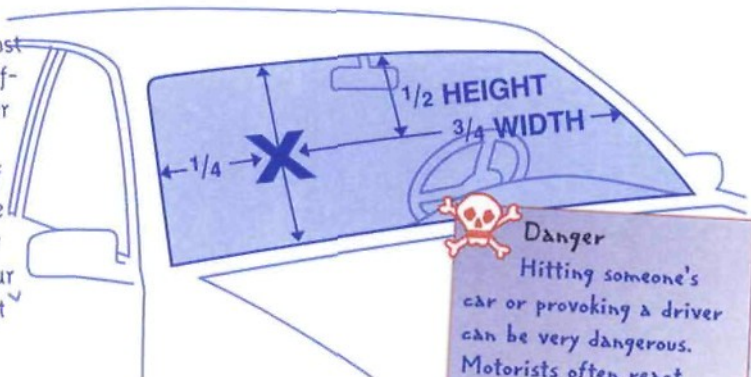
- 1 While bicycling forward, grab your water bottle and open the nozzle.
- 2 Hide the bottle behind your back and speed up.



- 3 When you pass the car's window, squirt your water inside. Don't slow down.

Windshields

A car's windshield is most vulnerable in a spot half-way down and a quarter of the way across, as shown here. **Caution:** If you accidentally hit one of these spots with your U lock or the heel of your gloved hand, you might crack the windshield.



Danger
 Hitting someone's car or provoking a driver can be very dangerous. Motorists often react quickly and violently—and they can run you down easily. In most fights between cyclists and motorists, cyclists lose.

Play chicken

- 1 Do this if a ped steps out into the street as if to harass you.
- 2 Speed up in an obvious way. Ride directly at one side of their body.

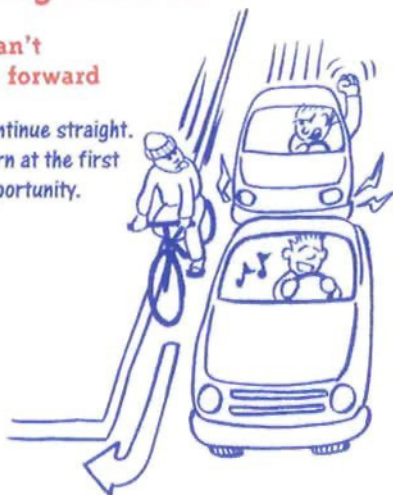


- 3 They should jump out of your way. If they don't, at the last possible second swerve around them. Don't slow down.

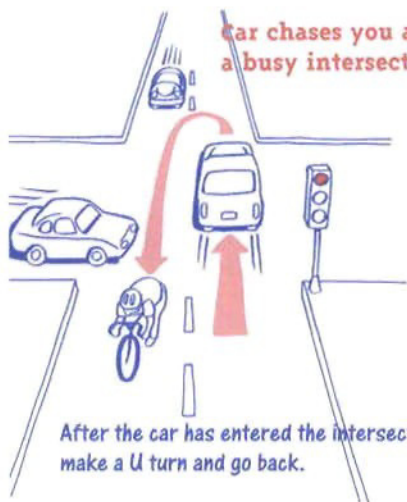
Running from a car

Car can't move forward

- Continue straight.
- Turn at the first opportunity.



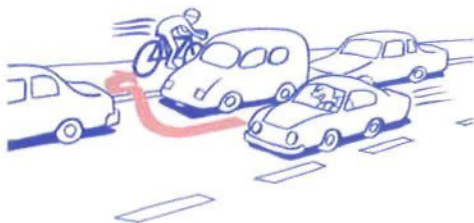
Car chases you across a busy intersection



After the car has entered the intersection, make a U turn and go back.

Car is chasing you

Take the sidewalk in the opposite direction.



Someone catches you on foot

- Get off of your bike.
- Hold it at arm's length between you and them.
- If they grab it, let go and run.



What to do about conflicts: Act sly



Pretend you know them



1 This will confuse many motorists.

2 Smile, wave, and say "Hi, Pat!" Then ride away.

3 This works best if you do it without hesitating. Practice saying "Hi, Pat!" to motorists in traffic. Then when you have to respond to an abusive one—either male or female—you'll say it automatically.



Get legal

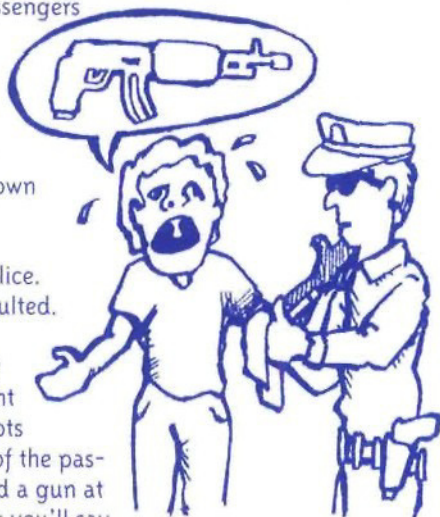
1 Notice the car's color, model, and license plate number, and what the motorist and passengers look like. If the incident involved a ped, notice what they wore.

2 When they can no longer see you, stop and write down what you noticed.

3 Go to a phone and call police. Report that you were assaulted.

4 To create more trouble for the motorist: If the incident happens in an area with lots of crime, report that one of the passengers or the ped pointed a gun at you. Rehearse exactly how you'll say this happened, including what the gun looked like.

5 You can also send a warning letter to the motorist's insurance carrier: In some places (such as the state of New York), motor vehicle departments will give you the name and insurer of the person to whom a license plate is registered.



After you've been harassed: how to build up your courage



A motorist who threatens or actually hurts you might really shake you up—so much that you might not want to bike in traffic again. What can you do to build up your courage?

- Ride with a companion for the first few days.
- If you were harassed on a route you take regularly, take a different route or change the time you leave.
- Change things about yourself to make riding feel different. Wear different clothes, or listen to music while you ride.
- Carry pepper spray to make you feel more confident. (See page 136.)

If you don't feel safe after a bad experience, don't force yourself to ride. Give yourself time. But when you're ready, get back on that bike . . . don't let the jerks win.

Mary Ellen Paquette
bicycles in Boston



DOGS

Dogs chase bikes everywhere: in cities, suburbs, and the country. Some dogs do it just because they like to chase. Other dogs want to attack you. When one chases you, you can't be sure what will work best (unless you know the dog). Some of your options are listed here.

**STOP
HERE
AND
READ**

Just stop

The dog might stop if you do. If it does, slowly ride or walk away.



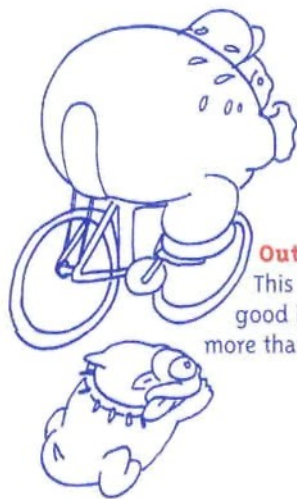
Stop and get off

- 1** Stop and get off your bike, quick.
- 2** Shout something commanding, like "Go home!"
- 3** If the beast attacks you, try to keep the bike between you and it.



Squirt it

If you try to outrun the dog, a squirt from your water bottle might slow Fido down.



Outrun it

This might be a good idea if there's more than one dog.





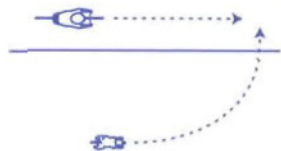
Dog repellent

If you continually have a problem with dogs, use a dog-repellent spray. But be careful: wind could blow the stuff back into your face. (See page 136.)



Smart Idea

Fill a water bottle with a citrus drink. A squirt from your bottle is less likely to get in your face than a commercial repellent.



Herders

Some dogs in rural areas will instinctively try to herd you: They run at you in an arc, barking. These dogs usually won't hurt you.

Bites

If a dog bites you:

- 1 Get to a doctor or hospital right away.
- 2 Report the attack to police.
- 3 If you can identify the dog, you might avoid a rabies test.



What not to do

Don't outrun it

Don't try to outrun it if you're not sure you can. Many cyclists wipe out when running dogs get caught in their wheels.



Don't hit it

Don't try to hit the dog while riding. You could lose your balance.



EMERGENCY MOVES

When you're riding fast and something gets in your way, should you slam on the brakes? Not always. In emergencies, experienced cyclists use other moves. You can learn them too. Find a quiet parking lot and practice the moves shown on this page.

**STOP
HERE
AND
READ**



HOW TO SLOW DOWN QUICKLY

The problem

When you stop fast using hand brakes, your weight shifts from the back wheel to the front. On dry pavement, this means pressing hard on your front brake stops you the fastest. What if you press too hard? You'll flip your bike. So you must learn how hard you can apply the front brake.



Smart Idea

When you have to stop fast, push yourself as far back on the bike as you can. Also put your head and torso as low as you can. This moves some of your weight to the back tire so you don't flip as easily.

What to do

- 1 Find a long (about 1/4 mile) stretch of road where you can practice without interference.
- 2 Speed up to nearly as fast as you can go.
- 3 Apply both your front and rear brakes, pressing slightly harder on the front.
- 4 Press harder on your front brake until your back tire starts to skid or lift off the ground. Then ease off of the front brake. You've just found the hardest pressure you can put on it.
- 5 Repeat but try stopping within shorter and shorter distances. In time, you'll learn how much front braking to use.



Danger

Don't use the quick slow-down method on wet pavement. Your front tire will skid and you'll lose control. Instead, apply both brakes evenly. And ride slower!

HOW TO TURN FAST

The problem

What do you do when a car turns directly in front of you and you can't brake in time? If you try to turn away you'll wipe out—unless you use this method.

To make an emergency right turn:



- 2** The car cuts right, in front of you. You steer sharply left, toward the car. This makes you lean right.



Sly Bikers Only!

You can make really sharp turns by tilting your bike way over. You can do this even at slow speeds by keeping your body relatively straight as you tilt the bike.



- 1** You're moving straight, with a car on your left and in front.



- 3** Turn right hard, steering into the lean and away from the car.

Step 3 follows immediately after step 2. You turn the front wheel left and then right within one second. To make a left turn, reverse the moves.



HOW TO DODGE A ROCK OR POTHOLE



The problem

Say you're riding down a street, with traffic on your left and parked cars on your right. A pothole appears in front of you. You don't have room to turn left or right. What do you do? Use this dodge.

What to do

1 Just before you reach the obstacle, jerk your front wheel left and then right so it goes around the obstacle.



2 Your back tire will also go around the obstacle.

3 Practice this, using a large sponge as the obstacle.



HOW TO FALL

The problem

You usually don't know when you're going to fall, so it's hard to prepare. But here are some things to think about.

When you're about to hit a car, don't try to wipe out first. Down low, you risk going under the wheels or hitting the sharpest parts of the car. Stay upright as long as you can and try to roll.



If you go flying, tuck your head, arms, and legs into a tight ball and try to roll when you hit the ground. If you stick your arms out you're likely to break them, or your collarbone, or both.



Smart Idea

Most serious bicycle injuries involve brain damage. So the best way to protect yourself in a fall is by wearing a helmet. For helmet info, see page 224.

WANT TO PRACTICE FALLING?

- 1 Wearing thick clothes, gloves, and a helmet, sit on your bike in a field of thick grass.
- 2 Put both feet on the pedals. Put one pedal at the 6 o'clock position and let the bike fall to that side. Keep your feet on the pedals and hands on the handlebars.
- 3 Let the outside of your calf absorb the fall first, followed by your thigh, hip, ribs or back, and shoulder. Concentrate on having the fall roll up your body, spreading out the impact.
- 4 Learn not to stop your fall with your arm, because that's how most cyclists break arms or collarbones.



HOW TO TREAT

1 CLEAN IT RIGHT AWAY

You should clean your wound within the first few minutes. If you don't, dirt and debris will make the wound hurt more and take longer to heal.



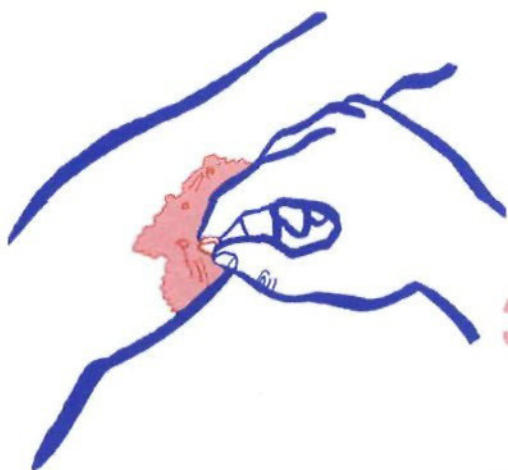
2 GET CLEANERS

Use water and a clean piece of fabric, such as your sock. If you're near a restaurant or gas station, go there for soap and napkins.



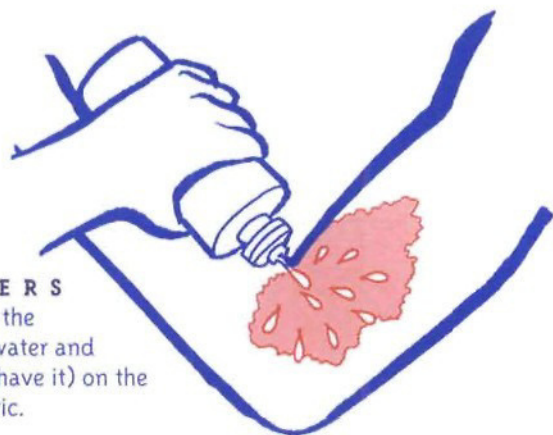
BEST

Use a clean, stiff hand-scrub brush, bar soap, and water.



3 PICK OUT GLASS

Pick out any big pieces of glass or other debris.



4 APPLY CLEANERS

Put water on the wound. Put water and soap (if you have it) on the brush or fabric.

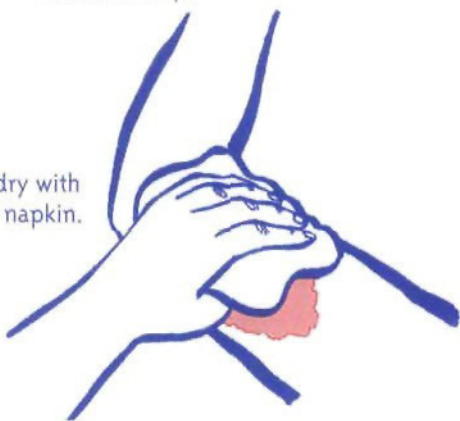
A BAD SCRAPE



5 SCRUB
Scrub the wound hard for 3 to 5 seconds. More blood will flow, but don't worry—this helps clean the wound.

Scrubbing really hurts—and it should. It works best if somebody scrubs the wound for you. Have them scrub until you finish counting to 10, fast. Counting helps you put up with the pain, because you know when it'll stop.

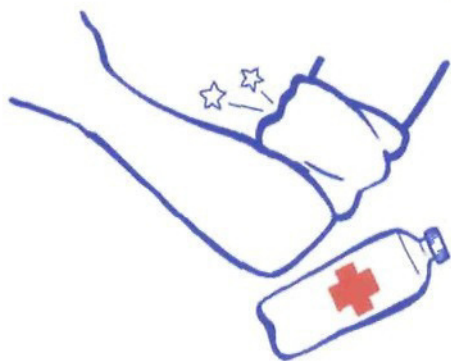
6 DRY
Pat the wound dry with a clean cloth or napkin.



7 BANDAGE
Wrap a clean cloth around the wound. You can tear open one end of a sock and pull it over, or use part of your tights.

BEST

Cover the wound with an antiseptic ointment. Then cover it with an adhesive bandage.



IF YOU CAN'T CLEAN THE WOUND RIGHT AWAY

After you do clean it, put a bag of ice on the wound. Do it for 20 minutes every two hours, until the wound gets less red. If redness and swelling get worse the next day, see a doctor.

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SPECIAL TECHNIQUES



Page 156

Does your bike have multiple gears? If so, maybe you're like a lot of people: you don't use 'em. Maybe gears seem too complex to bother with. Or you've gotten along fine without gears, and you can't see why you need them. Well, this chapter makes gears easy to understand.

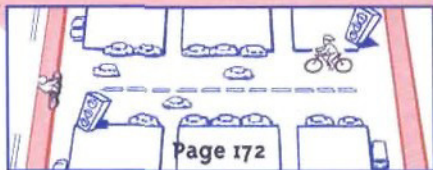
Once you've learned about gears, you'll have the power for things like hills, and even stairways. But how do you keep traffic signals from messing up your momentum? What if you lose control on a downhill? This chapter has the answers.

Maybe you want to avoid hills, or even heavy traffic.

If you don't know local streets well, how do you pick where to ride? This chapter tells you how to find routes that'll guarantee a nice ride—instead of urban warfare.



Page 161



Page 172

Bike cops learn how to ride up and down stairs, so there's no reason you can't. But sometimes

you'll want to just carry your bike on stairs, like when you bring your bike up to your apartment. Or when you take your bike onto escalators at work or the subway station. This stuff is explained step-by-step (get it?) in this chapter.



Page 170

And to where do stairs often lead?

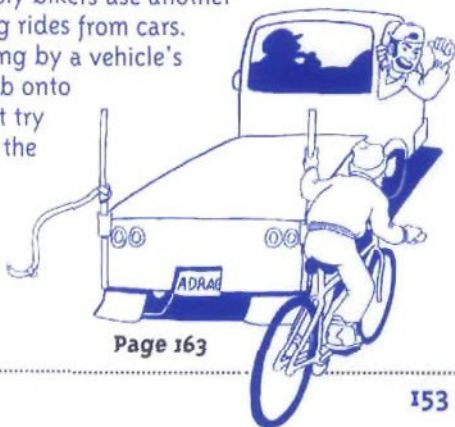
Sidewalks. Sure, they're lousy places to ride—too many peds.

But sidewalks can come in handy if you want to escape from a chase or beat a traffic light. In this chapter, you can learn how to use sidewalks on the sly.

Back on the street, sly bikers use another handy trick: getting rides from cars.

They get pulled along by a vehicle's air wake—or just grab onto the vehicle itself. Don't try

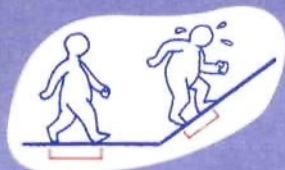
this, kids, without advice from the experts. Get it in this chapter.



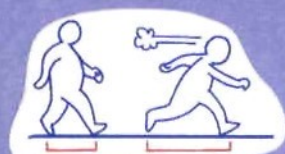
Page 163

Page 165

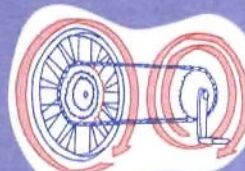
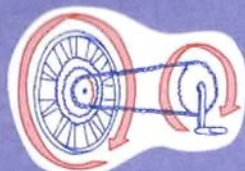
WHY YOU NEED MULTIPLE GEARS



Your legs help you go uphill by taking smaller steps or going slower.



Your legs help you go faster by taking bigger steps.



Your bike's gears help you go uphill or start from a stop by having you pedal faster, yet more easily.

New Word **Cadence**

How fast you pedal, or the number of times your pedals go around in one minute. Your legs will not get as tired if you can keep a steady cadence all the time. This means that you pedal at the same speed—whether you're going fast or slow, uphill or downhill.

Using

STEADY PACE ON A HILL



You're going very fast, using a small back gear.



As you start to go up a hill, you move slower. Your pedals will move slower too—unless you shift to a bigger back gear to keep them moving at the same speed.

In the middle of the hill climb, you move even slower. You shift to the biggest back gear to keep your pedals moving at a steady speed.



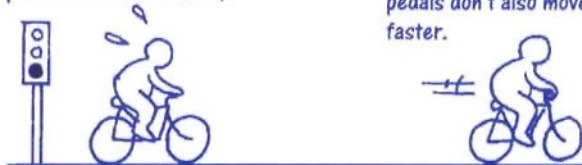
STEADY PACE WHILE STARTING



When you start from a stop, you move slowly. You use the biggest back gear so your pedals don't move slowly.



As you move faster, you shift to a smaller back gear so your pedals don't also move faster.



STEADY PACE INTO A WIND



You're going very fast, using a small back gear.



As you start to go into the wind, you move slower. Your pedals will move slower too—unless you shift to a bigger back gear to keep them moving at the same speed.



GEARS

**STOP
HERE
AND
READ**

Whenver you want to walk up a hill or go from walking to running, your legs move differently. Your steps become shorter or longer. That's how your legs adapt to the different kind of work you want to do. Your bike also can adapt, if it has multiple gears. It adapts by changing gears. By changing gears, you can move faster, go uphill, or ride upwind without working so hard.



In the middle of the downhill, you move fastest. You shift to the smallest back gear to keep your pedals moving at a steady speed.



At the top of the hill you start to move faster. You shift to a smaller back gear so your pedals don't also move faster.



& STOPPING



When you're moving the fastest, you shift to the smallest back gear to keep your pedals moving at a steady speed.



As you brake to slow down, you shift to a bigger back gear so your pedals don't also slow down.



As you come to a stop, you shift to your biggest back gear so it's already engaged when you start again.



When the wind hits you the strongest, you move even slower. You shift to the biggest back gear to keep your pedals moving at a steady speed.



As the wind dies down you start to move faster. You shift to a smaller back gear so your pedals don't also move faster.



HOW **HAND** SHIFTERS

B A C K G E A R S

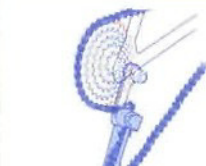
On many gear-shift systems, to put the chain on a bigger or smaller gear you simply move the hand shifter up or down slightly. On other bikes, the hand shifter acts like a trigger: You push it, it clicks, then it returns to its original position. These pages show you how different hand shifters move the chain across a bike's back and front gears.

**STOP
HERE
AND
READ**

HOW TO TELL WHAT GEAR YOU'RE ON

With most frame and bar-end levers, there's only one way to tell which back gear the chain is on: look down at the gear. Some levers help you, though: they make a clicking noise each time you change to a new gear. What if your levers don't click? Whenever you want to change gears, move the lever slowly until your pedaling feels easier or harder, and the chain doesn't make a rattling noise. See page 158 for details.

Under-bar levers



To move the chain to the biggest back gear, move the pointer to the lowest number

To move the chain to the middle back gear, move the pointer to the middle number

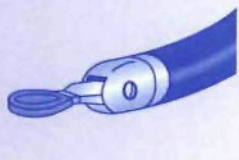
Hand-grip shifters



Frame levers



Bar-end levers



Trigger levers

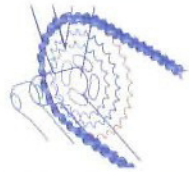
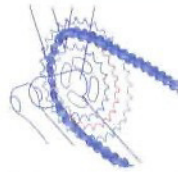
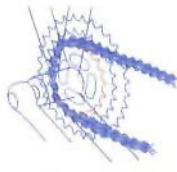
To move the chain to the biggest gear while pedaling, hold the lever all the way in until the chain goes to the biggest gear

To move the chain to the next bigger gear, click once
Click twice to move the chain two gears over



CHANGE GEARS

FRONT GEARS



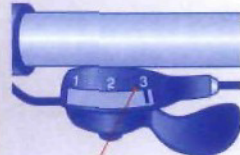
Highest number means smallest back gear



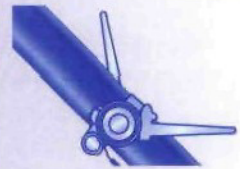
To move the chain to the smallest front gear, move the pointer to the lowest number



To move the chain to the middle front gear, move the pointer to the middle number



Highest number means biggest front gear



To move the chain to the smallest gear while pedaling, keep clicking until the lever won't click any more

To move the chain to the smallest gear while pedaling, hold the lever all the way in until the chain goes to the smallest gear

To move the chain to the next bigger gear, click once
Click twice to move the chain two gears over

To move the chain to the biggest gear while pedaling, keep clicking until the lever won't click any more



HOW TO SHIFT

Front gears

1 Pedal with very little pressure.

2 Move the hand shifter. If your hand shifter clicks once for each gear, move the shifter until it clicks. If your shifter doesn't click, move it until your pedaling becomes easier or harder, or you hear the chain move to another gear.

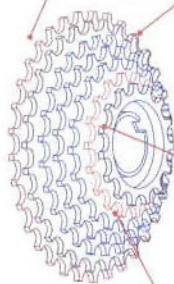


3 If your chain rattles or rubs after you've shifted, move the hand shifter slightly in one direction or the other until the sound is gone. If the sound remains, have your bike checked.

Back gears

Use the biggest gear when you go the slowest.

Use the next-to-biggest gears when you go a little faster.



Use the smallest gear when you go the fastest.

Use the next-to-smallest gears when you go moderately fast.

Some bikes have as many as seven back gears.

Situation	Do this
You're learning how to shift gears.	Stay in a single front gear. Learn to use the back gears before you start shifting the front gears.
You're speeding downhill and want to keep pedaling at a steady pace, or you want to go faster without pedaling faster; and you've shifted to your smallest back gear.	Shift to a bigger front gear.
You're climbing a hill or going into the wind; you've shifted to your biggest back gear; and you want to pedal more easily.	Shift to a smaller front gear.

BUMPS & RUTS

Riding across a bump



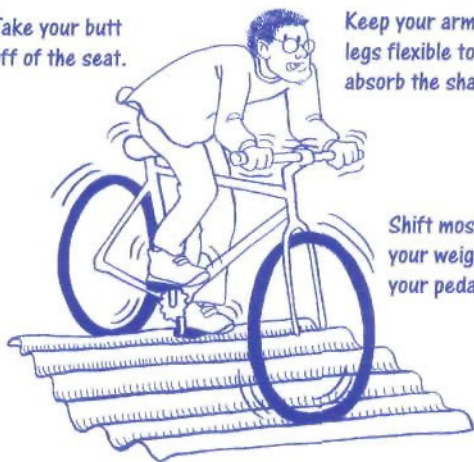
- 1** Just before the front wheel hits the bump, take most of your weight off of the handlebars, and make your arms loose.



- 2** Just before the back wheel hits the bump, take most of your weight off of the seat. For a large bump, take your butt off of the seat completely.

Riding on rough pavement

Take your butt off of the seat.



Keep your arms and legs flexible to absorb the shaking.

Shift most of your weight off your pedals.

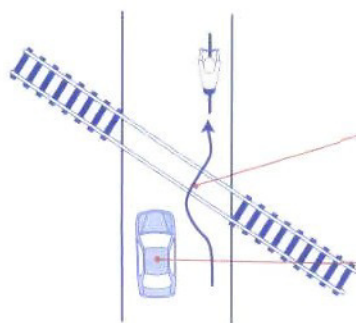
Riding through holes

- 1** Just before the front wheel hits the far side of the hole, take most of your weight off of the handlebars so your front wheel comes up easily.

- 2** Before the back wheel hits the hole, take your butt off of the seat and lean forward. The back wheel should roll through the hole.

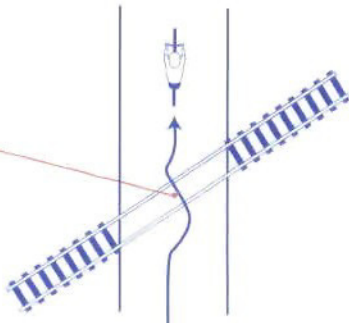


Crossing railroad tracks



To keep your tires from catching in ruts next to diagonal railroad tracks, change your approach so you cross the tracks at a right angle.

Before you swerve, check for traffic in your path.



HILLS

Going Uphill

If your uphill route includes traffic lights, learn to time the lights: Don't start up the hill until you know you'll pass the light when it's green, so you don't have to stop.

1 Speed up before you get to the hill, to give you more momentum. Try to go fast enough to get into your highest gear.

2 As you start to climb, stay in your highest gear until your pedaling starts to slow. Don't stop pedaling.

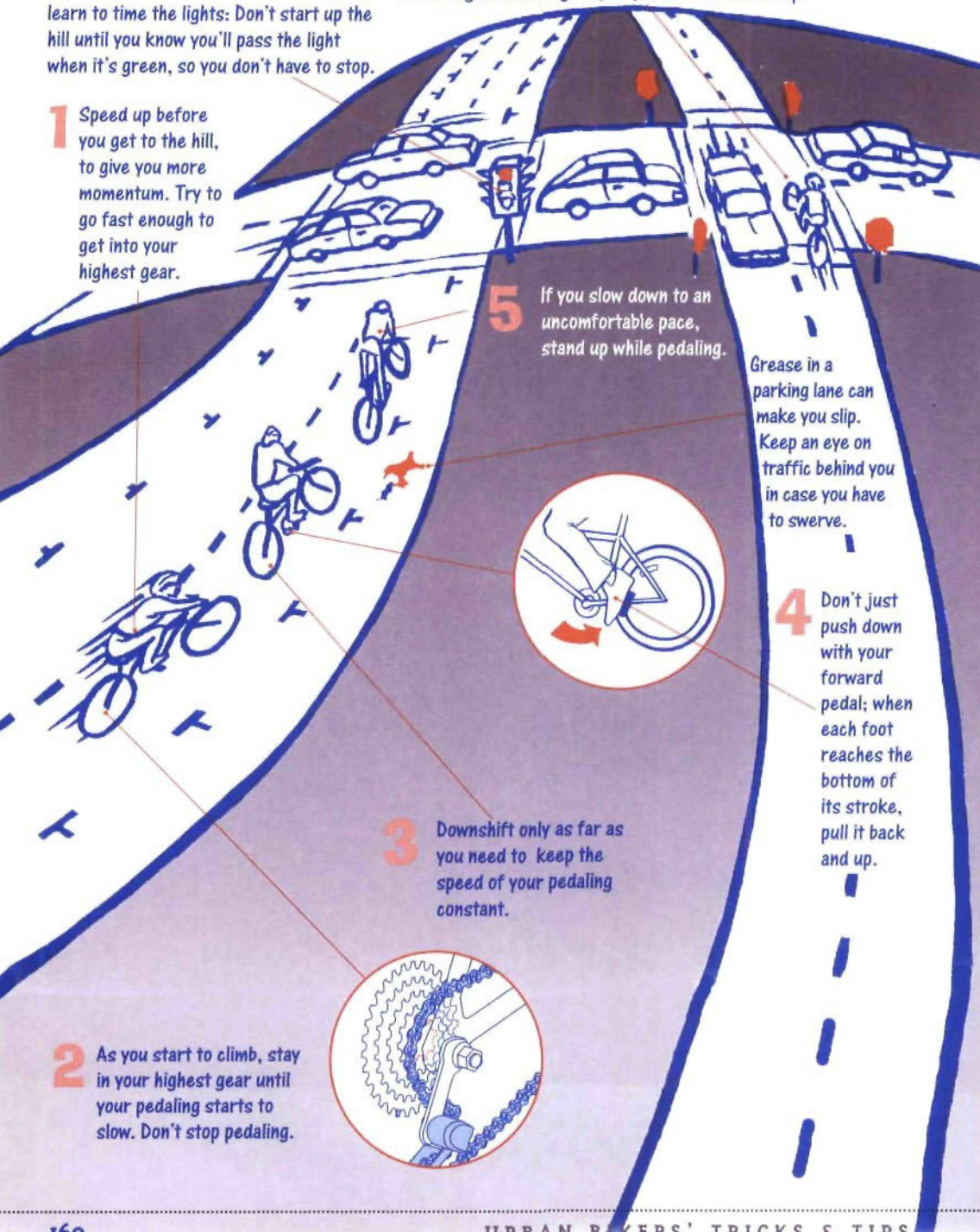
3 Downshift only as far as you need to keep the speed of your pedaling constant.

5 If you slow down to an uncomfortable pace, stand up while pedaling.

Grease in a parking lane can make you slip. Keep an eye on traffic behind you in case you have to swerve.

4 Don't just push down with your forward pedal; when each foot reaches the bottom of its stroke, pull it back and up.

If your uphill route includes a stop sign, try to shadow a car through the intersection: Time your arrival at the stop sign so you can go through the intersection at the same time as an oncoming or following car, so you don't have to stop.



Going Downhill

Shift into higher gears as you go faster, even if you're coasting. Otherwise, when you do pedal your pedaling will have no effect.



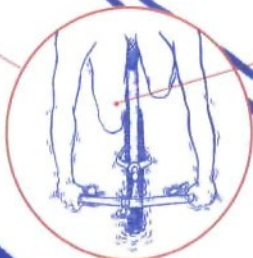
Right after you pass the top of a hill, stay well to the right. Motorists coming from behind won't see you until the last second.

Because it's harder to stop on a downhill, look farther ahead than normal for turns and obstacles.

If you're going too fast, gradually apply even pressure to both brakes. Sit more erect to resist the wind.

Try not to brake while you're going fast on a turn. Brake before or after. Braking on a turn can make tires lose their grip on the road.

If you start to drift to the outside of a fast turn, lean your bike at a steeper angle for better control: Steer momentarily to the outside of the turn.



If your bike starts to vibrate, don't freak out. Slow down by applying your brakes gradually and repeatedly. Press one leg against the top tube.



CATCHING A

How to draft

IDEAL

Van with rear windows. You can see what's coming, so you know when the van might slow or stop.

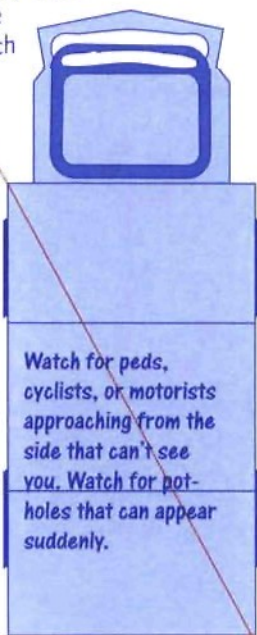


Sly Bikers Only

Drafting is the act of following a big, fast vehicle very closely so its air wake pulls you along. Why draft? It helps when you're riding uphill or into a head wind—or you just want to go fast.

NOT AS GOOD

Bus or truck. Stay close to the right side so you can watch ahead.



Watch for peds, cyclists, or motorists approaching from the side that can't see you. Watch for potholes that can appear suddenly.



Danger

When you follow a vehicle closely, you have to keep watching the pavement directly in front of you. If a pothole appears, you'll have only a split second to dodge it—far less time than you'd have if you spotted it way in advance. See page 66 for road-scanning methods, and page 159 for riding across bumps.



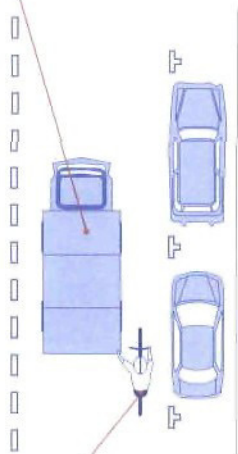
Smart Idea

Don't move too far to the side, or you'll fall out of the vehicle's wake and slow down. If this happens, immediately move back toward the middle while you try to catch up.

RIDE FROM A VEHICLE

How to skitch

The first few times you skitch, practice on very large trucks. They don't speed up or slow down as quickly as smaller vehicles. Or practice with a friend's truck, going slowly.



Two reasons to ride at the vehicle's right rear:

- You can watch for something that might cause the vehicle to slow. If an obstacle appears you can duck left.
- If the vehicle slows suddenly, you can let go and continue straight.



Danger

- Don't grab onto something not attached solidly, like a rope. If the vehicle slows suddenly, you won't.
- Don't grab a vehicle going faster than you. First match its speed, then grab it.



Sly Bikers Only

Skitching is the act of grabbing on to part of a vehicle so that it pulls you along. You skitch for the same reasons you draft: to ride more easily uphill or in a head wind, or to go faster. But skitching's lots more dangerous.

The best way to grab the vehicle is with an open grip. Why? When your fingers are hooked around something, it takes a second longer to let go. And if the vehicle does something unexpected, you might need that second. Also, if you panic you might clench your fingers—which means you'd take even longer to let go.



Lean slightly to the outside so you don't steer toward the vehicle.

Using SIDEWALKS

Sidewalks can slow you down. Pedestrians (peds) belong there more than you do; take care not to hit peds, cut them off, or freak them out. (On sidewalks, bikes are real dangerous to seniors and kids.) But sidewalks can help you pass jammed traffic, dodge a swerving car, or run from a nasty motorist conflict. If you use sidewalks a lot, learn where to find curb cuts or how to jump curbs without hurting your wheels.

**STOP
HERE
AND
READ**

Jumping onto a curb: the foot method

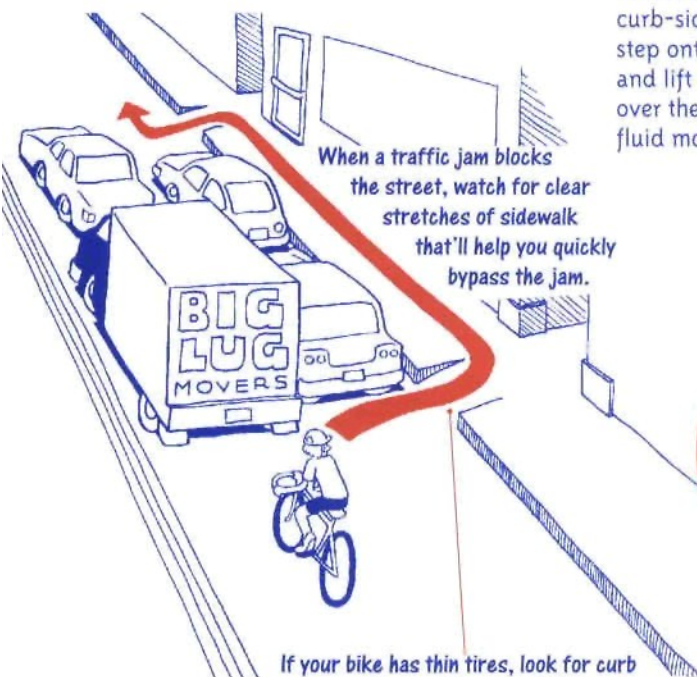
1 Approach the curb at a 45-degree angle or less. Put the curb-side pedal into the lowest (6 o'clock) position.



2 Just before the front wheel hits the curb, use your curb-side foot to step onto the curb and lift the front wheel over the curb—in one fluid motion.



Shortcuts



When a traffic jam blocks the street, watch for clear stretches of sidewalk that'll help you quickly bypass the jam.

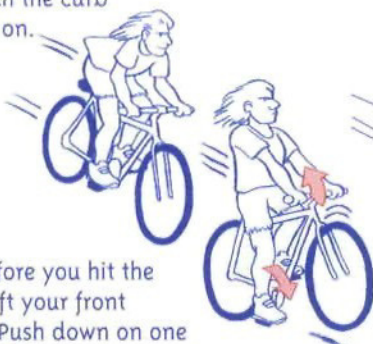
If your bike has thin tires, look for curb cuts or driveways through which to get on and off the sidewalk.

New Word Curb cut

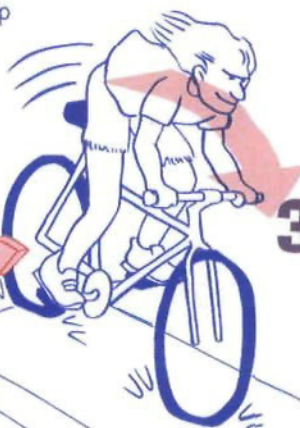
A curb cut is a place where the sidewalk is level with the street. That is, the curb has been cut out and the sidewalk made into a ramp. Towns usually make curb cuts to accommodate wheelchairs and strollers.

Jumping onto a curb: the two-wheel hop

1 Approach the curb straight on.



2 Just before you hit the curb, lift your front wheel: Push down on one pedal while pulling up on the handlebars. Pull up with as much of your weight as you can.



3 Right after the front wheel leaves the ground, throw your weight forward by rising off the seat and pushing down on the handlebars. When you do it right, your back wheel should lift.

4 When both wheels are on the sidewalk, pedal on.



3 Lean forward to get your weight off the back wheel. At the same time, use your other foot to push down on its pedal, rolling the back wheel up and over the curb.

Jumping off of a curb

1 Just before you get to the curb, pull your front wheel up.



2 Ideally, your back tire should hit the pavement just before the front.

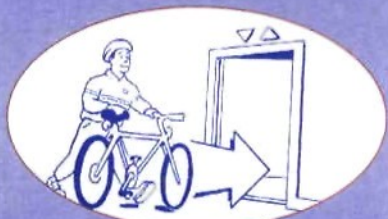


Smart Idea

Use a two-wheel hop to jump over anything. To learn: First master getting your front wheel high off the ground. Then practice the two-wheeled hop by jumping over a wooden 2-by-4 in a parking lot. At first, your back wheel will always hit the wood—but with practice you'll fly right over it.

CARRYING

GETTING ON ELEVATORS



If there's no one on the elevator, roll the bike straight on.



Immediately turn the bike around and hold it against a side wall.



If there are people on the elevator, ask the people on one side to move to the middle. Then stand your bike up as shown on page 167.



Roll the bike onto the elevator and go to the side wall. When you get off, back out.

Two ways to go up stairs

1 Reach over the top of the bike and grab the seat-post tube on the lowest part. Grab the handlebars near the middle. Lift the bike and walk up the stairs.



2 Bend at your knees so that your shoulder is level with the bike's top tube. With your elbow bent, grab the top tube from underneath, close to the seat.



Grab the handlebars near the middle. Holding your bent arm steady, stand up—hoisting the bike near your shoulder. Carry the bike up the stairs.



Smart Idea

Does your seat hit low ceilings on stairways? Install a quick-release bolt so you can remove the seat before climbing stairs. (And when you park your bike outside, take your seat with you.)



BIKES ON STAIRS

Three ways to go down stairs

- 1** Stand over your rear wheel. Grab the handlebars. Pull back and stand the bike up. Roll the bike down the stairs.




- 2** Reach over the top of the bike and grab the seat-post tube on the lowest part. Grab the handlebars near the middle. Carry or roll the bike down the stairs.



- 3** Bend at your knees so that your shoulder is level with the bike's top tube. With your elbow bent, grab the top tube from underneath, close to the seat. Grab the handlebars near the middle.

Holding your bent arm steady, stand up—hoisting the bike near your shoulder. Carry the bike down the stairs.

Recommended Product Shoulder pads



Several manufacturers make triangular pads that attach underneath your top tube, so you can comfortably carry your bike on your shoulder. Most of these products double as a carrying pack. And most pads double as storage pouches, inside of which you can carry stuff. (For more on Mr. Bike's Recommended Products, go to www.mrbike.com/products.)



BIKES ON

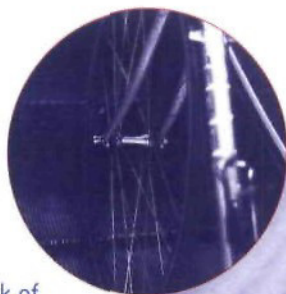
Going up

- 1** Stand on the right side of your bike, with your right hand on the right side of the handlebars, and your left hand holding the back of the seat.



- 2** Roll the bike forward as your left foot steps off.

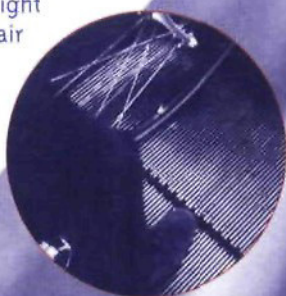
- 2** Roll the front wheel onto the bottom stair (stair #1). Press forward slightly so the wheel stays against the back of the preceding stair.



- 7** Let go of the brake as your right foot steps off of the escalator.



- 3** Put your right foot on stair #2, still pressing the bike forward gently.



- 6** At the top of the escalator, let the front wheel roll off of the stair.



- 4** Put your left foot onto stair #3 and let your rear wheel roll onto the same stair.



- 5** Apply the rear brake firmly. The rear brake keeps the bike from rolling back.



ESCALATORS

Going down

- 1** Stand on the left side of your bike, with your left hand on the left side of the handlebars, and your right hand holding the front of the seat.



- 2** Roll the front wheel onto the top stair (stair #1).



- 3** Apply the front brake firmly as you put your left foot on stair #2. The front brake keeps your bike from rolling forward.



- 4** Put your right foot on stair #3.



- 5** Let your rear wheel roll onto stair #3.

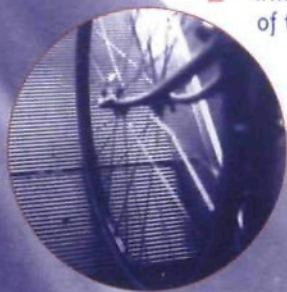


- 9** As your right foot steps off of the escalator, roll the bike forward.

- 8** Step off of the escalator with your left foot.



- 7** Let the front wheel roll off of the stair.




- 6** At the bottom of the escalator, release the front brake as the front wheel touches the floor. Hold the seat firmly so the bike doesn't get away from you.



RIDING ON

Riding up stairs

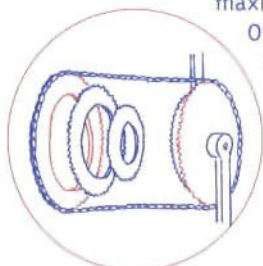
- 
- 1** Shift into a low enough speed (with the chain on a big back gear) so you can pedal uphill.
- 2** Put your pedals at the 3 and 9 o'clock positions and stand up on them. Move your butt back so most of your weight is toward the back of the bike.
- 3** Just before the first stair, pull your front wheel up. You should raise it high enough so that it lands on the second stair.
- 4** When your front wheel lands on the stair, start pedaling. Keep your weight back—or else your front wheel will slam to a stop. Pedal up the stairs.
- 5** When your front wheel reaches the top landing, shift your weight forward. Continue pedaling as your back wheel reaches the top.
- Keep your knees and elbows flexible so they can absorb the bumps.*

STAIRS

Riding down stairs

**STOP
HERE
AND
READ**

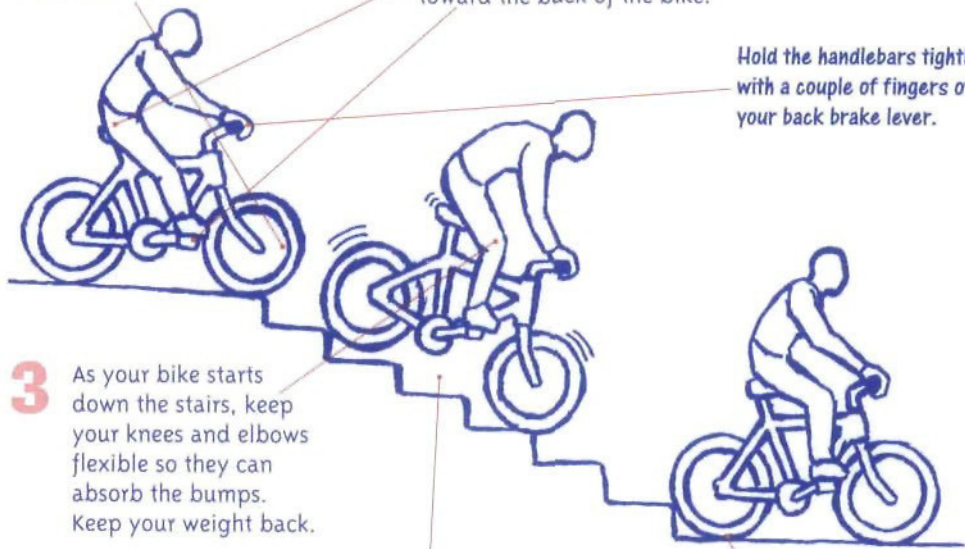
- 1** Shift to your biggest front and back gears so your chain has maximum tension. Otherwise, it might jump off of the gears.



Approach the stairs straight on. Even the slightest angle could make you lose control.

- 2** Just before the first stair, put your pedals at the 3 and 9 o'clock positions and stand up on them. Move your butt back so most of your weight is toward the back of the bike.

Hold the handlebars tightly, with a couple of fingers over your back brake lever.



- 3** As your bike starts down the stairs, keep your knees and elbows flexible so they can absorb the bumps. Keep your weight back.

- 4** Use only your back brake to slow down. If you go too slow, you'll have a very rough ride. On long stairways you can go fast enough to get a rhythm, so that both wheels appear to be hopping the stairs at the same time.

- 5** When your back wheel hits the bottom, start pedaling. If you're going fast enough, immediately shift to a faster gear.



FINDING YOUR

Before you ride off to your destination, think about the roads you'll take: How can you make your trip easier, cutting your conflicts with automobiles? Experiment with different routes, or ask for help from a local bike group (see "Local advocacy groups" in Appendix A).

**STOP
HERE
AND
READ**

Choosing your route

Choose a route that lets you make as few left turns as possible. This might mean using one route to a destination, and a different route from the destination.

Cross major roads at traffic signals instead of on side streets.

NO YES

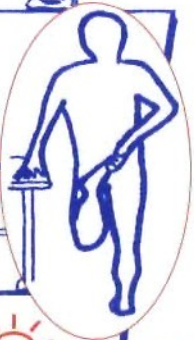
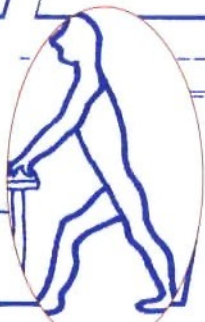
Pick streets where you have room to avoid the door zone.

**YES
NO**

Find streets where the traffic lights are timed to turn green for 20 MPH (35 KPH) traffic or slower, so you can comfortably make all the greens. Fewer red lights means fewer conflicts with vehicles at intersections.

NO YES

When starting your ride, choose streets where you can go slowly and warm up your leg muscles before exerting them. Avoid roads where you immediately have to go fast or climb a hill.



Smart Idea
You can warm up your legs before riding by stretching your quadriceps and (if you use pedal clips) your calves.

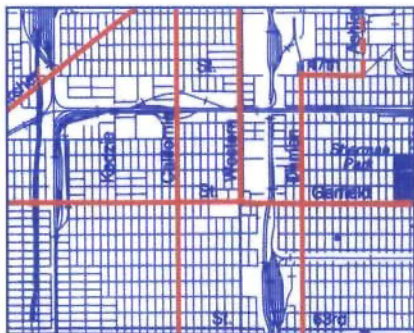
WAY

Choosing street maps

OK

Bike routes with no street detail

Shows only recommended bike routes or streets with marked bike lanes, but few or no other street names. OK if you know streets well.



GOOD

Bike routes with street detail

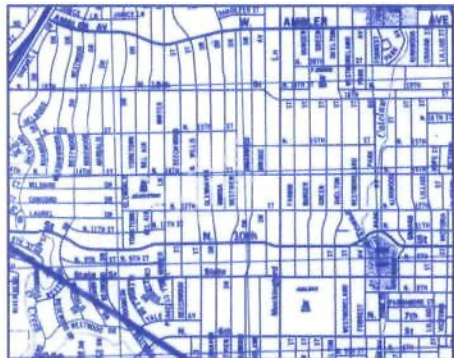
Shows all the streets and their names, along with recommended bike routes or marked bike lanes.



OK

Street detail

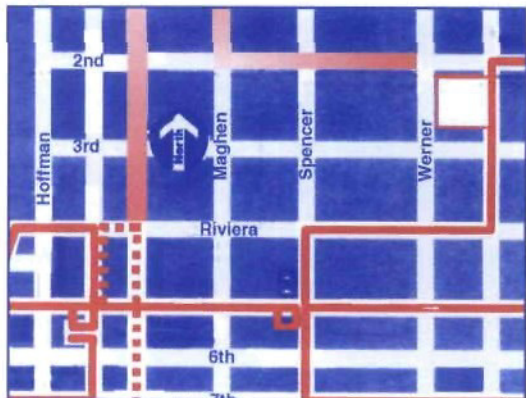
Shows all the streets and their names. OK if you don't need bike-route suggestions.



BEST

Bike routes, street detail, extras

Shows all streets names, bike routes, and helpful info such as: one-way designations; elevation (for hilly areas); bike parking locations; high-traffic volume.



Maps are good tools to help you figure out how to get around town on your bike. But some maps will help you more than others. Even one that carries the name "bicycling map" might not work as well as a standard street map. Here's what to look for.

**STOP
HERE
AND
READ**

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BUSES, TRAINS, & PLANES



Page 181

Most cities publish their own bike-on-bus rack instructions. But they don't tell you how the racks might screw up your commute. Luckily, cyclists across the country have learned—and they tell you in this chapter.

Lots of cities have bike-carrying racks on transit buses. Bicyclists have learned a few tricks for putting bikes onto these racks. And, where buses don't have racks, cyclists have tricks for taking bikes inside of buses. They're all in this chapter, along with step-by-step instructions.



Page 182



Page 187

Commuter trains are a little different from subways. Conductors, special placement areas, stairs, and schedules can trip you up. But not if you look at this chapter.

Taking your bike onto a subway or light rail is even trickier. Where's the best place to put yourself? How do you keep your bike from getting thrown around? And what do you do on a crowded car? This chapter gives you the answers.



Page 191



Page 200

Hey, what if someone told you bikes can fly? Nuts, you'd say—and you'd almost be right. Getting your bike into an airport and onto a plane can make you crazy. But many cyclists have done it. Their sanity-saving hints are in this chapter.

BIKES ON

Many cities have installed bike-carrying racks on the front of their transit buses. Why use them? If you have a very long commute or must travel through a bike-restricted area, you can ride the bus partway. Also, if rain catches you unprepared or you get a flat you can't fix, you can hop the bus. Once you learn how, using a bike-on-bus rack is easy.

**STOP
HERE
AND
READ**

Timing

Most bike-on-bus racks carry only two bikes. So by the time a bus gets to your stop, the rack might be full—so you have to wait for the next bus. What to do if you commute regularly:

1 The first couple of weeks, leave your house much earlier than usual so you won't be late. After that if you haven't had a problem with full racks, try leaving a little later each day—until you find the best time to leave.

2 Experiment with different bus routes that go in your direction. Your bike gives you the flexibility to take any of several parallel routes.



Smart Idea

In some places you need a permit to put your bike on a bus. Before you plan your first trip, learn how long it takes to get the permit, and where to get it.



Don't forget!

Many bus riders forget their bikes are on the bus! If you've regularly ridden the bus before you started bringing your bike, make yourself a reminder—such as hanging your helmet on your arm.

Watch

Stay near the front of the bus and watch your bike. A two-person thief team can distract a driver while stealing your bike. Or a dishonest cyclist might take your bike and leave you their junk. To deter thieves, lock one wheel before loading your bike.



BUSES: BASICS

Learn

Call your transit agency for a route map, schedule, and list of rules—including times that bikes aren't allowed. Learn the routes on which bikes are allowed. Also ask for bike-on-bus brochures or videos.

Practice

Before you use a bike-on-bus rack for the first time, practice on a real bus. Bring your bike to where a bus is waiting at its origin or turnaround point. Ask the driver to let you try the rack.

Relax

The first few times you rack your bike, you'll think you're taking too long. Relax. View yourself not as a cyclist, but as a passenger with a bike; you're just as entitled to a little extra time as a passenger with heavy groceries or a wheelchair.

Smart Idea

Ask your transit agency to hold public training in which they teach people how to use bike-on-bus racks.



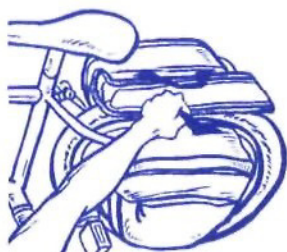
LOADING A

No bikes already loaded



Danger

While loading or unloading, don't kneel or crouch out of the driver's view. They might forget you're there and run over you.



1 Take bags or other big accessories off of your bike and lay them on the sidewalk.



2 When a bus approaches, stand with your bike so that the driver can see it.



11 Grab any stuff you'd left on the sidewalk and board the bus.



10 Shake your bike to make sure it's secure.



9 Pull the support arm out, up, and over your front tire to about the 11 o'clock position. If the tire has a fender, put the arm just below it.



FRONT BUS RACK



3 When the bus stops, walk with your bike on your right side to the middle of the front of the bus, about three feet away.



4 Holding your bike with your right hand, use your left hand to pull the rack down.



5 Move your bike between you and the rack.



6 Grab your bike with your left hand on the wheel and down tube, and your right hand in the middle of the seat tube.



8 Holding the bike with your right hand, grab the rack's support arm with your left hand.

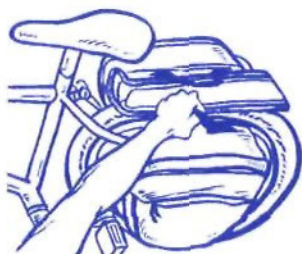


7 Lift the bike onto the wheel well farthest from you.



When no bikes are already in the rack, some agencies require you to put your bike on the outer wheel well.

Bike already loaded



1 Take bags or other big accessories off of your bike and lay them on the sidewalk.



2 When a bus approaches, stand with your bike so that the driver can see it.



9 Grab any stuff you'd left on the sidewalk and board the bus.



8 Shake your bike to make sure it's secure.





3 When the bus stops, walk with your bike on your left side to the middle of the front of the rack. **If loading to the inner side:** Back your bike to the rack's left side.



4 Grab your bike with one hand on the wheel and down tube, and the other hand in the middle of the seat tube.



5 Lift the bike onto the wheel well closest to you.



6 Holding the bike with one hand, grab the rack's support arm with your other hand.



7 Pull the support arm out, up, and over your front tire to about the 1 o'clock position. If the tire has a fender, put the arm just below it.



Removing your bike



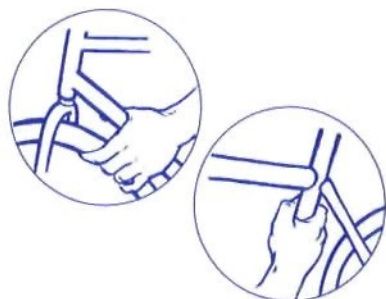
- 1** Tell the driver you'll be removing your bike at the next stop.



- 2** Get off the bus at the front door. Place anything you're carrying on the sidewalk.



- 3** Stand in front of your front tire and pull the support arm out and down.



- 4** Grab your bike with one hand on the wheel and down tube, and the other hand in the middle of the seat tube.



- 5** Lift your bike out of the wheel well. If there's another bike on the rack, carry or roll your bike onto the sidewalk.



Danger
Don't step out to the traffic side of the bus.



- 6** If there is no other bike on the rack, place the bike on the ground next to you and hold it with one hand. With the other hand, fold the rack up against the front of the bus. Then roll your bike onto the sidewalk.

BIKES INSIDE BUSES

Slim your bike

Some bus doorways have railings that you and your bike can squeeze through, but not with side bags. Buses can have narrow aisles, too. Before you board such a bus, remove your bags and put them onto the floor of the bus. Then carry your bike on.

Pay later

On a moving bus, it's hard to fish out your fare money while holding a bike. If your bus agency doesn't have rules to guide you, do this: When you board, ask the driver if you can first secure your bike, then pay your fare.

Get a transfer

On some buses you put your bike in the space reserved for wheelchairs. If no wheelchair is already there, you can board with your bike. But if a passenger using a wheelchair boards after you, they can bump you off the bus. For this reason, when you board the bus, get a transfer (if your system has them) so you don't have to pay for the next bus.

Carry bungees

Some buses require you to tie your bike so it doesn't move around. For this purpose, always carry at least two 14-inch bungee cords.

Stand it up

If you share the space with many passengers, stand your bike up on its rear wheel. See page 189 for tips on how to secure it.

Some cities' buses don't have outside racks, but you may bring your bike on board. Also, in a couple of places where bike-on-bus racks block the buses' headlights, after dark you must carry your bike inside the bus. Here are some tips for doing so.

**STOP
HERE
AND
READ**



Smart idea

Know your bike. It has sharp edges that can cut someone, and a greasy chain that can soil their clothes. Warn passengers who get too close.

SUBWAYS &

Getting on

Choose a place on the platform where the least people are waiting. The cars that stop there might also have the least passengers.

In some places (such as New York), trains on certain routes have bigger cars than trains on other routes. Learn these and use them.

Late at night, ride in the first car or the conductor's car.

LIGHT RAIL

Many stations have special gates for disabled or service access. Use these instead of carrying your bike over the turnstile. If the gate's locked or you're not sure you can use it, ask the ticket agent.

If cars are always too crowded at your stop, try getting on one or two stops before.

If a route has both local and express trains, use the express when you can. Fewer passengers get on and off.

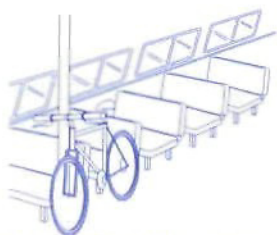
See page 168 for how to ride escalators with a bike.

Don't ride on platforms—it annoys most people. And most agencies forbid it, so you could get banned from the trains.

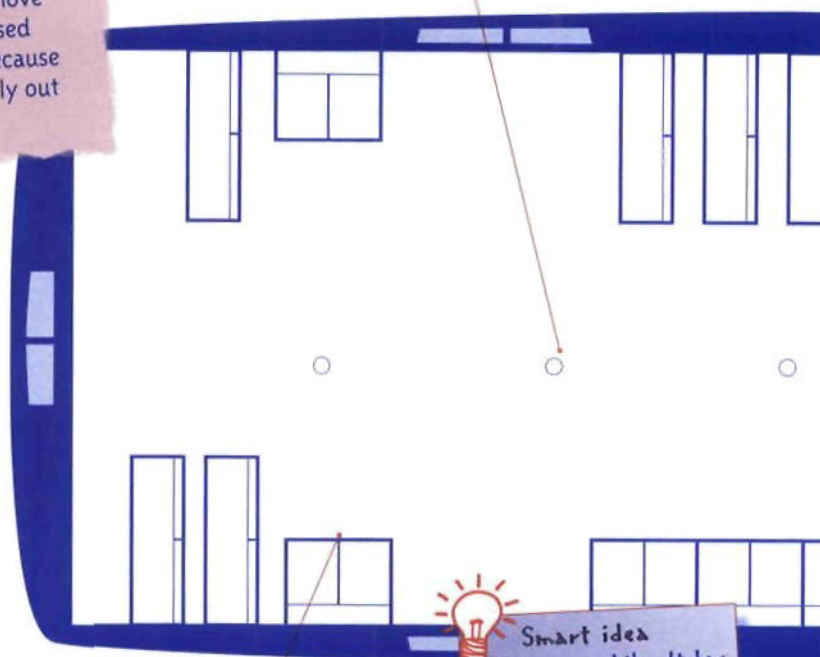
Placing your bike

If your town has rules about exactly where on a subway car bikes should go, follow the rules if they seem practical. But try to put your bike where it blocks the fewest people who want to sit down or move through the car. Unused doorways are best because your bike's completely out of the way.

**STOP
HERE
AND
READ**



Put your bike in the middle next to a center pole, especially if all seats are taken. Lean your bike against the pole.



Smart idea

Know your bike. It has sharp edges that can cut someone, and a greasy chain that can soil their clothes. Warn passengers who get too close.



Sit in the aisle-facing seat next to the door, with your bike in front of you. A small part of the wheel can stick out into the doorway.

- If your bike has a kickstand, face the kickstand side of the bike toward the seat and put the kickstand down. Warn passengers not to rub against your chain.
- If your bike has no kickstand, face the chain side of the bike toward the seat. Sit down and lean the bike against your knees.



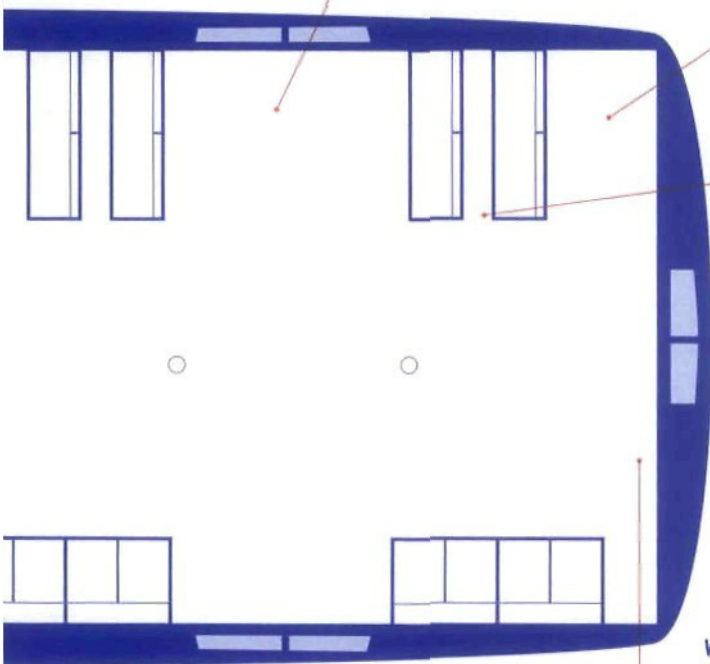


If, when the train stops, doors open only on one side, place your bike in a doorway on the other side. If door openings alternate from side to side, you can

move from side one to the other—if the car's not crowded.



Put your bike in the wheelchair space. Plan where you'd put your bike next if a wheelchair boards the car.



If there are few passengers, take a seat and put your bike next to you.



With many passengers present, put your bike in the back or front of the car, especially at either end of the train. Stand it up or put it across the door. Get ready to move it if someone comes through the door.

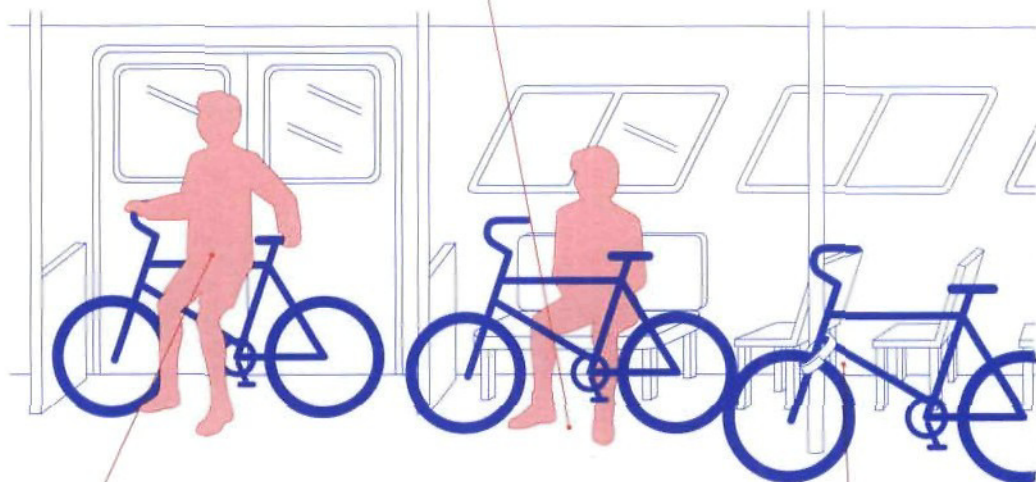
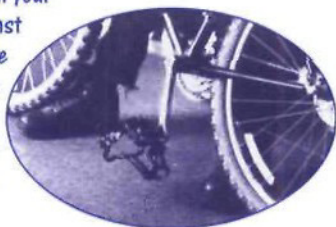


Don't try to get on a packed subway car at rush hour. You'll make enemies for other cyclists. If you keep encountering crowds, change your commute time.



Holding your bike

When sitting with your bike leaned against your knees, place each foot next to the wheel so the bike won't roll in either direction.



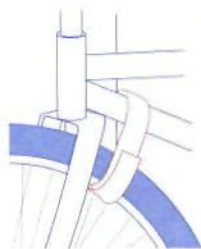
Lean the bike against the door, sit on the top tube, and hold one brake lever.



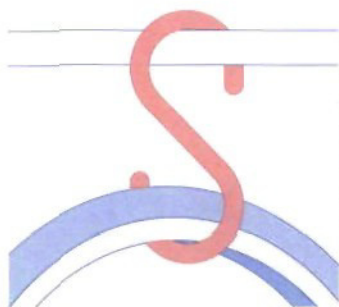
Danger
Don't lean against or block a door unless you're sure it won't open at an upcoming stop.



Smart Idea
The more you lean your bike the less likely it will roll.



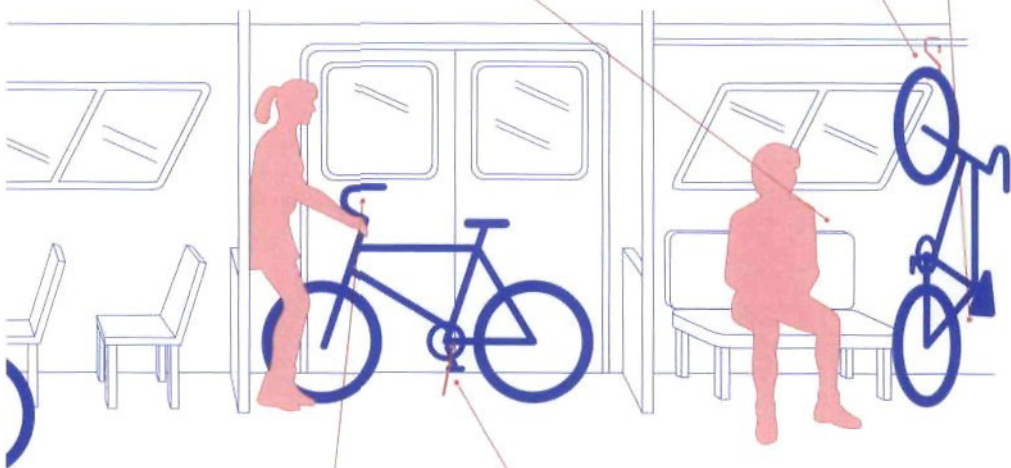
Lock or bungee your bike to a pole. Don't do this on short rides, or if train rules don't allow it.



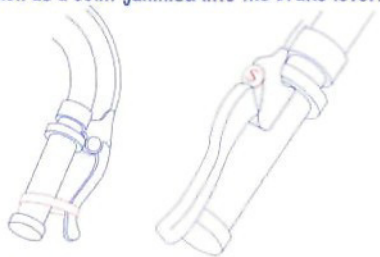
Stand the bike up and hang it from an overhead pole. Place an S hook through the front tire and over the pole. (For suppliers, see "Hardware" in Appendix B.)

Make sure rear-mounted stuff won't fall off.

Make sure the chain faces away from other passengers.



Hold the bike with its brakes on: To keep the brake on without holding the lever, use a Velcro ankle strap, your bike glove strap, or something (such as a coin) jammed into the brake lever.



If your bike doesn't have a kickstand and you use the train often, get one. With a kickstand, you can more easily support a bike's weight. (But some train rules don't let you put your kickstand down!)



COMMUTER TRAINS

BASICS

Permits

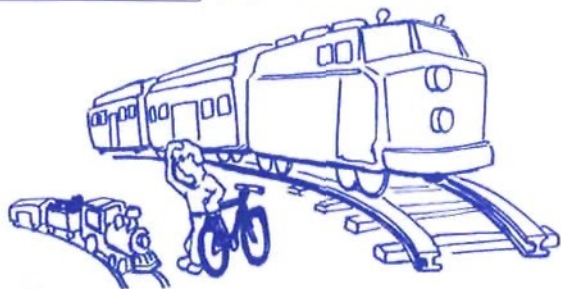
When applying for a permit, get one for each member of your family. (If you don't have a family, make one up). Then, when your bicycling friends visit from out of town, you can all bring your bikes onto the train. (This



won't work on trains that have photographic permits.) And if permits expire annually, don't forget to renew them.

**STOP
HERE
AND
READ**

Many cities allow bikes on commuter trains. Some require you to have a permit. Others let you board with a bike only at certain times or in certain cars. But even where you're allowed to board with a bike, you might get discouraged by lack of room, other passengers, or rail employees. Don't. Be polite, but firm—you belong there! Above all, be creative: Bungee cords can help you stow your bike almost anywhere on a train.



Split routes

Be careful with train routes in which you have to change trains. The second train might not accommodate your bike because it's smaller or configured differently.

Conductors

- As long as conductors let your bike on the train, don't argue with them or get them mad—even if they don't follow the rules exactly. On the train, they're the bosses. Don't make enemies for other cyclists.
- A certain train might have just started carrying bikes. Or its passengers might seldom board with bikes. So to its conductors, passengers with bikes are a new thing. On such a train, ask conductors where they want you to put your bike. They might not know themselves, but your respect will help other cyclists.
- If a conductor mistakenly stops you from boarding with a bike: Note the time of the train and the conductor's name, if you can get it. If you can't, write down a description of the conductor and which car they were on. Then report the incident to the transit agency and the local bike advocacy group.



GETTING OFF A TRAIN

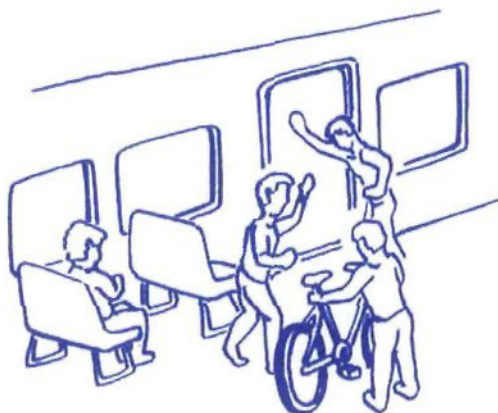


Get ready

At the stop before yours, start preparing to get off. Untie your bike and attach any accessories you removed.

Yield

Let passengers without bikes get off the train first, unless you'll block them.



Getting out

If you have bags on your bike that won't fit through the door, put your bags on the floor near the stairs.



Carry your bike out the door and lean it against the train. Immediately run back for your bags.

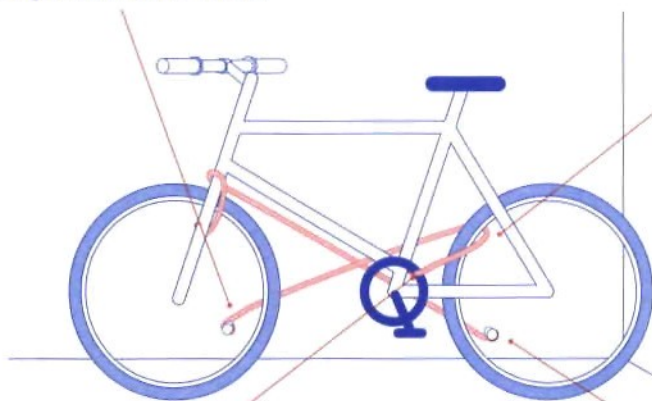


BIKES ON

Tying to wall mounts

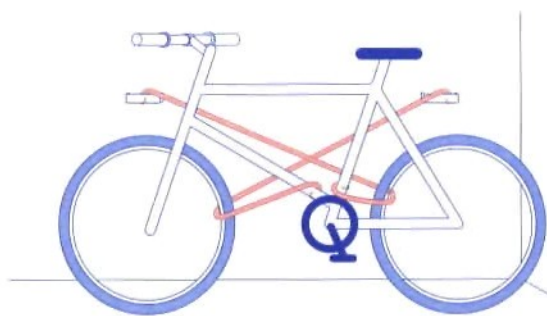
1 Put one hook of the bungee on the wall mount.

2 Run the bungee through one wheel so the bike won't roll.



3 Attach the second hook to the frame or to the original wall mount next to the first hook.

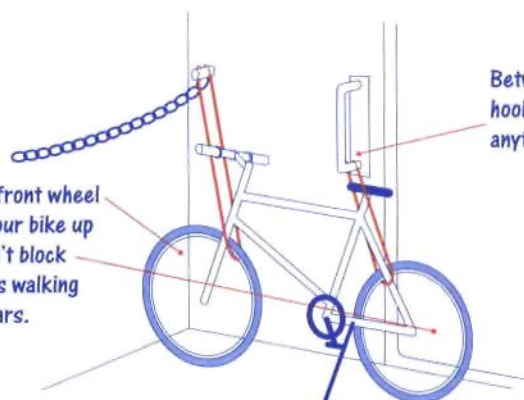
4 Repeat with the second bungee, attached to another wall mount and through the other wheel.



If you can, attach the bungees so they pull your bike in opposite directions. This will help keep it from moving.

Turn your front wheel or stand your bike up so it doesn't block passengers walking between cars.

Between cars, hook bungees onto anything solid.



COMMUTER TRAINS

Wall-mounted racks

When leaning your bike against a bike already attached to a wall-mounted rack, face it in the opposite direction. Its handlebars won't get in the way.



Don't jam your pedal into the other bike's wheels.



Before attaching your bike against another bike, ask its owner where he or she is getting off. (Call out "Where's this bike going?") If you're getting off later, you may want to put the earlier-departing bike on the outside.



Smart idea
Put a sign on your bike that shows the name of the stop at which you're getting off.

Where bikes sit separately from passengers, sit where you can watch your bike—because sometimes bikes on trains get stolen.



Smart idea
To prevent theft, hobble your bike: lock the front wheel to the frame.

**STOP
HERE
AND
READ**

Your trains might have areas where the seats have been removed. In some cities these spaces are made just for bikes. In other cities these spaces are made for wheelchairs—but if they're empty, bikes can use them. On other trains, no seats have been removed but bikes are allowed between cars.

GOTTA HAVE BUNGEEES

You can't lash your bike to the wall of a train without bungee cords. A few trains contain racks with bungees already attached—but you should always have at least two of your own. Get bungees that are at least 24 inches long when they're not stretched.



TRAIN TRAVEL

Timing your commute

No room

Some trains carry a limited number of bikes. So by the time a train gets to your stop, it might already have the maximum number. What to do if you commute regularly:

- 1 The first couple of weeks, leave home much earlier than usual so you won't be late. After that, if you haven't had a problem with full trains, try leaving a little later each day—until you find the best time to leave.
- 2 Try bicycling to a station before the one you usually use.



Flex time

If your commuter train doesn't allow bikes during rush hours, ask your boss for flex time: you could work from 7 a.m. to 3 p.m., or from 10 a.m. to 6 p.m.

Work early, home late

Say your commuter train doesn't allow bikes during rush hours. If you leave home earlier and go home later, you can use the extra time to eat breakfast and dinner: Bring food with you and eat away from home. Don't eat on a train unless you know whether food's allowed.

Sports crowds

Certain trains pass close to sports stadiums. When big sports games are over, these trains get swamped with passengers. Learn when games end so you can avoid the nearby trains.



Traveling between cities

Amtrak trains in the U.S. and Via Rail trains in Canada have different ways of handling bikes. Most make you put your bike in a box and check it as baggage. Others, such as Amtrak's *Vermont*, *Twilight Shoreliner*, *Ethan Allen Express*, and *Adirondack* have cars with bike racks; you just roll your bike on. (To learn how to pack your bike into a box, see page 202.)

Amtrak's National Timetable tells you which trains take checked baggage at which stops. Also, if a particular train lets you roll your bike on without checking it as baggage, the timetable says that in the train's "Services" description.

To learn how to get the current Amtrak timetable, or for more information on Via Rail, see "Trains, national service" in Appendix B.



Amtrak's roll-on bike-storage racks on the Vermont line

BIKES ON

Before you go to the airport

Bikes fly free on several airlines for members of the League of American Bicyclists and the International Mountain Bicycling Association. (To contact them, see "National advocacy groups" in Appendix A).

If you're using luggage-fee waivers from the League's travel agency, put the agency's phone number on each waiver. Some ticket agents don't trust the waivers and might hold you up for a half hour while they get authorization. If they can call the travel agency directly, it might speed things up.

Things to do

- ❑ Decide how you'll transport your bike
- ❑ Learn whether your airline supplies bike boxes
- ❑ If bike requires disassembly, practice at home
- ❑ Decide how to pack
- ❑ Pack a spare bike-lock key separate from the original
- ❑ Make sure you have tickets and other documentation
- ❑ If riding to or from an unfamiliar airport, get directions
- ❑ Figure how far in advance to leave for the airport

See the table of pros and cons on page 197.

Find out how to ask on page 198.

Think about packing two bags: One for stuff you want on the plane, such as book, maps, or food, and the tools you'll need to pack the bike (see page 202). Another bag for everything else.

Page 200 guides you.

You can bring your bicycle onto an airplane like any other piece of luggage. But it's not simple. Airlines just aren't used to carrying bikes! Checking yours as luggage can cost lots, take much more time, and even make you miss your plane. But what if you like the freedom of riding into an airport, taking a flight, and riding out of your destination airport? These ideas will smooth the turbulence.

**STOP
HERE
AND
READ**

Item	Time required
Riding to the airport	Depends on distance
Getting a bike box	5 to 20 minutes
Packing a bike box	20 to 40 minutes
Checking in, if the agent freaks out	Up to 60 minutes
Long agent lines during airport rush hours	Up to 45 minutes

AIRPLANES

5 ways to fly your bike: pros and cons

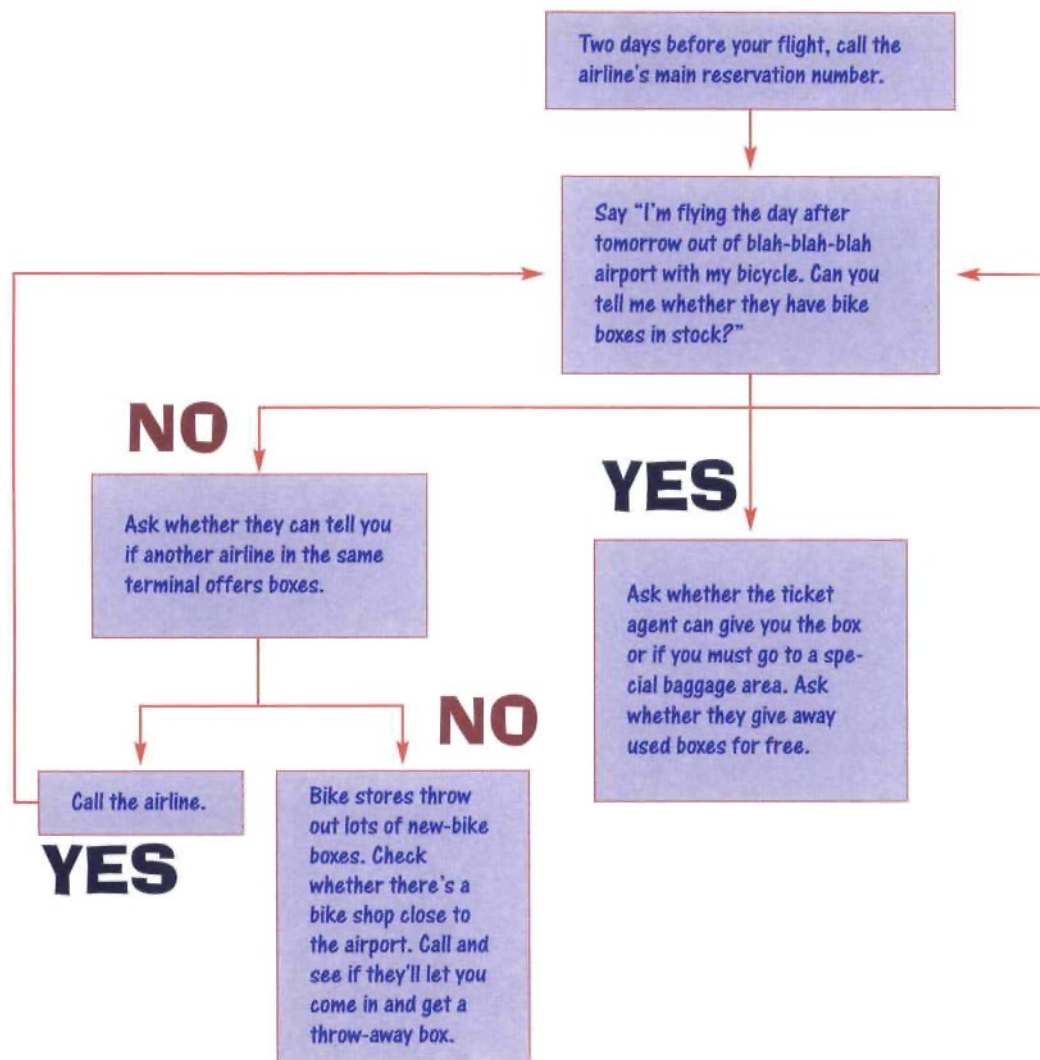
Bike in no container whatsoever	Bike shop-supplied cardboard bike box	Airline cardboard bike box	Plastic bag or case	Collapsible bike
Don't have to get anything	Get before you travel	Get when arrive at the airport	Get before you travel	Get before you travel
Costs nothing	Usually can get for free each time you travel	Costs \$5 to \$20 (US)	Costs \$75 to \$400 (US) one time	Costs \$400 to \$2400 (US) one time
Lets you bike to the airport	Can't bike to the airport	Lets you bike to the airport	Can't bike to the airport	Lets you bike to the airport
No packing needed	Can pack before you go to airport	Must pack at the airport, adding time and hassle	Can pack before you go to airport	Must pack at the airport, but takes less time than an airline box
Nothing to keep or throw away	Throw away at your destination	Throw away at your destination	Travels with you like luggage	Travels with you like luggage
Airlines charge between \$40 and \$60 (US) to transport a bike one way	Airlines charge between \$40 and \$60 (US) to transport a bike one way	Airlines charge between \$40 and \$60 (US) to transport a bike one way	If sum of 3 dimensions is less than a certain length (usu. 62"), there's no charge	If sum of 3 dimensions is less than a certain length (usu. 62"), there's no charge
Bike can get bent, scratched, and dented	If packed right, protects your bike well	If packed right, protects your bike well	Protects your bike well	Protects your bike well
Airline might require a container	Always allowed	Always allowed	Always allowed	Always allowed



Smart Idea

Sometimes you can avoid the airline's bike-luggage fee by taking your bike right to a skycap at curbside. When you ask the skycap to check your bike, hold out a ten-dollar bill. But don't give it to him unless he agrees to check your bike.

Getting an airline bike box

**Danger**

If you use the connecting-flight scam to get a cheap airfare, don't bring your bike on the plane. Why? With the scam, you'd book a flight to somewhere you don't want to go, making sure the flight connects through your desired destination. Then you'd simply get off at your destination. You wouldn't get on the connecting flight—but your bike would!



Smart Idea

Ship your bike to a friend or bike shop at your destination—lots cheaper than taking it with you on a plane. (E.g., approximate UPS charges to ship a bike: Chicago to L.A. \$45, Dallas to N.Y. \$40.)

They give you an airport phone number

Call and say "I'm flying the day after tomorrow out of your airport with my bicycle. Do you have bike boxes in stock?"

YES

Ask whether they give away used boxes for free.

YES/NO

Ask whether the ticket agent can give you the box or if you must go to a baggage office.

Baggage office

Ask what hours the office is open.

NO

Ask whether they can tell you if another airline in the same terminal offers boxes.

NO

Bike stores throw out lots of new-bike boxes. Check whether there's a bike shop close to the airport.

Call and see if they'll let you come in and get a throw-away box.

YES

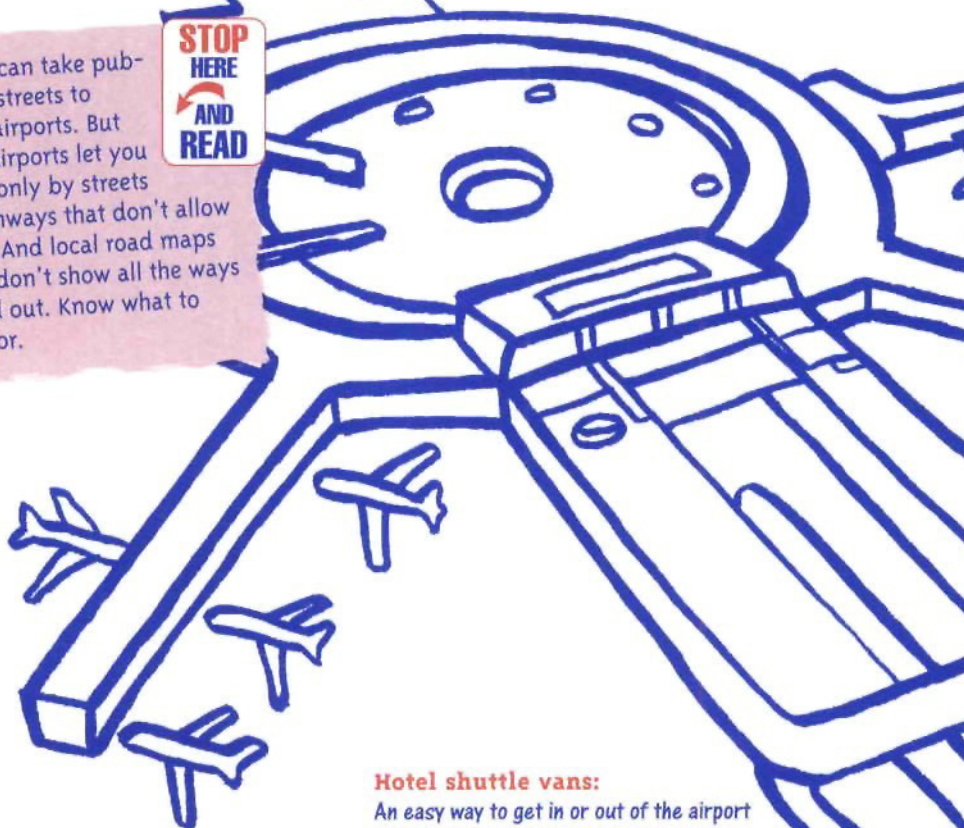
Call the airline.



Riding in and out of airports

You can take public streets to many airports. But some airports let you arrive only by streets or highways that don't allow bikes. And local road maps often don't show all the ways in and out. Know what to look for.

**STOP
HERE
AND
READ**



Hotel shuttle vans:

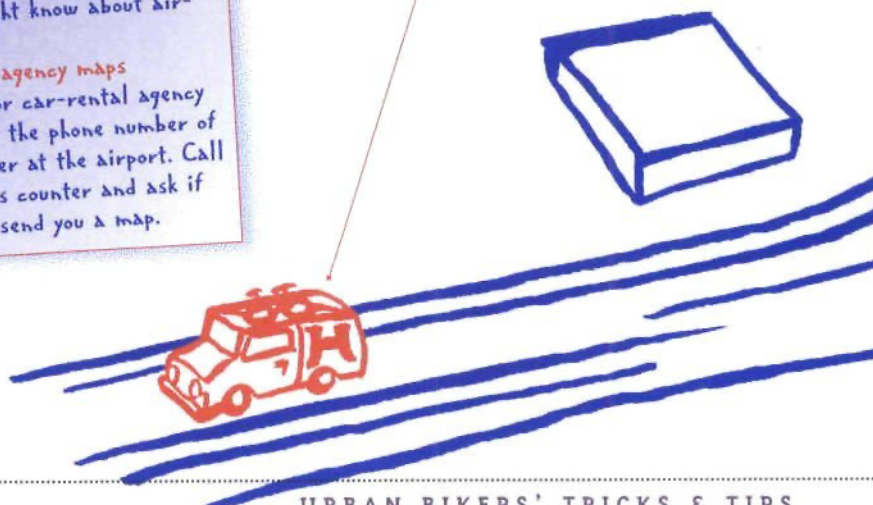
An easy way to get in or out of the airport with your bike. Leaving the airport, pretend you're going to the hotel. Going to the airport, go to the hotel and pretend you've just checked out. Either way, the shuttle driver won't try to check your story.



Smart Idea

Two good sources of directions:

- > **Local bike advocates**
See Appendix A for the local advocacy group. Call them and ask who might know about airport access.
- > **Car-rental agency maps**
Call a major car-rental agency and ask for the phone number of their counter at the airport. Call the agency's counter and ask if they could send you a map.





Service roads:

Often a fast and easy way into the airport for caterers, airport employees, and delivery people. Find 'em. Use 'em.

Limited-access expressways:

Avoid, unless you have to ride them for only a short stretch. Otherwise police will kick you off.

If police or security stop you, say:

- > Can you suggest another way?
- > I can't afford a taxi.
- > If I don't get going now, I'll miss my plane.



Packing your bike into a box

When you fly your bike, you can pack your box in one of two kinds of cardboard bike boxes: (1) an airline box, for which you pay your airline; and (2) a smaller manufacturer's box, used to ship new bikes to stores. This page tells you how to pack a top-loaded airline box. (Pack side-loaded boxes almost the same way.) To learn how to pack a manufacturer's box, talk to a bike store employee. (You can get manufacturer's boxes from bike stores for free, because they discard the boxes.)



WHAT YOU'LL NEED

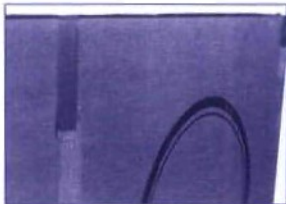
-  Knife, box cutter, or scissors
-  Duct or filament tape, or 3"-wide plastic tape
-  Adjustable wrench
-  Wrenches that can loosen your handlebars and seat
-  Writing marker

1 If the bike has a water bottle, empty it into a nearby plant, fountain, or curb.

2 Unfold the box and stand it upright. Fold the end flaps in, and then the side flaps.



3 Tape over the top of the box at each side and the middle.



4 Turn the box over so the open end is on top. Lean it against a wall.

5 Using the adjustable wrench, remove the bike's pedals. As you face the right pedal, unscrew the pedal shaft counter-clockwise. As you face the left pedal, unscrew the pedal shaft clockwise.



6 Attach the pedals to the seat stay by wrapping them firmly with tape.



7 If you want to put a bag or pannier in the box, put it in the middle of the bike's frame. Attach it by wrapping firmly with tape or bungee cords.





Airline box



Manufacturer's box

- 8** Remove the handlebars and lay them along the top tube.



- 9** Stand the box up next to the bike. Make sure the seat is low enough to fit into the box. If it isn't, lower or remove the seat. (If you remove it, tape it to the top tube.)



- 10** Attach a luggage tag (showing your name, address, and phone number) to the bike's frame and any bags going into the box.



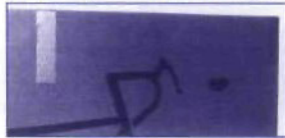
- 11** Stand the box next to a wall and pull back the flaps.

- 12** Put the bike in front of the box. If the bike has a kickstand, raise it.

- 13** Grab the bike with one hand at the bottom of the seat post tube, and the other hand at the wheel and down tube. Lift the bike and lower it slowly into the box. (Side-loaded boxes: roll the bike into the box.)



- 14** Fold the end flaps in, and then the side flaps. Tape the top of the box in the middle.



- 15** Stand the box up on one end. Tape completely around one side and the middle so the flaps stay shut. (Side-loaded boxes: Leave the box sitting on its bottom and tape the box side to side, not top to bottom.)



- 16** Stand the box up on the other end. Tape completely around the other side.

- 17** Stand the box on its bottom. Tape completely around the middle.



- 18** With the marker, write your name, address, and phone number on each of the two faces of the box.



Checking in at the airport

When you approach an airline ticket counter and say you have a bike, some airline ticket agents know just what to do. But others freak out. Here are some ideas about how to handle them.

**STOP
HERE
AND
READ**



Smart Idea

Before you get into a check-in line, put your bike where you can see it easily. One good place is right up against the ticket counter, at an unattended agent position.



How ticket agents might trip you up

Agent does this

Why it's a problem

Doesn't know how to charge you for a bike

Delays you

Doesn't know how to handle LAB bike-fee waiver

Delays you

Can't find a bike box

Delays you

Makes you get the bike box from the baggage office

Delays you

Won't let you leave the counter to pack your bike

You don't have enough room to pack the box

Makes you check your bike separately at a baggage office

Delays you

Doesn't quickly get a baggage handler to take your packed bike box

Your bike might not get on your plane

What to do

- > Arrive at the airport soon enough to allow for this.
- > Don't offer to tell how much they should charge you, because they might charge you less.
- > Arrive at the airport soon enough to allow for this.
- > Write the phone number of the League's travel agency on the waiver.

If you've already verified that the airline has boxes, say so. If they still don't find one, insist that they get one from another airline.

- > Arrive at the airport soon enough to allow for this.
- > When you go to the baggage office, take your bike.

Point to an area within view of the counter, and tell the agent you'll be in plain sight.

Learn whether the baggage office can also check you in and assign your seat.

Unless it will make you miss your flight, hang around the ticket counter until a baggage handler takes your bike. If no one takes it within ten minutes, talk to a ticket agent.



Smart Ideas

When you arrive at your destination:

- > Where do you get your bike? In most airports, bikes come out separate from other baggage. Ask an airline employee where.
- > To avoid having to get a new box on the return trip, ask whether the airline will save your box until you return to the airport. If they will, flatten the box and write your name on it.



Smart Idea

What if an airport employee won't let you bring your bike into a terminal or a ticket area, or tells you to move your bike while you're getting checked in? Don't flip out at them. Instead, you can help teach them that bicyclists have the same rights as any passenger with luggage: Gently but firmly say that an airline representative told you to be where you are. Tell them that your bike will be out of their way in just a few minutes.



BIKES IN CARS

WHAT YOU'LL NEED

- > Bungee cord
- > Medium or large sized rag

- 1** Open the car's trunk. Make sure you have at least one foot of space (from top to bottom) into which you can slide the bike.
- 2** Remove accessories such as bags and headlights from the bike.
- 3** Stand in front of the trunk with the bike on the opposite side of you. Have the bike's gears facing away from you.
- 4** Reach over the bike and with your right hand grab the bottom of the seat post tube. With your left hand grab the head tube.
- 5** Pick up the bike and slide it horizontally into the trunk. Leave the handlebars and front wheel outside the lip of the trunk. (To load another bike, slide it on top of the first bike, but slightly off to one side.)
- 6** Lower the trunk lid and see where on the bike's frame the lid hits the bicycle. Open the lid, then tie a rag around the frame where the lid will hit it (so nothing gets scratched).
- 7** Hook one end of a bungee cord into a hole on the underside of the trunk lid, and let the cord hang. (If you can't find a hole, hook the cord to the trunk lock.)
- 8** Lower the lid until it touches the bike's frame. (The handlebars and front wheel should stay outside of the trunk lid.) Then, holding the end of the bungee cord tightly, hook the bottom of the cord to the bottom of the car's bumper or to the underside of the car.

To carry a bike with a car, most people think you must attach a bike-carrying rack to the car. Wrong!

You can put almost any bike into just about any car without special equipment—just a bungee cord. And you can usually carry two bikes. This page shows how.

**STOP
HERE
AND
READ**



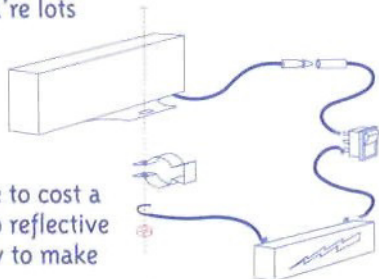
NIGHT & BAD WEATHER



Page 208

Afraid of the dark? You should be, if you bicycle at night without lighting up your body and your bike. Statistics say that cyclists with no lights or reflectors are the ones who get hit at night. So you're lots safer if you get bright. This chapter tells you how.

Getting bright doesn't have to cost a lot. What are the cheap alternatives to reflective suits and fancy headlights? Learn how to make your own in this chapter.



Page 212

The smart night-riding ideas don't stop with lights. Veteran night cyclists have a few tricks for how to ride. This chapter reveals them.



Page 213



Page 214

The more you ride, you might wonder why cold weather should stop you. After all, plenty of northerners bicycle in the fall and winter—and feel pretty warm when they do. What do they know about the right ways to dress? This chapter tells you.

Say you learn how to keep darkness and cold from thwarting your bike rides. Now what? Well, there are plenty of tricks that make it easy to bike in rain and snow. Some have to do with how you dress. Others involve little things you do to your bike. Still others concern how you ride. All are described in this chapter.



Page 218




Page 219

RIDING AT

Equipment

CHOOSING REFLECTIVE MATERIAL

When you buy a bike accessory that contains reflective material, what color material should you get? At night, reflective silver reflects several times brighter than either fluorescent orange, fluorescent yellow, or reflective white. But during the day, fluorescent pink, orange, or yellow makes you seen more easily. So if you can, get something colored bright pink, orange, or yellow with sections of reflective silver.

-  **reflective white**
standard brightness
-  **fluorescent orange**
(actual color not shown)
1.75 times standard brightness
-  **reflective silver**
5 times standard brightness

You can buy reflective material to put on your clothes by sewing, sticking, or ironing. Avoid the stick-on kind, because it often comes off after several washes. Get one of two kinds of reflective Scotchlite material: Reflective Transfer Film that you can press onto clothing with a clothes iron; or Reflective Fabric that you can sew on to light- or medium-weight fabrics and wash in warm water. To find the nearest Scotchlite distributor, call 3M (listed under "Lighting" in Appendix B).



Also, picture how you look at night to motorists behind you. Reflective stuff on your clothes and bike should make it obvious you're a bicyclist. Smart ideas:

- Put reflective material on the sides, top, bottom, and sleeves of your jacket to make a reflective outline of your upper body.
- When headlights shine on you, keep pedaling. Motorists will see the up-and-down motion of your pedal's reflectors.

Recommended Product

Reflective Yield Symbol

When headlights hit this reflective triangle, motorists can see it from 3,000 feet (915 meters). And it straps on over any clothes, so even a dark jacket has something bright. Have your bike dealer order from Jogonalite, listed under "Lighting" in Appendix B. (For more on Mr. Bike's Recommended Products, go to www.mrbike.com/products.)

Rear light

Red strobe lights are most popular. Not needed if you have a good rear reflector. If buying just one light, get a good headlight. Note that some places require a rear light at night.



Rear reflectors

Biggest are best. Get one at least three inches wide, and make sure it's pointed straight and not up or down. Many places require red, but amber is much brighter. Reflectors work only if they're clean, so remember to wipe them off! Required by law for night riding.

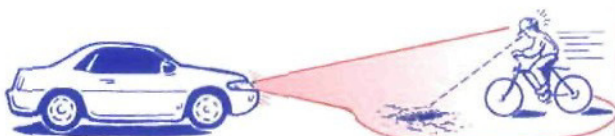


Smart Idea

If you put a rear carrying rack on your bike, move the back reflector to the end of the rack—so stuff you carry doesn't block it. If the reflector sticks up over the top of the rack, mount it with an extension.



NIGHT



**STOP
HERE
AND
READ**



Smart Idea

The streetlights in some towns don't light up the pavement very well. But the headlights of oncoming cars can help. If you wear a cap or helmet with a visor, you can keep headlights out of your eyes so you can use the headlights to see the road.

Reflective orange safety vest

Good for cycling in dark clothes. Don't wear dark clothes, unless you add some light-colored material.

Jacket

Bright color, reflective piping in back.

Reflective tape

Use white facing front and red facing back. These colors help motorists see what direction you're going in.

Spoke reflectors

Put one on each wheel and keep them clean.

Reflective ankle strap

Only three percent of bike rides take place at night—but over half of all cyclists killed get hit while riding at night without lights. Under bright street lights you need bike lights to be seen, not to see. But lights aren't enough. Because your upper body appears at eye level to most motorists, they'll see you easily if you wear bright stuff at night.

Clear glasses or goggles

Needed if airborne dirt bothers your eyes. Get wraparound glasses, so dirt can't enter from sides.

Headlight

Required by law for night riding in most of North America. Battery-powered halogen or strobe. Get the most powerful one you can afford. How to choose? See page 210. In a pinch, tie on a flashlight with rubber bands or a bungee cord. Generator lights can be bright, but many go dark when you stop.



Tips for buying headlights

At night, the law in much of North America requires a white front light visible from 500 feet (150 meters).

That's not much, considering you can see car headlights from 3,000 feet—and headlights are what most motorists look for. So it's smart to have a headlight almost as bright. This page tells you what to think about when choosing a headlight system.

**STOP
HERE
AND
READ**

How much do you want to spend?

How bright a light do you need?

How does the headlight mount?

Do you want to aim the headlight easily?

How long should the light last?

What does the charger cost?

Can you replace the battery?

Where does the battery go?

What temperatures will you ride in?

Do you like to build stuff?



If you can spend only \$30 (US) or less, get a headlight with white LED bulbs (the more bulbs, the better). They have the best brightness and battery use for the price.

- To be seen as well as a car under bright streetlights, use a halogen light with a bulb of 50 watts or more.
- To be seen well in a dim setting, use a halogen light with a bulb of 20 watts or more.
- To simply light your route, use a halogen light with a bulb of 10 watts or more.

- A handlebar-mounted light should come with the needed mounting hardware.
- Your handlebars should have room for the light. (If not, see the accessory bar shown on page 15.)
- If you leave your bike unattended, the light should be easy for you (or hard for a thief) to remove.

If you want a light you can quickly point in any direction—such as in a motorist's face—check out helmet-mounted lamps. Some come with hardware that lets them mount to almost any helmet.

For how many hours do you need the light to work in a single day? The light's batteries should power the light at full strength for that period without recharging. (Unless, e.g., you bike to work in morning darkness, from work in evening darkness, and you can charge the batteries in between.) And if your night ride takes you away from streets and motorists: Look for headlights with both a high and low beam. (Away from traffic, use the low beam to make your battery last longer.)

Some headlights come with their own chargers. If you consider one that doesn't, learn what kind of charger you need and its cost. And if you have other battery-operated devices, consider running them with rechargeable batteries—making a new charger more cost-effective.

Avoid headlights having their batteries sealed inside. If a battery goes bad, you must replace the whole unit.

The batteries for some headlights go into a unit separate from the light itself. You should have a place (e.g., handlebar bag, carrying rack) to put them.

If you'll use the headlight at very cold temperatures, the light's battery should work in such cold. If it doesn't, learn whether a different type of battery will work.

If so, consider making your own headlight system—many people do. See page 212 for more info.

GENERATOR-POWERED LIGHT

WHY & WHY NOT

- 👍 No batteries
- 👍 Leave it on the bike
- 👍 Weighs less than batteries
- 👍 Newest models mount in wheel hub or bottom bracket (where pedals go around), not by tire. Have your dealer order from distributors listed under "Lighting" in Appendix B.
- 👎 Light stops when you do
- 👎 Slows you down somewhat



New Words

Halogen

The filament in an old-style bulb burns off a little of its tungsten coating with each use. A halogen bulb contains a special gas that makes the tungsten last longer. This also makes the light brighter than incandescent, non-halogen bulbs.

LED

Light Emitting Diode: A type of bulb that can conserve battery power longer than an incandescent bulb will. When batteries run low LEDs can stay brighter longer.



A homemade headlight system

Headlight

55 watt halogen driving light

\$15 US (for a pair)

From automotive stores

Hardware

1/2" conduit hanger

\$2 US

From hardware stores



Smart Idea

Learn exactly how long your battery will power your lamp at full strength, so you don't get caught in the dark without a light. And to make batteries last longer, don't run them all the way down before recharging.

There are lots of different ways to build your own headlight system. But each has only five main pieces: bulb, battery, wire, switch, and charger. The biggest choices involve the brightness of the bulb and the size of the battery. This page shows an example of a homemade headlight system that's cheaper yet brighter than most systems made for bikes. It also shows some of the options you have for each piece.

**STOP
HERE
AND
READ**

Wires

6 ft., 14 gauge, stranded copper wire

.10/foot US

From hardware and electronics stores

Connector

Bullet receptacle

.10 US

From electronics and automotive stores

Switch

10-amp, single-pole/single-throw rocker

\$4 US

From electronics and hardware stores or (for waterproof switches) boat stores

Battery

12-volt, sealed lead-acid,

7 amp-hours

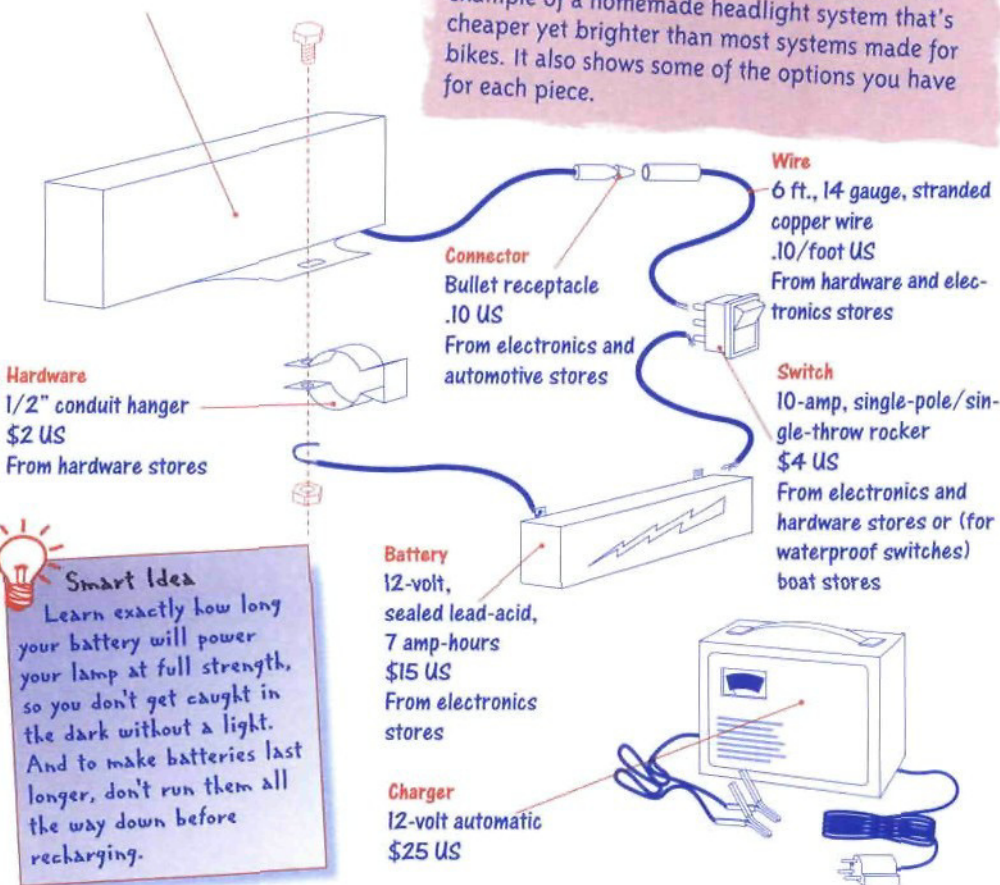
\$15 US

From electronics stores

Charger

12-volt automatic

\$25 US



Bulb options

- > 6- or 12-volt: More wattages available at 12.
- > Halogen or non-halogen gas enclosure: Halogen brighter, lasts longer.
- > LED: Compared to regular (incandescent) bulbs, runs longer on low batteries.
- > 2 to 100 watts: Higher is brighter, but also hotter.


Rechargeable battery options

- > 6- or 12-volt: Depends on bulb.
- > Amp-hours: Battery charge = life amp-hours / [bulb wattage/volts]
- > Lead-acid, NiCad, NiMH, or alkaline: Most 6- and 12-volt batteries are lead-acid. Lead-acid holds a charge longer but gradually fades; NiCads and NiMHs stay at almost maximum power till they quit. But when not in use NiMHs lose their charge more quickly than NiCads.


Charger options

- > Lead-acid, NiCad, NiMH, or alkaline: Depends on battery.
- > Manual or automatic: Automatic quits after battery is charged; manual can overcharge (and destroy) batteries.

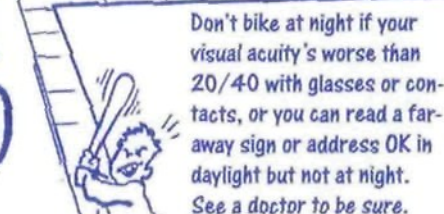
On-street tips



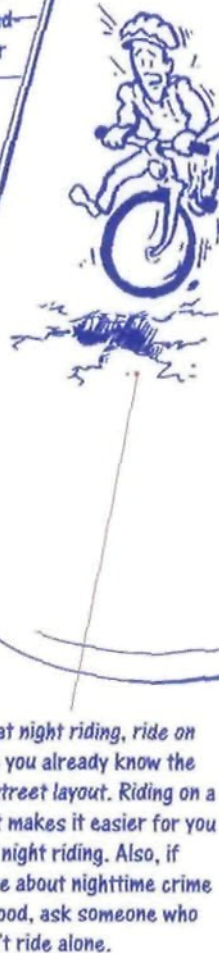
Sometimes your headlights are not strong enough to make a motorist notice you. If you're stopped at an intersection in such a situation, signal the motorist by twitching your handlebars back and forth.



Until you're even with them, motorists coming from your sides often can't see your headlight. And their headlights won't hit your front or side reflectors. So assume they can't see you, and get ready to get out of their way.



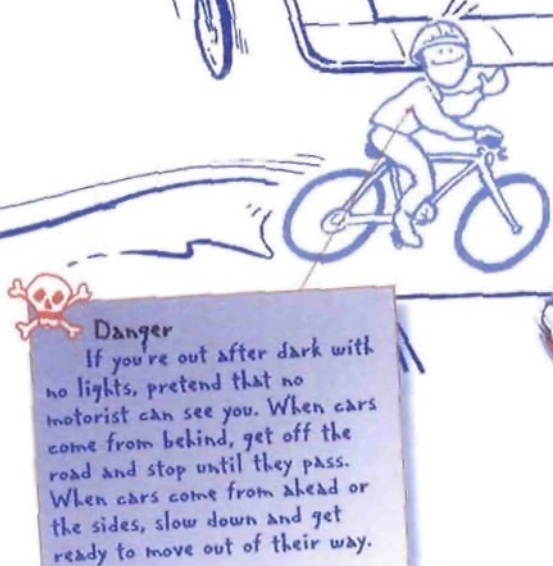
Don't bike at night if your visual acuity's worse than 20/40 with glasses or contacts, or you can read a far-away sign or address OK in daylight but not at night. See a doctor to be sure.



If you're new at night riding, ride on streets where you already know the potholes and street layout. Riding on a familiar street makes it easier for you to learn about night riding. Also, if you're not sure about nighttime crime in a neighborhood, ask someone who knows, or don't ride alone.



Danger



If you're out after dark with no lights, pretend that no motorist can see you. When cars come from behind, get off the road and stop until they pass. When cars come from ahead or the sides, slow down and get ready to move out of their way.

RAIN, COLD &

Dressing for cold

INNER LAYER

The layer closest to your skin should be a non-absorbing material that'll let sweat evaporate as you ride. Use underwear made of a synthetic, wicking fabric such as polyester or polypropylene—not cotton. For more info on wicking fabrics, see page 215.



Long underwear

Metal conducts cold. In freezing cold, remove or cover metal body-pierced rings.

Cover cracked skin with petroleum jelly.

Nylon knee socks

MIDDLE LAYER



Headband
Other options:
Knit cap

Thick headband
Other options:
Scarf
Turtleneck
Neck gaiter
Zippers (to vent body heat)

Sweater
Other options:
Long-sleeved shirt

Cotton, wool, or synthetic glove liners
Other options:
Outer shells of layered ski gloves

Crotch
To avoid unusual frostbite, wear a wind brief. Avoid porous sweat pants.

Tights
Other options:
Light pants

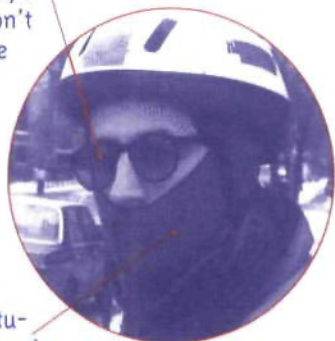
Wool or cotton socks

If you sweat a lot, wear wool or synthetic, wicking fabrics for your middle layers. Cotton will trap the sweat.

**STOP
HERE
AND
READ**

Cold weather cycling is a lot like snow skiing: You don't need a whole new set of clothes to bike in the cold. Instead, start with a sweat-shirt or jacket. In colder weather, add t-shirts, light sweaters, long underwear, and tights in layers. By wearing light layers you can remove outer clothes if you warm up while cycling. And when it's very cold, many cyclists don't need much insulation on their torsos and legs where heat builds up. But they do need extra insulation on their ears, hands, and feet, where blood circulates less.

You can fog-proof your glasses using juice from a raw potato. On each side of each lens, rub with a piece of the inside of a potato. Dry (but don't rub) with a lint-free cloth or paper towel.



If you have trouble breathing in freezing-cold or salt-saturated air, wrap a couple layers of scarves or bandannas around your mouth and nose.

SNOW

OUTER LAYER

Ski mask

Other options:
Balaclava

Earmuffs

Windbreaker

**Insulated
mittens**

Other
options:
Gardening
gloves
Fishing
gloves
Thickly-lined
hunters'
gloves



Ski goggles

Goggles that seal tightly against your skin are less likely to let your breath in and fog up. Also, don't use goggles that block your peripheral vision.

In freezing cold, having a **thin inner glove** helps when you have to use your fingers for things like locking. You can remove the outer glove.

Jeans

Wear black denim to hide road grime. Other options:
Nylon overpants

Shoes

Other options:
Boots
Rubber overshoes

Overlap clothes at the neck, wrists, waist, and ankles to seal out wind.



Smart Idea

In cold weather, you might feel uncomfortably warm after riding for five to ten minutes. What if you don't want to stop and take off some clothing layers? Learn the minimum amount of clothes you need to feel comfortable after you've warmed up—then start out wearing only those clothes. You'll feel cold when you start, but you won't have to stop later.

FABRICS THAT WICK MOISTURE

Even in cold weather, you sweat when you bicycle. If sweat doesn't evaporate, it can build up inside your clothes and make you feel colder. You need two things to keep sweat from building up:

- Inner layers of clothes that wick sweat away from skin
- Outer layers that "breathe" or let moisture pass through to the outside air

How does a fabric wick sweat? It pulls sweat from inside the fabric and pushes the sweat outside. There, the moisture can evaporate in the air.

Synthetic, wicking materials go by many names. Here are some of them:

Acclimate
Activent
Bergeline
Capaline
Comfortrel
Coolmax
DriFit
Drylete
Filament polyester
Hydrofil
Innova
Power Dry
Sportwool
Spun polyester
Thermastat
Thermax
Thermolite
Wicklite

For suppliers of wet-weather clothing, see "Rain gear" in Appendix B.

Dressing for rain



New Words

Waterproof & Water-resistant

Rubber- or plastic-coated fabric is often waterproof: it doesn't let water in. But it doesn't let sweat out, which makes you clammy. Other fabrics are only water-resistant (or repellent): they stop wind, snow, and light rain, but will still get soaked in a downpour. Yet water-resistant fabrics are usually lighter, and dry out fast. Want to spend more? Get outerwear from materials that resist rain but let sweat out, such as Gore-Tex and Helly-Tech.

**STOP
HERE
AND
READ**

For rain, you have options.

In hot weather: Don't dress for rain, just get wet. Carry dry clothes and a towel in a plastic bag.

For moderate temperature & short trips: Wear a poncho and gaiters, which get you a little wet but cut down sweat.

In cold weather: Wear a rain suit that keeps out all rain but makes you warm and maybe sweaty.

Before you put on your helmet, move the sides of the hood back so they don't block your peripheral vision.

Poncho

A waterproof poncho keeps rain off of your body, and lets air evaporate sweat from below. Sit on the back end so it doesn't fly around. Stick the front part under each hand.

Fog

Heavy fog gets you as wet as rain—so dress for it. If fog tends to show up unexpectedly where you ride, carry rain clothes.

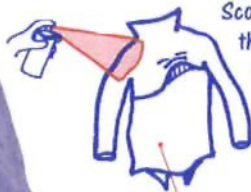
Footwear

For extreme wet or snow, use rubber or waterproof overshoes such as those made by NEOS (listed under "Rain Gear" in Appendix B). To make shoes waterproof, use a sealer such as fabric cement, Aquaseal, Nikwax, Shoo Goo, Sno-Seal, or Welt Seal.



A plastic bag over each of your socks will keep your feet dry, and in cold weather keep them warm.

Make your jacket, pants, and shoes water-resistant with a spray, such as Scotchgard, that's made for this.



Jacket

Should have vents that let sweat evaporate. A hoodless jacket should have a high collar so water doesn't go down your neck.

Cyclist's rain cape

Similar to a poncho. But it has cords that loop around your thumbs and thighs to keep it in place. Order from Campmor (listed under "Rain gear" in Appendix B).

Pants

Black jeans or pants still look OK when wet or dirty.

Waterproof Rain Suit

Keeps rain out completely.



Equipping your bike

Brakes

Grime builds up on brake pads, making them squeak or scratch your rims. Run a rag between each pad and the rim, like shining a shoe. Occasionally remove the wheel and check the pads for wear.

Grease

To keep water from rusting cables: Before you ride in rain or snow, cover the top end of each cable housing with a big glob of heavy-duty grease.



Salt damage

With lots of winter riding, occasionally wipe your frame, rims, spokes, and derailleurs, and lube your chain (see page 32). Use a toothbrush for hard-to-reach parts.

Seat cover

Stuff a plastic grocery bag under your seat. When you park your bike outside in the rain or snow, put the bag over your seat. Later, you won't have to sit on a wet seat.



Rims

When wet, brakes grip aluminum rims better than they do steel.

Bearings

After biking in wet weather, put your bike indoors so bearings can dry.

Tires

- If you ride a lot on wet pavement with slippery surfaces, use a deep-tread tire.
- If you ride a lot on ice, use a studded tire. Have your bike dealer order from All Weather Sports (listed under "Tires" in Appendix B).
- Another option: Use your current tires and follow the riding tips on page 219. (For a guide to tire treads, see page 23.)

Chain cover

Nylon shield protects your pants legs when riding. Also protects upper-body clothes when you lift or carry your bike. Helps keep dirt and salt off of your chain. Order from Sidetrak (listed under "Rain gear" in Appendix B).

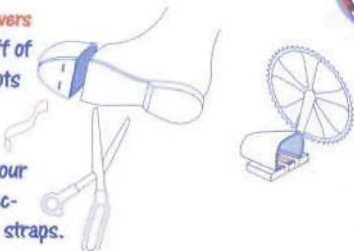


Carrying dry clothes

To keep clothes dry in panniers, backpack, or other carrying bags, coat the bags with a water-repelling spray. Or before you put your clothes inside the carrying bag, pack them in a plastic bag.

Protective foot covers

Cut the fronts off of an old pair of boots and cut slits in the bottoms. Attach them to your pedals with reflective Velcro ankle straps.



Riding in snow

Too fast on hard pack

When riding too fast on hard-packed snow or ice, don't apply your front brake—you might skid out. Instead, turn into softer snow (that you might find on either side of a tire rut) to slow down.

Snow-narrowed street

With piles of snow on the right, ride in the middle of the right lane. If in light traffic motorists give you the horn, shake your head firmly and keep going. In heavy traffic, pull over and let cars pass.

Snow excuse

Snow's not an excuse to stay off your bike. Within a day of a major snowfall, snow crews usually clear most major streets. Walk your bike to one and get going.

Circulation

In extreme cold, wiggle your fingers often to keep blood circulating. If your toes freeze, get off your bike and run with it.

Hidden ice

Loose snow can hide ice on the pavement, so don't ride on it.

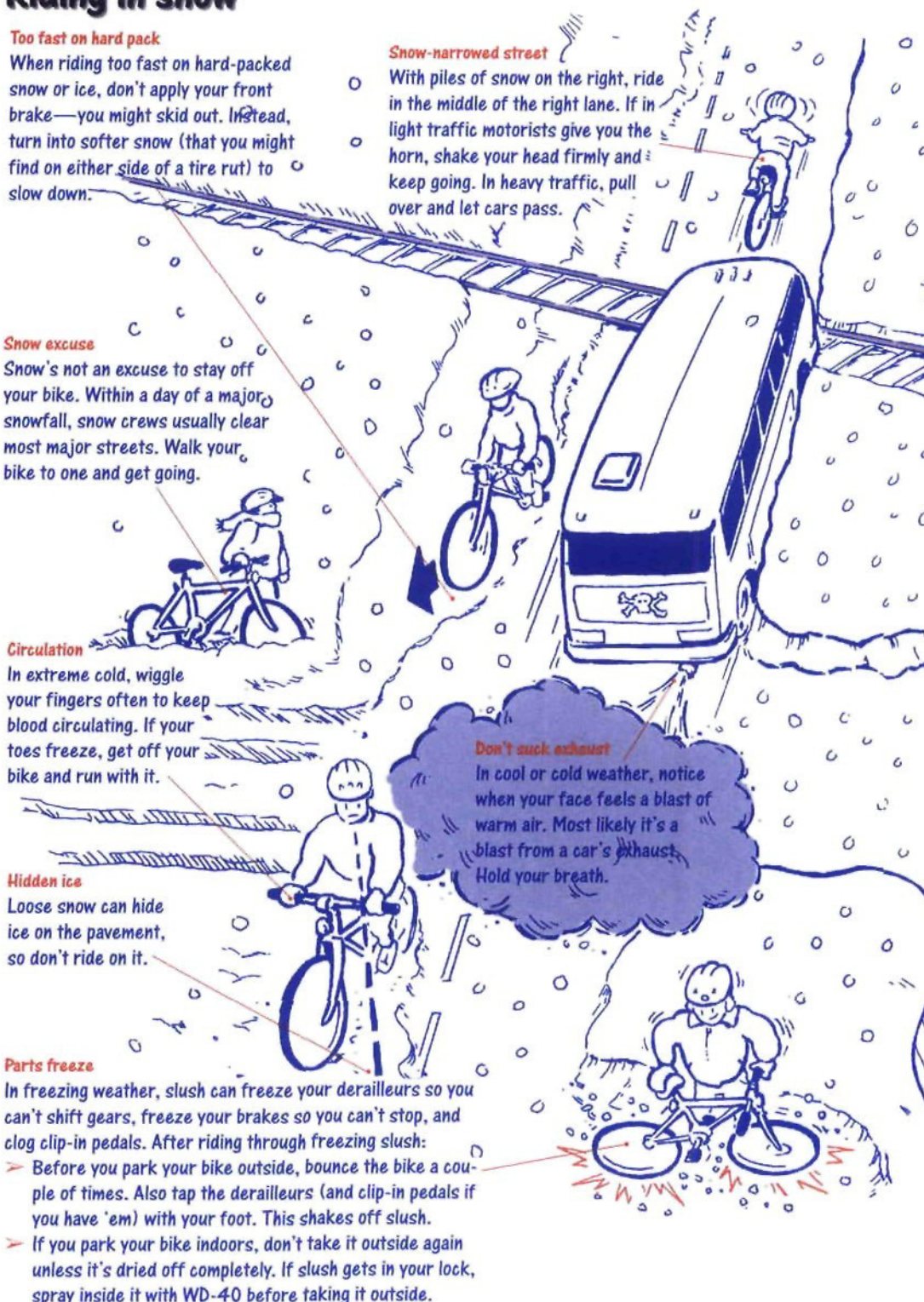
Parts freeze

In freezing weather, slush can freeze your derailleurs so you can't shift gears, freeze your brakes so you can't stop, and clog clip-in pedals.

- After riding through freezing slush:
- > Before you park your bike outside, bounce the bike a couple of times. Also tap the derailleurs (and clip-in pedals if you have 'em) with your foot. This shakes off slush.
 - > If you park your bike indoors, don't take it outside again unless it's dried off completely. If slush gets in your lock, spray inside it with WD-40 before taking it outside.

Don't suck exhaust

In cool or cold weather, notice when your face feels a blast of warm air. Most likely it's a blast from a car's exhaust. Hold your breath.



Riding in rain

Escape to transit

If your town allows bikes on buses or subways, bike on days when you normally wouldn't because rain threatens—then take transit if it does.

Bridges

When wet, bridges with metal-grated decks can you make wipe out if you have thin tires. Take the sidewalk or put both feet on the ground and push yourself across.

Slippery when wet

When it's wet outside, don't turn or brake suddenly on surfaces that get very slippery:

- Metal bridge grates
- Lane stripes
- Sewer and manhole covers
- Railroad tracks
- Leaves

Braking

When brake pads are wet, they take lots longer to work. Dry them by applying your brakes far ahead of where you want to slow down, causing your pads to wipe the rims. To dry them faster, pump the brakes by applying them, then letting go, over and over.



Can't brake

When you can't brake on a slick surface, put one pedal down (in the 6 o'clock position). Put the other foot on the ground, heel first, in front of the pedal and let your foot skid.

Riding over slick surfaces

Put your pedals at the 3 and 9 o'clock positions, and go loose at your elbows and knees. Ride straight until you get past the slippery area.

Start of rain

Don't race to beat the rain when it starts. That's when the streets are the most slick, because oil and anti-freeze on the road spread before they wash away. The same thing happens in heavy fog. In these conditions, make turns more slowly so you don't wipe out.

Puddles

Don't ride through a puddle if you can't see the bottom. It could be a deep pothole that can make you crash or bend a rim.



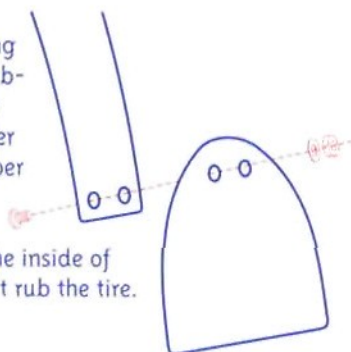
Fender options

Fenders help keep you dry and clean. Why? In wet weather your front tire sprays dirty water on your feet and legs, and your rear tire sprays your back. The more of your tire a fender covers, the less spray you'll get on your body. Here are some options.

**STOP
HERE
AND
READ**

CHEAP

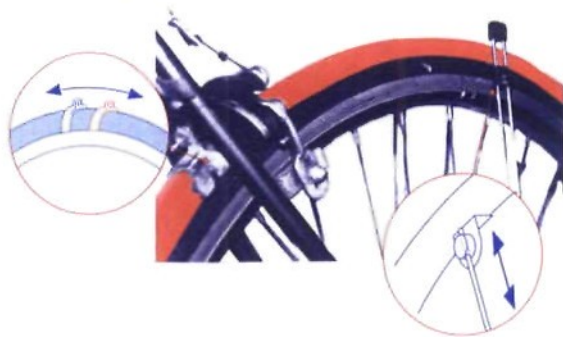
Make a rear fender longer by cutting a triangular piece of rubber. Drill holes through the bottom of the fender and the top of the rubber piece. Bolt the rubber piece on. Put the heads of the bolts on the inside of the fender so they don't rub the tire.



GOOD

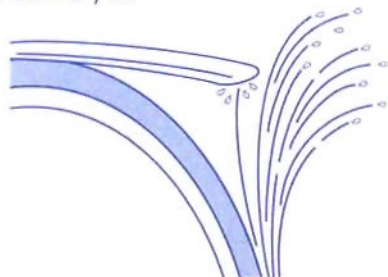
If you buy fenders:

- Look for thick struts that won't bend.
- Fenders that hug the tires should be adjustable, in case they start to rub.
- If you use your bike year-round or carry it often in a vehicle, get easy-to-remove fenders.



RUDE

Short horizontal fenders can be very convenient: You can mount them easily and many are made to snap right off. They keep most of the spray off your back, but soak anybody who rides behind you.

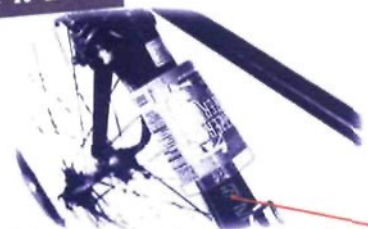


CHEAP



Cover a long strip of cardboard or wood with a plastic bag or plastic wrap. Bungee it to your rear carrying rack to keep your rear tire from spraying your back.

CHEAP



Cut a two-liter plastic bottle in half lengthwise and cut a pair of slits near both the top and bottom. Mount the plastic on the back of the **down tube** with the bottle's inside facing front. Tie it to the down tube by running tape, twist ties, or zip ties through the slits. Make sure it doesn't interfere with the derailleur cables.

AVOIDING HAT HEAD & SWEAT

Does bicycling (or wearing a helmet) mess up your hair? Lots of people have the same problem. Folks with all kinds of hair—long, curly, 'fro, stringy—have secrets about how to avoid helmet head, sweat head, or fly-away hair. This chapter reveals these secrets.



Page 222



Page 225

Maybe you've got other reasons for avoiding helmets. Like, you don't know death and injury statistics. Well, they're in this chapter. But, more important, it's easy to pay way too much for a helmet. Or get one that fits badly. You can avoid bad fit and high cost if you read this chapter.

Enough about heads. What about the rest of your body? Maybe you've noticed people who bike to work all summer long. Many wear suits at their jobs. So they've got lots of tips on how to control sweat—few of which mean sweating less. Most of their tips involve changing clothes or toweling off. Find all of them in this chapter.

Page 228



By the way, women have a few extra ideas about how to dress for biking to work. Some have figured out how to wear skirts of every length. And what to do about some of the more gender-specific problems of hot-weather riding. This chapter tells all.



Page 232

HAIR

Dealing with helmets and wind

PROBLEM

Helmet crushes your hair.



SOLUTION 1

Wear a headband, bandanna, or scarf under your helmet.

SOLUTION 2

Get your hair permed. After removing your helmet, lightly fluff your hair with your fingertips.

How to turn a kerchief into a hair bandanna



Problem:

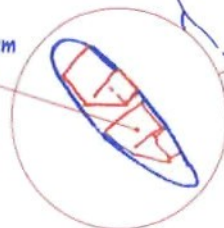
Your ponytail doesn't fit well under your helmet.



Solution: Get a helmet with a ponytail opening. Brands with such openings include Giro and GT. Have your bike dealer order from a distributor listed under "Helmets" in Appendix B.

Solution: Buy a helmet cover, and wear plastic wrap or a plastic bag underneath it.

Aluminum or duct tape



Solution: Make vent louvers that block light but let air in. Or apply sun block to your head.

Some people use their hair as an excuse: an excuse not to wear a helmet, or even an excuse not to ride their bike. If you're worried about bike hair or helmet head, check out these tips.

**STOP
HERE
AND
READ**

Problem: Long hair gets whipped around by the wind.

Solution: Wear a bandanna, headband, or scarf.

Problem: Rain gets through your helmet vents and soaks your hair.

Problem: You're bald, and you get tan stripes from your helmet vents.

Fixing your hair after a bike commute

Problem	Tactic
In humid weather, hair gets wild or frizzy	Before you ride, wash your hair with a shampoo made to remove oil from the scalp. Avoid tar-based shampoos, which can make your hair oilier. (See Smart Idea.)
Hair gets wet from sweat	Shampoo before you ride. At your destination, have a blow dryer and comb or brush handy.
Straight hair goes limp, curly hair gets frizzy	A heated styling comb can put a curl into the end of your straight hair, or straighten out wild hair. Apply hair spray before your ride. At your destination, fluff your hair with your fingertips. If needed, apply more spray.
In dry weather, hair curls up	Use a hair conditioner before cycling.
In hot weather, hair gets smelly	Apply perfumed oils to the foam pads on the inside of your helmet.
In hot weather, head gets too hot	Water squirted onto your hair will cool your head. If you wear a helmet, squirt into the vents.

Before I leave the house, I shower and dry my hair. When I get to work, my hair is soaked with sweat. But I keep hair-care stuff in my desk. I just blow-dry my hair and I look like a completely different person!



Carole Weiss
bicycles to work in Simi Valley CA



Smart Idea

Use a shampoo containing salicylic acid. Salicylic acid strips oil from the scalp, leaving your hair and scalp dry. When bicycling makes you sweat, the excess oil won't mess up your hair.

THREE BASIC HAIR STYLES

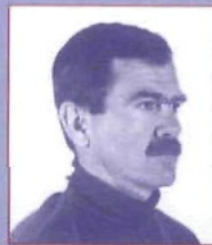
PONYTAIL

If you have long hair, a ponytail keeps your hair from getting whipped by the wind. In hot weather, a ponytail keeps your hair off your neck for coolness.



SHORT HAIR

A close cut stops wind, sweat, and helmets from messing up your hair.



CUSTOM CUT

Put on your helmet or your usual cycling headwear, and take a long bike ride. Then bike to your hair



stylist. Show them how your hair looks after cycling. Tell them to give you a haircut that will make your hair look good for biking.



HELMETS

Helmet features

Hard shell

Most helmets have a thin plastic surface. Avoid dark colors and flat finishes that make you less visible. Also avoid raised lumps or fasteners that might snag on something and cause you to break your neck.

Vents

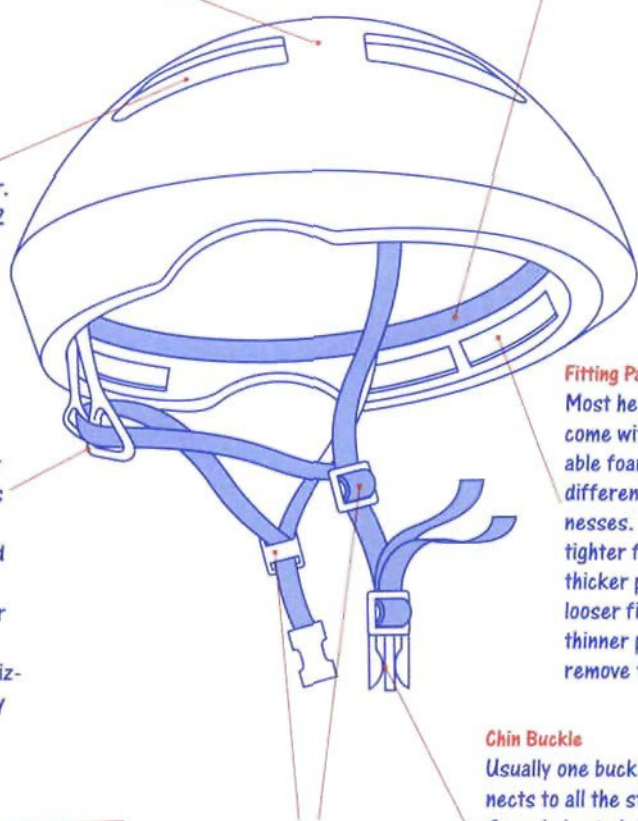
The more vent space a helmet has, the cooler your head will stay in hot weather. If you're bald, see page 222 to learn how to avoid weird tan lines.

Rear stabilizer

Presses on the back of your head. Helps keep the helmet from moving when it crashes—an important feature, because in a crash your head might bounce. If you wear a ponytail, get a rear stabilizer that has a ponytail opening (see page 222). Rear stabilizers are not available on many helmets.

Inside straps

Not available on most helmets. Can give you a much tighter fit than standard straps. Not good if you end up with space between your head and the inside of your helmet.



Fitting Pads

Most helmets come with removable foam pads of different thicknesses. To get a tighter fit, insert thicker pads. For a looser fit, use thinner pads or remove the pads.

Chin Buckle

Usually one buckle connects to all the straps. Some helmets have a thin rubber ring that keeps the strap from slipping. If your helmet doesn't have one, put a small rubber band on the strap. **Best fit:** You have the buckle tight enough so when you open your mouth wide, you feel the helmet press down on your head.

Strap junctions

Should be adjustable so you can loosen or tighten the helmet after a haircut or when you wear stuff over your ears. **Best fit:** Adjust the junctions so that the straps come to a "V" directly under your ear.



Smart Idea

If you ride at night, put reflective tape (see page 209) or a reflective elastic band on your helmet. Remember that your head's the highest part of your body: If your helmet reflects headlights, motorists will see you better.

Every year in the U.S., almost a thousand cyclists die or suffer brain damage from head injuries. Most of these injuries can be prevented by wearing helmets. What's most important in a helmet? Two things: a good fit and the right safety certification.

HOW HELMETS WORK

When you crash, an abrupt stop can crack your skull and bruise your brain. That won't usually happen when you wear a helmet, because helmets make your head stop more gradually. A helmet "absorbs" the energy of the crash.

WHEN TO REPLACE A HELMET

Replace your helmet if you ever crash it. Even if it looks OK, its innards will be so screwed up that it won't protect you again. Otherwise, there isn't much evidence that a five- or ten-year-old helmet won't still protect you—even though some manufacturers say helmets "degrade" after only a few years. So if you haven't crashed a helmet, good reasons to replace it are to:

- Get a better fit because of new fastening systems.
- Get more protection because of new technology or revised standards.

For the latest helmet developments, contact the Bicycle Helmet Safety Institute (listed under "National advocacy groups" in Appendix A).



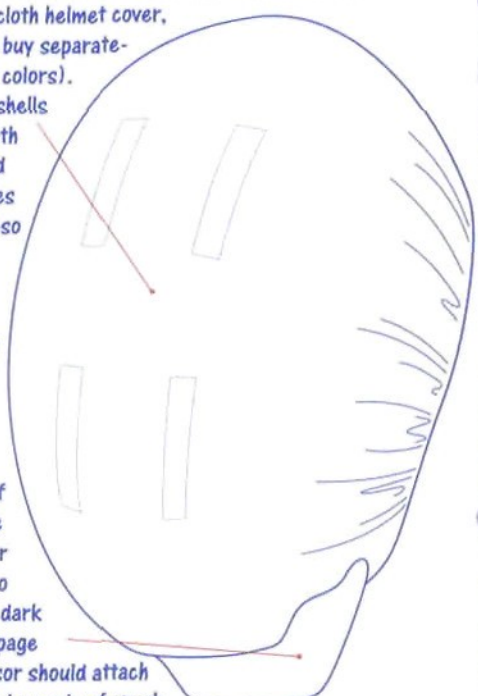
Soft shell

How a hard-shell helmet looks without the shell. Often comes with a cloth helmet cover, which you can buy separately (avoid dark colors).

Danger: Soft shells are less smooth than hard, and easily get holes and bumps—so if one slides during a fall, your head could snag on something.

Visor

Only needed if you often ride into sunrise or sunset, or into headlights on dark streets (see page 209). The visor should attach with Velcro or be made of crushable foam—so when the helmet crashes, it releases or crumples. Otherwise, it could get snagged on something and cause you to break your neck.



Smart Idea

Instead of paying extra for a visored helmet, wear a baseball cap or cheap sun visor under your helmet. Or make one yourself with a piece of rigid plastic and stick-on Velcro strips.

Aerodynamic design

The rounder and smoother a helmet is, the more it'll protect you. But it won't help you go faster—no matter how aerodynamic it looks—unless you're moving at warp speed.



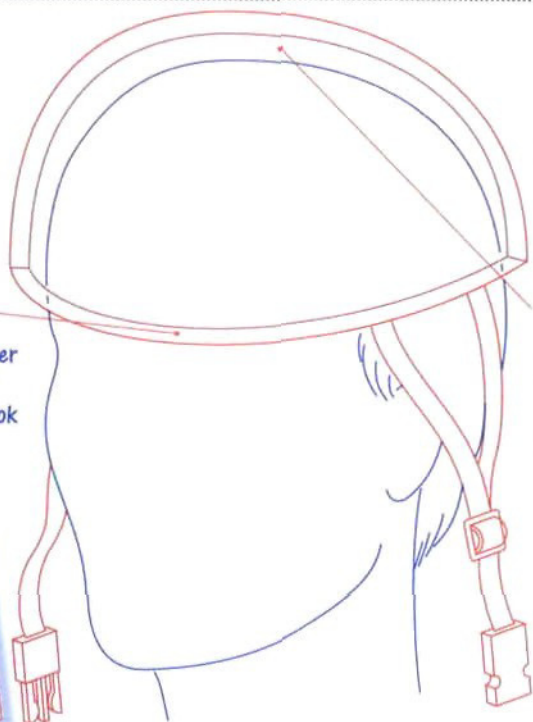
Fit

Sizes

Some manufacturers make only two adult sizes. And some cheaper helmets come only in a single adult size. If you choose a brand that offers more sizes, chances are better you'll get a good fit. And if your head is larger than most, look for an XL size. (You can also find XXLs if you look around.)

Space

You should have as little space as possible between your head and the inside of the helmet—so that when you crash, your skull doesn't bang up against the helmet.

**Danger**

If your helmet doesn't fit right, it won't stay in one place when it crashes—so it might not protect your head.

How to test the fit

- 1 Sit the helmet level on your head.
- 2 Fasten the buckle and adjust the strap junctions. Make all the straps as snug as possible without making yourself uncomfortable.
- 3 Make sure you can't easily push the helmet forward, back, or to the sides. If you can push it easily, make adjustments.
- 4 Adjustments: Move the strap junctions or add thicker foam pads to the inside. If the helmet is still too loose, try a different helmet.

**YES****NO****Danger**

Don't wear your helmet tilted back. It won't protect your skull if you crash on your forehead.

Cost

- You can get a good helmet for \$20, even less if you look around.
- More costly helmets usually aren't much safer. But they have better ventilation, weigh less, and look sharp.
- Cheaper helmets usually aren't much heavier than expensive ones. Most cyclists notice no difference. If you think you need an ultra-light helmet, test-ride a regular one to make sure.
- You can pay lots for style. But even a low-cost helmet can look cool if you decorate it.
- Get a helmet with a replacement discount: If you crash the helmet, its manufacturer replaces it with 50 percent (or more) off the price.

Kids' helmets

Fit your kids' helmets the same way that you fit your own. And how do you make sure your kids wear their helmets? Set an example: Always wear yours!



CERTIFICATION

Look at the inside of a helmet, or the box it comes in, for safety certification. *Don't* buy a helmet unless it has one of these certifications.

THIS HELMET COMPLIES WITH U.S. CPSC SAFETY STANDARD FOR BICYCLE HELMETS FOR PERSONS AGE 5 AND OLDER.

US Consumer Product Safety Commission



Snell B-90A



ASTM F1447

(actual size & shape may vary)



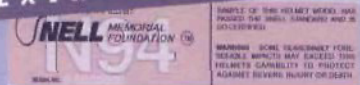
CSA D113.2

EXTRA PROTECTION



Snell B-95A

EXTRA PROTECTION



Snell N-94

(actual color: yellow)

DON'T GET THIS



ANSI Z90.4 1984
(out of date)



HANDLING

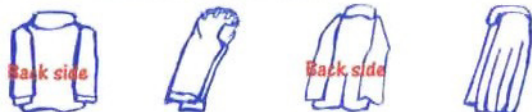


How to pack wrinkle-free

Rolling



Fold where creases are least noticeable



Roll from top to bottom



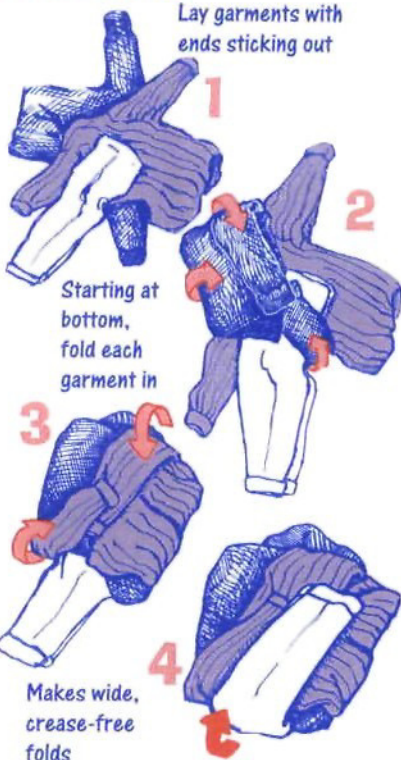
Put belts & ties in shoes to save space



Pack shoes with bottoms together

Loose folding

Lay garments with ends sticking out



Starting at bottom, fold each garment in

Makes wide, crease-free folds

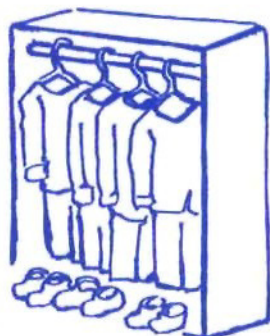


Smart Idea

If you take your clothes to work each day, keep spare clothes (especially socks, underwear, and shoes) at work—in case, one day, you forget to bring them.

Clothes at work

- On the weekend or start of the week, take five days' worth of clothes to work.
- At week's end, take your clothes to the cleaners.
- Pick up your cleaning from work and leave it at work.



CLOTHES & SWEAT



Dressing for the ride

In warm weather:

- Wear loose t-shirts, tank-tops, and shorts for good ventilation.
- If sweat gets in your eyes or face, wear a headband.



In cold weather, wear loose cycling clothes, your work clothes, and wind-breaker in layers (see page 214) that you can remove in layers as you heat up.

Bags for carrying clothes

SIMPLE BACKPACK

WHY & WHY NOT

- 👍 Low cost
- 👍 Can bungee to your bike's rear rack
- 👎 Makes your back sweat
- 👎 Can't pack lots of extra stuff

HANDY PANNIERS

WHY & WHY NOT

- 👍 Can fit lots of stuff
- 👍 Attaches easily to your bike's rear rack



DELUXE

BIKE GARMENT BAG

WHY & WHY NOT

- 👍 Don't have to fold stuff
- 👎 High cost for limited use



**STOP
HERE
AND
READ**

In a coast-to-coast survey conducted for this book, over 85 percent of people who bike to work or school said they don't shower at their destinations. Do they just smell bad? No. Most erase bad odor by simply toweling off and changing into fresh clothes. If they want to feel even cleaner, they sponge off and apply talcum powder. As for clothes themselves: When weather's mild, they bike in the clothes they wear at work. On days when they'll sweat, they change clothes when they get to work.





Riding to work

To cut down on sweat, leave earlier and cycle more slowly.

If your route involves hills, find the roads with the most gradual inclines (see page 172).



Smart Idea
If you commute into the sun at dawn or sunset, wear a red or deep orange top. Don't wear white, because sun-blinded motorists behind won't see you.



Cleaning up at work

- 1** Change clothes and clean up in a washroom. For privacy, use a toilet stall.
- Use wheelchair-accessible stalls for the most room.

- 4** Use a towel to dry off sweat.

- 2** Remove your work clothes from your bag and hang them up.

- If stalls don't have wall hooks, buy adhesive ones and put them in the stalls yourself.

- 3** Take off your cycling clothes and put them in your bag.

- If you've nowhere to let cycling clothes dry, put them inside a plastic bag.
- If you store your bike in a secure, private area, lay your cycling clothes on the top tube and handlebars to dry.



- 5** If you feel smelly:
- Carry a package of disposable, moist towelettes and use them to sponge off. Or use a washcloth.
 - Apply talcum powder.

- 6** Towel off hair, wet it if necessary, and brush, comb, and/or blow-dry (see page 223).

- 7** Put on jewelry away from toilets and sinks so you don't drop it in.

Work clothes to bike in



Smart Idea

Some bike-grease stains won't come out in the wash. For tough grease stains, apply a degreasing hand soap (usually a waterless gel or cream) found in automobile-supply stores. (First check how it affects the fabric's color.)

Sunglasses or goggles

Keeps airborne debris out of your eyes. (For custom goggles, see "Can't find it?" on page 237.)

Key holder or chain

When you bike in clothes without pockets.

Kerchief

Comes in handy to wipe grime from bike contact or sweat from exertion.

Slacks

- Black or dark-colored pants don't show grime from your bike.
- If you often bicycle in the same pair of pants, the pants' seat can get shiny or faded—especially if they're corduroy or wool. Wear loose shorts over the pants.

Ankle strap

Keeps pants cuff from getting in chain or front gears.

Blazer or sports coat

On cool days, wear instead of windbreaker.

Bra

Large-breasted women find more comfort in athletic support bras.

Shirt or blouse

Loose enough to let air in.

Underwear

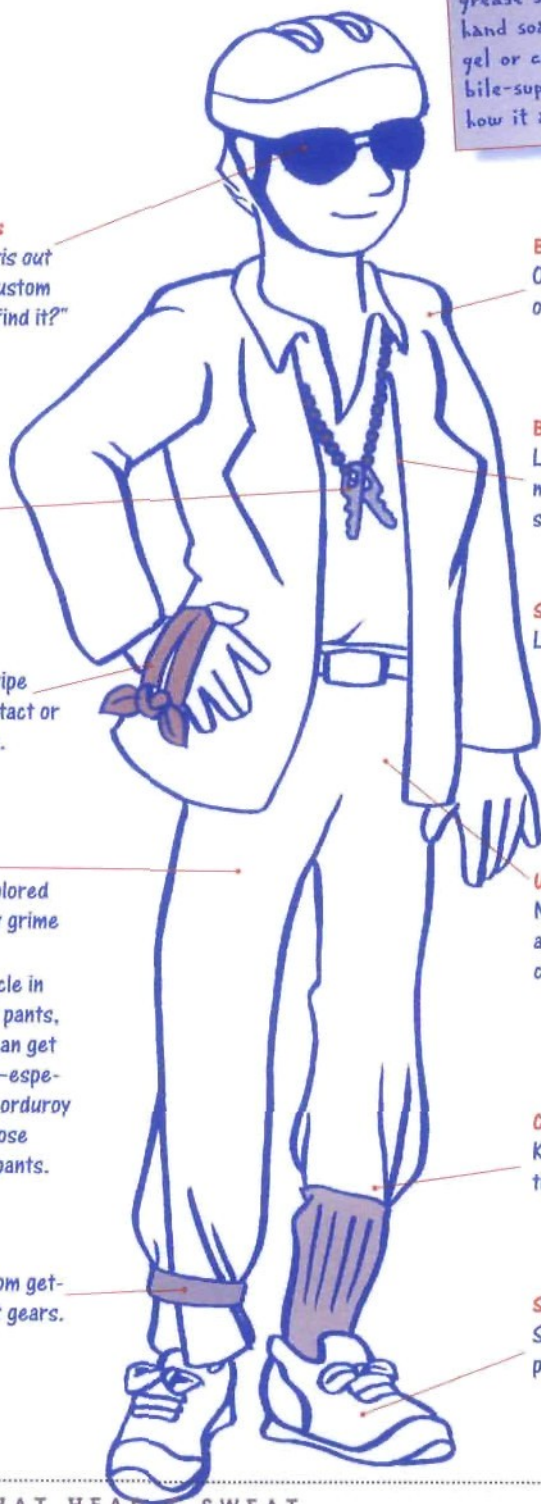
Nylon or other synthetics absorb sweat less than cotton.

Cuff tucked in socks

Keeps pants cuff from getting in chain or front gears.

Shoes

Soles have tread to grip pedals.



Skirts and dresses

A good cycling skirt:

- Isn't too tight to let you open your legs enough to pedal.
- Comes down no farther than the knees.
- Won't get caught in the back brakes.
- If it's shorter or wider than modesty allows, wear cycling shorts underneath.
- Try a "skort": a pair of shorts that look like a skirt.



Long dresses or skirts

- 1 Wear a belt.
- 2 Pull one or two feet of material up until the dress hangs at knee height.
- 3 Tuck the material into the belt.
- 4 If you have no belt, tuck the dress into the waistband of your underwear.



It's hard to find a work skirt I can cycle in. Women's skirts often aren't flared enough. So I've bought skirts made for teenagers, which work fine.

Sue McNamara
bikes to work in Philadelphia

Mounting a standard-frame bike in a skirt

- 1 Lay the bike on the ground.
 
- 2 Put one foot inside the middle of the frame.
 
- 3 Pull the bike up halfway.
 
- 4 Pull your foot out of the frame.
 
- 5 Stand the bike all the way up.
 
- 6 To get off the bike, reverse the steps.

APPENDIX A

RESOURCE GUIDE

Contents

National advocacy groups	233
Local advocacy groups	234
World Wide Web pages	236
Bicycle touring	236
Bike maintenance books	236
Bike safety booklets	236

National advocacy groups

Bicycle Helmet Safety Institute

4611 7th St. South
Arlington VA 22204
703/486-0100
info@helmets.org
www.helmets.org

Canadian Cycling Association

702 - 2197 Riverside Drive
Ottawa Ontario K1H 7X3
613/248-1353
general@canadian-cycling.com
www.canadian-cycling.com

International Mountain Bicycling Association

PO Box 7578
Boulder CO 80306
303/545-9011
info@imba.com
www.imba.com

League of American Bicyclists

1612 K St. NW, Suite 800
Washington DC 20006
202/822-1333
bikeleague@bikeleague.org
www.bikeleague.org

Rails-to-Trails Conservancy

100 7th St. NW, Floor 10
Washington DC 20036
202/331-9696
railtrails@transact.org
www.railtrails.org

Thunderhead Alliance

PO Box 3309
Prescott AZ 86302
928/541-9841
info@thunderheadalliance.org
www.thunderheadalliance.org

Local advocacy groups

If a U.S. town's not listed below, you can learn about its local bike-advocacy group from the League of American Bicyclists. The league is listed on page 233 in "National advocacy groups." Members can get the league's annual almanac that shows bicycling resources for every U.S. state.

Arizona**Atlanta Bicycle Campaign**

PO Box 54488, Phoenix AZ 85078
602/493-9222
www.cazbike.com

Atlanta area**Atlanta Bicycle Campaign**

PO Box 31107, Atlanta GA 30307
404/881-1112
www.atlantabike.org

Baltimore**Bike Baltimore**

c/o Bob Moore
216 Longwood Rd., Baltimore MD 21240
410/435-6623
bikemoore@aol.com

Boston and Massachusetts**Massachusetts Bicycle Coalition**

20 Park Plaza, #1028, Boston MA 02116
617/542-2453
www.massbike.org

Chicago area**Chicagoland Bicycle Federation**

650 S. Clark St., Rm. 300, Chicago IL 60605
312/427-3325
www.biketraffic.org

Connecticut**Connecticut Bicycle Coalition**

433 Chapel St., Floor 2, New Haven CT 06511
203/848-6491
www.ctbike.org

Denver and Colorado**Bicycle Colorado**

Union Station
1701 Wynkoop St., Suite 236, Denver CO 80202
303/417-1544
www.bicyclecolo.org

Florida**Florida Bicycle Association**

PO Box 1547, Orlando FL 32802
407/327-3941
www.floridabicycle.org

Houston**BikeHouston**

PO Box 25372, Houston TX 77265
713/729-9333
www.bikehouston.org

Indiana**Indiana Bicycle Coalition**

PO Box 20243, Indianapolis IN 46220
317/466-9701
www.bicycleindiana.org

Los Angeles**Los Angeles County Bicycle Coalition**

634 S. Spring St., #820, Los Angeles CA 90014
213/629-2142
www.labikecoalition.org

Maine**Bicycle Coalition of Maine**

PO Box 5275, Augusta ME 04332
207/623-4511
www.bikemaine.org

Michigan**League of Michigan Bicyclists**

PO Box 16201, Lansing MI 48901
517/334-9100
www.lmb.org

Minnesota**Minnesota Bicycle and Pedestrian Alliance**

210 E. 10th St., St. Paul MN 55101
651/224-8626
www.bikeped.org

Mississippi**Bicycle Advocacy Group of Mississippi**

703 PO Box 515, Jackson MS 39205
601/898-2899
www.bikemississippi.org

Montreal**Le Monde à Bicyclette**

911 Jean Talon East, Bureau 135
Montreal Quebec H2R 1V5
514/270-4884
www.cam.org/~lemab

New York City

Transportation Alternatives

115 W. 30th St., Floor 12, New York NY 10001
212/629-8080
www.transalt.org

Oakland area

East Bay Bicycle Coalition

PO Box 1736, Oakland CA 94604
510/433-7433
www.ebbc.org

Philadelphia area

Bicycle Coalition of Greater Philadelphia

252 S. 11th St., Floor 1, Philadelphia PA 19107
215/242-9253
www.bicyclecoalition.org

Portland and Oregon

Bicycle Transportation Alliance

PO Box 9072, Portland OR 97207
503/226-0676
www.bta4bikes.org

San Diego area

San Diego County Bicycle Coalition

PO Box 34544, San Diego CA 92163
858/487-6063
www.sdcbc.org

San Francisco

San Francisco Bicycle Coalition

1095 Market St., Suite 215
San Francisco CA 94103
415/431-2453
www.sfbike.org

Seattle and Washington state

Bicycle Alliance of Washington

PO Box 2904, Seattle WA 98111
206/224-9252
www.bicyclealliance.org

Texas

Texas Bicycle Coalition

P.O. Box 1121, Austin TX 78767
512/476-7433
www.biketexas.org

Toronto

Toronto City Cycling Committee

North York Civic Centre
5100 Yonge Street, Toronto Ontario M2N 5V7
416/392-7592
www.city.toronto.on.ca/cycling

Washington, DC

Washington Area Bicyclist Association

818 Connecticut Av. NW, #300
Washington DC 20006
202/872-9830
www.waba.org

Vancouver (British Columbia) area

Vancouver Area Cycling Coalition

Box 0074, 641 Columbia Street
New Westminster BC V3M 1A8
604/878-8222
www.vacc.bc.ca

Wisconsin

Bicycle Federation of Wisconsin

PO Box 1224, Madison WI 53701
608/251-4456
www.bfw.org



World Wide Web sites

www.bicyclinginfo.org

Lots of background info and data for those who want to advocate for bicycling improvements in their communities.

www.bikemap.com

Steve Spindler's maps and access info for public-transit systems in major U.S. cities.

www.bikewinter.org

Winter bicycling events and tips.

<http://draco.acs.uci.edu/rbfaq>

An archive of rec.bicycles, useful on-line contributions of bikers from all over.

www.girlbike.com

How-to tips, product reviews and deals, and resources for female bike riders.

www.helmets.org

Bicycle Helmet Safety Institute reviews the latest products, debunks safety myths, more.

www.mapsonus.com

Creates an on-map route for a start and end you specify. You can also tell it to find and/or avoid certain things along the route.

www.mrbike.com

Mr. Bike's tips on many bike subjects, info for news media, and more about this book.

www.nordicgroup.us/fold

Huge resource about folding bikes.

<http://users.rcn.com/icebike>

Tips on bicycling in ice and snow.

www.wordspacepress.com

Learn how to get adult and child bike-safety publications customized for your area.

Bicycle touring

Adventure Cycling Association

PO Box 8308, Missoula MT 59807

406/721-1776

www.adventurecycling.org

Bike maintenance books

You can find many books that show you how to fix and maintain your bike. Here are a few we recommend.

Anybody's Bike Book,
by Tom Cuthbertson

Bicycling Magazine's Basic Maintenance and Repair, by the editors of *Bicycling* magazine

Sloane's New Bicycle Maintenance Manual,
by Eugene A. Sloane

Roadside Bicycle Repairs,
by Rob Van der Plas

Bike safety booklets

Mr. Bike's *Bicyclist Survival* gives you all the bike safety information you'll need!

- Fully illustrated on 32 pages.
- Covers traffic basics, bike fit, off-road riding, and more.
- Perfect as a give-away at bike shops, bicycling events, and libraries, or as a text for biking classes.

How to order: Use the order form on the last page or at www.wordspacepress.com.



APPENDIX B

SUPPLIER DIRECTORY

Contents

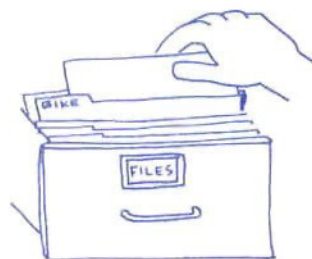
Bells, whistles, & gadgets	238
Bicycles, folding	238
Bicycles, women's	238
Bungee cords	239
Can't find it?	237
Handlebar parts	239
Hardware	239
Helmets	239
Lighting	239
Locks & accessories	240
Pepper spray	240
Rain gear	241
Registries, national	241
Tires	241
Trains, national service	241

Can't find it?

Do you need special clothes or equipment, and can't find them in any store? Maybe we can help. Mr. Bike has a big file of unique and custom-made products that wouldn't fit into this book. If you want help getting a hard-to-find product, check www.mrbike.com/products or contact Mr. Bike:

Mr. Bike

2445 North Artesian Avenue
Chicago IL 60647
773/292-0932 (voice and fax)
mrbike@mrbike.com



BICYCLE DEALERS :

You can use your own desktop computer to locate distributors for over 170,000 bicycling products—with a subscription to the Bike-alog CD database. Bike-alog's database also provides bike specs, an automatic spoke-length calculator, and much more. Call Bike-alog today at 800/962-1950 or e-mail to weserveyou@bikealog.com.

Bells, whistles, & gadgets**All Weather Safety Whistle**

PO Box 8615, St. Louis MO 63126
314/436-3332
www.stormwhistles.com
Have your bike dealer order:
Storm whistle, page 77.

Kauffman Marketing

PO Box 16846, Portland OR 97216
866/463-1314
www.greenlightstuff.com
Order direct:
Green Light Trigger, page 108.

Olympic Supply

5711 W. Douglas Av., Milwaukee WI 53210
800/236-8380
www.olympicsupplycompany.com
Have your bike dealer order:
Kool-Stop "China Bell," page 76.

Bicycles, folding (page 4)

If your bicycle dealer doesn't carry folding bikes, ask them to learn about the models of folding bicycles available from the following bicycle companies.

Dahon California, Duarte CA
Giant Bicycle, Newberry Park CA
KHS, Rancho Dominguez CA
SimpliCity Cycle Company, Sausalito CA
Trek Bicycle, Waterloo WI

Contact the following bicycle companies directly, to order or to find dealers.

ACE Bike

6251 Schaefer Av., Unit Q, Chino, CA 91710
888/869-8809
www.acebike.net

Bike Friday

3364 W 11th Av., Eugene OR 97402
800/777-0258
www.bikefriday.com

Kinn-Ovations

5296 Greenleaf Dr., Swartz Creek MI 48473
810/635-7844
www.bikedriveshaft.com

Montague

PO Box 381118, Cambridge MA 02238
800/638-5348
www.montagueco.com

Alex Moulton Bicycles

44 (0)225 865895 (United Kingdom)
www.alexmoulton.co.uk

Peregrine Bicycle Works

11 Commerce Ct., #7, Chico CA 95928
877/729-2453
www.pbwbikes.com

Riese & Muller (Birdy)

49/(0)6151/366 86 0 (Germany)
www.r-m.de/english/1_katalog/bird

Slingshot Bicycle

211 N. 7th St., Grand Haven MI 49417
888-530-5556
www.slingshotbikes.com

Swift Folders

800/884-5541 (New York City)
800/343-5568 (Eugene OR)
www.swiftfolders.com

C.M. Wasson Company (Brompton)

423 Chaucer St., Palo Alto CA 94301
800/783-3447
www.foldabikes.com

Bicycles, women's (page 4)

If your bicycle dealer doesn't carry bikes made especially for women, ask them to learn about the models of women's bicycles available from the following companies.

Bianchi USA

Cannondale
Diamondback
Giant Bicycle
GT Bicycles

Joannou Cycle (Jamis)

Marin Bikes
Raleigh America
Schwinn Bicycle
Terry Precision Cycling
Trek Bicycle

Bungee cords (page 16)

RiderWearHouse

8 S. 18th Av. West, Duluth MN 55806
800/222-1994
www.aerostitch.com
Order direct:
adjustable and multiple-strap bungees.

Handlebar parts

J&B Importers

11925 SW 128 St., Miami FL 33186
800/666-5000
www.jbimporters.com
Have your bike dealer order:
Pyramid stem riser, page 10.

Sidetrak

774 Industry Dr., Seattle WA 98188
888/770-0335
www.sidetrak.com
Order direct:
ExcessAccess accessories mount, page 15.

United Bicycle Parts

691 Washington St., Ashland OR 97520
800/482-1984
www.ubike.com
Have your bike dealer order:
handlebar stems, page 10.

Hardware

McMaster-Carr Supply

Atlanta GA 404/346-7000
Cleveland OH 330/995-5500
Elmhurst IL 630/833-0300
Los Angeles CA 562/692-5911
New Brunswick NJ 732/329-3200
www.mcmaster.com
Order direct: S-hooks, page 189.
Or visit your local hardware store.

Helmets (page 222)

Bell Sports (including Giro helmets)

380 Encinal St., Santa Cruz CA 95060
800/969-4476, www.bellsports.com
Have your bike dealer order:
helmets (with ponytail openings), lights,
and accessories.

GT Bicycles

4902 Hammersley Rd, Madison WI 53711
800/283-3303
www.gt bicycles.com
Have your bike dealer order:
helmets with ponytail opening.

Lighting

bicycletires.com

4790 W. 73rd St., Indianapolis IN 46214
888/222-9887
www.bicycletires.com
Have your bike dealer order:
Union bottom-bracket generators, page 211.

J&B Importers

11925 SW 128 St., Miami FL 33186
800/666-5000
www.jbimporters.com
Have your bike dealer order:
Shimano wheel-hub generators, page 211.

WANT TO HELP CHANGE YOUR COMMUNITY SO MORE PEOPLE CAN RIDE BIKES?

Connect with your local
bicycle advocacy orga-
nization through us!



THUNDERHEAD ALLIANCE

Advancing bicycling through unified state & local advocacy
www.thunderheadalliance.org

No advocacy group in your community?
Thunderhead can show you how to get
one started. Contact us:

928/541-9841
sue@thunderheadalliance.org

Lighting (continued)**Jogalite**

PO Box 149, Silver Lake NH 03875
800/258-8974
www.bikeroute.com/jogalite
Order direct:
reflective yield symbol #8512A, page 208.

Peter White Cycles

24 Hall Rd., Hillsborough NH 03244
603/478-0900
www.peterwhitecycles.com
Have your bike dealer order:
wheel-hub generators, page 211.

3M Scotchlite Reflective Material

3M Center, St. Paul MN 55144
800/328-7098 (select #2)
www.3m.com/scotchlite
Call for nearest Scotchlite dealer (page 208).

Wilson Bicycle Sales

31157 Wiegman Rd., Hayward CA 94544
800/877-0077
Have your bike dealer order:
bottom-bracket generators, page 211.

Locks & accessories**ABUS**

23910 N. 19th Av., Phoenix AZ 85027
800/352-2287, www.abus.com
Have your bike dealer order:
Granit X-Plus 54 HB lock, page 54.

Kabletek Manufacturing

320 W. Lone Cactus Dr., #3, Phoenix AZ 85027
800/553-2453
www.kabletek-flexweave.com
Have your bike dealer order:
Flexweave cables, page 59.

Kent International

2 Cranberry Rd., Parsippany NJ 07054
800/451-5368
www.kentbicycles.com
Have your bike dealer order:
The Club and Ultra Club for Bikes, page 55.

Joannou Cycle

151 Ludlow Av., Northvale NJ 07647
800/222-0570, www.jamisbikes.com
Have your bike dealer order:
Bad Bones lock straps, page 51.

Kryptonite

437 Turnpike St., Canton MA 02021
800/729-5625
www.kryptonitelock.com
Have your bike dealer order:
bicycle locks, page 54.

Master Lock

2600 N. 32nd St., Milwaukee WI 53210
800/558-5528
www.masterlockbike.com
Have your bike dealer order:
bicycle locks, page 55.

St. Pierre Manufacturing

317 E. Mountain St., Worcester MA 01606
800/926-2342
www.stpierreusa.com
Have your bike dealer order:
QuadraChain, page 57.

Stocks Manufacturing

1365-B Colborne Street E., RR #8
Brantford Ontario N3T 5M1
800/376.6587
www.stocksrmfg.on.ca
Have your bike dealer order:
Stocks Lock, page 54.

Todson

PO 637, Foxborough MA 02035
800/213-4561
www.todson.com
Have your bike dealer order:
OnGuard locks, page 54.

Pepper spray (page 136)**Defense Devices**

111 S. Highland, #144, Memphis TN 38111
901/268-5566
www.defensedevices.com
Order direct:
Sabre bicycle pepper spray.

Rain gear

Campmor

PO Box 700, Saddle River NJ 07458
800/226-7667
www.campmor.com
Order direct:
bicycle rain cape, page 216.

New England Overshoe Company

208 Flynn Av., Studio 3F, Burlington, VT 05401
888/289.6367
www.overshoes.com
Call for ordering information:
NEOS overshoes, page 216.

Sidetrak

774 Industry Dr., Seattle WA 98188
888/770-0335
www.sidetrak.com
Order direct:
chain cover, page 217.

Registries, national (page 40)

Cycle Finders

1521 Alton Rd., #484
Miami Beach FL 33139
866/567-8245
www.cyclefinders.com

National Bike Registry

1776 Fairway Dr.
San Leandro CA 94577
800/848-2453
www.nationalbikeregistry.com

Tires

All Weather Sports

4001 Geist Rd., Fairbanks AK 99709
907/474-8184
www.allweathersports.com
Have your bike dealer order:
studded tires (page 217).

Nu-Teck

2751 W. Oxford Av., #1, Englewood CO 80110
800/290-8828
www.nu-teck.com
Have your bike dealer order:
airless tires (page 23).

Quality Bicycle Products

6400 W. 105th St., Bloomington MN 55438
800/346-0004
www.qbp.com
Have your bike dealer order:
studded tires (page 217).

Trains, national service (page 195)

Amtrak (U.S.)

www.amtrak.com
To get the current Amtrak timetable, in the
U.S. call 800/872-7245 and press 3
for reservations.

Via Rail (Canada)

www.viarail.com
For information on fares and service, in
Canada call 800/681-2561.

Can't We All Just Ride Along?



25% of profits donated
to bike advocacy

The Best Bicycle Accessories on the Planet™
Contact your local Dealer or visit us at: www.planetbike.com

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Advisors & contributors

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John Ciccarelli	Nancy Kendrew	Gail Smith
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Bike Track	Master Lock	Todson
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Dahon California	Mary Ellen Paquette	Dick Weber
Delta Cycle	Planet Bike	Carole Weiss
Go Boulder	Carolyn Prieb	Chip Williams
	Sidetrak	Winner International

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INDEX

A

- Access to bike, 24
- Accessories, 14–19, 55
- Accessory bar, 15
- Accident report, 126–129
- Accidents, 126–131, 149
- Adjuster barrel, 26
- Advocacy groups, 64, 130, 200, 233–235
- Air pumps, 30
- Airless tires, 23
- Airplanes, 196–205
- Airports, 200
- Aluminum wheels, 14, 219
- Ambushes, 132
- Amtrak, 195
- Ankle strap, 14, 189, 231, 233
- Armored cables, 59
- Armrests, 14, 15
- Assertive riding, 123
- Attacks, 132, 134–137, 141–145
 - by dogs, 144–145
- Attorney. *See* Lawyers
- Auctions, police, 45
- Automobiles. *See* Cars
- Axle pegs, 14, 17
- Axles, lubrication, 33

B

- Back gear assembly, lubrication, 33
- Back pain, 8
- Backpacks, 229
- Baggage
 - accessories, 16–17
 - bike on airplanes as, 202–205
 - bike on trains as, 195
 - on buses, 178, 180, 183
- Bandanna. *See* Kerchief
- Baskets, 14, 17
- Batteries, for lights, 211, 212
- Bearings, wet, 217
- Bells and whistles, 77, 238
- Bicycle. *See* Bike
- Bike
 - on airplanes, 196–205
 - as baggage, 195, 205

Bike (continued)

- to carry, 166–167
 - in cars, 206
 - choosing and fitting, 4–24
 - frame height, 13
 - holding, in small spaces, 183
 - new, 12–13
 - parking, 46–51
 - price, 6–7, 12
 - recycling, 7
 - to ship, 199
 - single-speed, 5, 20
 - storage, 24
 - on trains, 184–195
 - types, 4–5
 - used, 7, 38
 - as vehicle, 133
 - weight, 5
- Bike-advocacy groups, 64, 130, 200, 233–235
 - Bike bag, 197
 - Bike box, 197–199, 202–203, 204–205
 - reusing, 205
 - Bike detectors, 108–113
 - Bike lanes, 90–91, 115, 173
 - Bike lock. *See* Locks
 - Bike-luggage fee, at airport, 197, 204–205
 - Bike maintenance books, 236
 - Bike racks
 - on buses, 176–182
 - for parking, 47
 - on trains, 192–193, 195
 - Bike registries, 40–41, 44, 241
 - Bike routes, 173
 - Bike shop, 34
 - box from, 198, 199
 - BikeEd, 65
 - Body language, 69–71 (*See also* Hand signals)
 - vehicles', 72–75
 - Body position, 4, 8, 9, 10, 13
 - Books, 236
 - Box, for air travel. *See* Bike box
 - Box left turn, 85
 - Brake cables, 33, 217
 - Brake levers
 - lubrication of, 33
 - moving too far, 27
 - pressure on, 146

INDEX

- Brake pads
distance from rim, 27
wet, 219
- Brakes, 161
to clean, 217
lubrication, 33
quick check, 27
testing, 27, 65
wet, 219
- Braking, 65 (*See also* Slowing down;
Stopping)
on slippery surface, 219
- Bras. *See* Underwear
- Braze-ons, 16
- Bridges, 132, 219
- Bumps and ruts, 159
- Bungee cords, 14, 16, 183, 189, 192–193
in bike box, 202
suppliers, 239
- Bunny hop (jumping over objects), 165
- Bus racks, 176–182
- Bus routes, 177
- Bus stop, 94, 96
- Bus traffic, 93–97
- Buses, 93–97
bringing bikes on board, 176–183, 219
drafting, 162
- Butt, comfort of, 11
- ## C
- Cable locks, 47, 53, 58–59
- Cables, brake, 33, 217
- Cadence, 154
- Cameras, surveillance, 105
- Camouflage, for a nice bike, 36–37
- CAN-BIKE, 65
- Carrying a bike, 166–167
- Carrying rack, 14, 16, 208
- Cars
carrying bike in, 208
getting comfortable with, 64
- Case for a bike, 197
- Case hardening, 56–57
- Center line, 118–119
- Chafing and soreness, 11, 13
- Chain
care, 217
moving, 157
noisy, 26, 158
quick check, 26
rusted, 32
- Chain cover, 14, 217
- Chain link fences, locking to, 48
- Chain locks, 53, 57
- Chain lube, 32
- Chainring, 21
- Chain stay, 16, 19
- Changing clothes, 24, 230
- Chargers, battery, 211, 212
- Children's helmets, 227
- Classes, street biking, 65
- Cleaning a wound, 150–151
- Clearance, checking, 64
- Clipless pedals, 19
- Clothing, 11, 228–232
changing, 24, 230
foul-weather, 214–216
packing, 228
storage, 24
suppliers, 241
waterproof vs. water-resistant, 216
- Cold weather, 214–215, 218
- Collars for U locks, 50
- Collisions, bike-car, 126–131, 149
- Comfort bikes, 4–5
- Communication with motorists,
69–70 (*See also* Body language;
Eye contact; Hand signals; Teaching)
- Commuter trains, 190–195
- Commuting, 176
clothes for, 231
via train and bike, 190–191
- Conductors on trains, 190
- Confusing motorists, 142
- Costs
of bikes, 6–7, 12, 52
of helmets, 227
of locks, 52
- Crank, 21
- Crashes, bike-car, 126–131, 149
helmet for, 225
where occur, 64
- Cross bikes. *See* Hybrid bikes
- Cross locking, 49, 53
- Crosswalks, 63, 85, 105–107
- Cruisers, 4–5
- Curb cut, 164
- Curbs, 164–165
- Cutters, of cables, 58

D

Demand package, 131
Derailleur, lubrication, 33
Detector left turn, 111
Detectors, 108–113
Diagonal pedestrian crossings, 105
Directions to airports, 200
Dirt on bike, 38
Dodging, 148
Dogs, 144–145
DON'T WALK signal, 100–102
Door zone, 90, 114–116, 120–121, 172
Double-parked cars, 90
Drafting, 162
Dresses, 232
Drive-through lanes, 91
Drive train, 105
Drivers. *See* Buses; Motorists

E

Educating the ignorant, 139
Effective Cycling. *See* BikeEd
Elevated rail tracks, 120–121
Elevators, 166
Emergency moves, 132, 146, 147
Engraving I.D., 42
Entrance ramps, 98
Equipment, 14–15, 30, 210–212 (*See also* Accessories; Clothing; Tools)
for rain, 217, 241
Escalators, 168–169
Escape routes, 132
Etching I.D., 42
Exhaust, vehicle, 218
Exit ramps, 99
Express subway trains, 185
Eye contact with motorists, 69, 84

F

Falling, 149
Fences, locking to, 48
Fenders, 14, 220, 222
Fighting with motorists, 140–141
Finger whistle, 76
Fit
of bike, 8–13
of helmet, 226

Flat tire, 28–31
Flying over objects, 165
Flying with a bike, 196–205
Folding bikes, 4, 238
Following closely, 62
Foam grips, 14, 15
Fog, 216
Fog-proofing glasses, 214
Foot covers, homemade, 217
Footwear, 216
Frame
height and length, 4, 13
to uglify, 36–37
Frame lock, 53, 54–55 (*See also* Cable locks; Chain locks; U locks)
Freewheel, lubrication, 33
Freezing weather, 218
Friction of clothing, 11

G

Garment bag, 229
Gear. *See* Accessories; Clothing; Equipment
Gear-shift levers, 156–158
lubrication, 33
Gears, 20–21, 154–158
lubrication of, 33
quick check, 27
Generator lights, 209, 211
Glasses, 14, 214, 233 (*See also* Goggles; Sunglasses)
Gloves, 14, 15
Glue, 29
Goggles, 14, 231, 233
Granny gear, 21
Grease
on cables, 217
on pavement, 160
stains, 231
Green lights, causing, 108–110
Grip-Shift. *See* Gear-shift levers
Grips, 14, 15

H

Hair, 222–223, 230
Halogen bulbs, 211
Hand shifters, 156–158
Hand signals, 69–70, 84, 92, 99
Handlebars, 4, 211
adjustment, 10

Handlebars (continued)
 bags mounted on, 17
 parts, 10, 14, 15
 quick check, 27
 suppliers, 239
 theft-proofing, 49
 to uglify, 36

Hands
 preventing cold, 215
 preventing numb, 15

Harassment by motorists, 138–143

Hardware, 14–15, 16, 239

Hazards, 31, 66, 115, 148, 159

Headband, 222, 229

Headlight, 209–212

Helmet, 14, 149, 224–227 (*See also* Hair)
 suppliers, 239

Helmet-mounted lamps, 211

Hills, 20, 21, 154–155, 160–161

Hit and run, 126

Hobbling a bike, 47, 193

Hooks for storage, 24, 238

Horn, 78

Hybrid bikes, 4–5

I

Icy pavement, 218

Identification, 39–42

Impatient left turn, 86

Indexed shifting, 156

Injury
 getting money for, 130
 how to treat, 150–151

Inner tube, 28–31, 36

Insulation, 215

Insurance
 accident, 127, 130–131, 142
 theft, 43, 44

Internet. *See* Web sites

Intersections, 82–89
 bike lanes at, 91
 crossing, 92
 on hill, 160
 traffic at, 70–75, 103–107

J

Jacket, 209, 215, 216

Jughandle turn, 88–89

Junk shops, 44–45

K

Kerchief, 14, 222, 233

Key holder, 14, 231, 233

Kickstand, 186, 189

Kids, helmets for, 227

Knee pain, 8, 20

Komanoff's Rule, 123

L

Lanes
 bike, 90
 changing, 72, 80–81
 left-turn, 84
 multiple, 82–92
 sharing and taking, 65, 79

Law. *See* Lawyers; Police; Traffic rules

Lawyers, 130

League of American Bicyclists, 130, 196, 233

LEDs. *See* Light emitting diodes

Left turns, 75, 84–89
 avoiding, 172
 box, 85
 danger of improper, 122–123
 with detector, 111–113
 impatient, 86
 jughandle, 88–89
 Michigan, 88–89
 by motorists, 71, 80, 119
 shortcut, 87, 111

Levers, shifting, 156–158

Light bulbs, 211, 212

Light emitting diodes, 211, 212

Lighting, 14, 208–213
 helmet-mounted, 211
 suppliers, 239

Limited-access expressways, 201

Lock holder, 55

Locking, 18, 193

Locks, 14, 30, 44, 46–59 (*See also* Cable locks; Chain locks; U locks)
 combination, 56
 insurance for, 43
 keyed alike, 54
 prices, 52
 suppliers, 240

Looking techniques, 66–68

Loop detectors. *See* Detectors

Lubricants, 32, 241

Lubrication, 32–33
of locks, 50
Luggage. *See* Baggage

M

Maintenance, 26–34
books, 236
quick check, 26–27
Maps, 173
to airports, 200
Mechanics at bike shops, 34
Medical attention, 126, 150–151
Medical costs, 131
Merging, 72, 84, 98–99, 119
Messengers, 47
Metal detectors, 109–110
Meters. *See* Parking meters
Michigan left turn, 88–89
Mirror, 14, 68, 116
Money (*See also* Insurance)
for bike, 6–7, 12, 52
for bus fare, 183
for helmet, 227
for lock, 52
Motorists
conflicts with, 133, 138–143, 213
confusing, 141
crashes with, 126–127
predicting moves of, 72–73
Mountain bikes, 4–5
Mr. Bike
contacting, 237
message from, 1
Multi-lane intersections, 82–84
Multiple speeds. *See* Gears

N

National bike-advocacy groups, 64, 130, 233
Narrow streets. *See* Streets
Neck pain, 8
New bikes, 12–13
New Jersey turn. *See* Jughandle turn
Night riding, 208–213
danger of, 122–123
Night travel on trains, 194
Noise
in emergency, 135
makers, 14, 76–78
Numbness, preventing, 215, 218

O

Oil
household, 33
on wet road, 219
Oiling. *See* Lubrication
One-speed bike, 20
One-way streets, 89

P

Packing clothes. *See* Clothing, packing
Padlock, 49, 53, 56, 58
Pain
in back, arms, or shoulders, 8
knee, 8, 20
Panniers, 14, 17, 229
Pants, 215, 216, 231
Parked cars, 81, 114–117, 121, 122–123
Parking a bike, 46–51
Parking lots, 46
Parking meters, 47
Parking racks, 46, 193
Partial ped mode, 86
Parts, securing, 49
Passing, 74–75, 80–81
a bus, 94–97
on right, 122–123
Patching a tire, 30
Pavement detectors, 108–113
Ped mode, 63, 86, 105–107
Pedals
clipless, 19
lubrication, 33
to rainproof, 217
speed of, 154, 196
Pedestrian mode. *See* Ped mode
Pedestrian-controlled traffic lights,
102, 109
Pedestrians
acting like, 63
approaching from behind, 78
between parked cars, 117
conflicts with, 138–139, 141
diagonally crossing, 105
under elevated tracks, 121
Pepper spray, 135–137, 145
suppliers, 240
Permit for bikes
on buses, 176
on trains, 190

Perspiration. *See* Sweat
Police, 126–127
Police auctions, 45
Police reports, 126–129
Ponytails, 222–223
Potato, fog-proofing glasses with, 214
Potholes, 67, 73, 148, 159, 162
Prices. *See* Costs
Products, finding, 237
Puddles, 219
Pumps, 14, 30

Q

Quick check, 26–27
Quick-release
 seat, 14, 18, 166
 wheels, 14, 18–19, 48
Quick slow-down, 146

R

Racks. *See* Bike racks; Carrying rack
Railroad tracks, 159
 elevated, 120–121
Railroads, 241 (*See also* Commuter
 trains)
Rain, 216, 219
 helmets in, 222
Rain gear, 216, 217, 241
Ramps, highway, 98–99
Rear light, 208
Rear stabilizer in helmet, 224
Recommended products, 23, 58, 77, 108
 167, 208
Recumbent bikes, 5
Recycled bikes, 7, 44–45
Red lights, 86, 100–101, 104–107
 danger of running, 122–123
 turning at, 82, 89
Reflective material, 208
 suppliers, 240
Reflectors, 14, 208, 210
Registries, 40–41, 44, 241
Repellent for dogs, 145
Repairs, 34
Replacement cost, 52
Rewards, 45
Riding against traffic, 120, 122–123
Right hook, 79
Right turn, 92, 93

Right-of-way rules, 69
Rims, aluminum, 217
Road bikes, 4–5
Road hazards, 66, 148, 159
Rough pavement, 159
Rush hour, 194
Rust, 32, 42, 217

S

S-hooks, 189, 239
Saddle. *See* Seat
Safety
 books, 236
 guide, 122–123
 vests, 209
Salt damage, 32, 217
Schedule
 airline, 198
 work/travel, 194
Scotchlite material, 208
Scrapes, 150–151
Seat
 fit, 9, 11
 locking, 48
 quick-release, 14, 18, 166
 tilt, 9
Seat bag, 14, 17
Seat cover, 217
Seat post, 39
Seat stay, 16
Self-defense, 135–137
Serial number, 40–41, 44
Service roads, 201
Shackle of lock, 55
Shadowing, 103, 160
Shampoo, 223
Sharing a lane, 65
Shifters, 156–158
 lubrication of, 33
 quick check, 27
Shifting gears, 154–158
Shipping a bike, 199
Shoes
 for cycling, 19, 231
 taking thief's, 137
Shortcut left turn, 87, 111
Shoulder pads, 167
Shoulder pain, 8
Showering, 229
Shuttle vans, to/from airports, 200
Sidewalks, 122–123, 164–165

Sign poles, 47
Signals
 hand, 69–70, 84, 92, 99
 traffic, 100–113, 160, 172
Single-file riding, 112
Single-speed bike, 5, 20
Sirens, 78
Skid, 218
Skin irritation, 11
Skirts and dresses, 228, 231, 232
Skitching, 163
Slick surfaces, 218, 219
Slowing down, 146
Slush, 218
Sly biking, 62
Snow, 218
Soreness, 11, 13
Speed
 decreasing, 146
 increasing, 162–163
Speeds. *See* Gears
Squeaking pedals, 33
Stains, from bike grease, 231
Stairs, 24, 166–167, 170–171
Stem riser, 10, 239
Stolen bikes, recovering, 44–45
Stop signs, 104
 danger of running, 122–123
 on hill, 160
 traffic at, 70
Stopped cars, moving among, 117
Stopping, 65, 82 (*See also* Brakes;
 Parking a bike)
Storage beam, 24
Storing a bike, 24, 49
 on trains, 195
Storing clothes, 24
Straps
 ankle, 231
 for U lock, 51
Street map, 173
Streets
 narrow, 80–81
 where to ride on, 172
Stretching, 172
Subways, 47
 bikes on, 184–189, 219
 express, 185
Sucker poles, 47
Sunburn. *See* Tanning
Sunglasses, 231
Sweat, coping with, 214, 215, 228–230

T

Taillight, 208
Taking a lane, 65, 79
Tanning through helmet, 222
Teaching, 139
Terry bikes, 4
Theft, 35–59
Theft insurance, 43
Theft prevention, 18, 24, 36–38, 42, 46–59
 on buses, 176
 on trains, 193
Thickness of cables, 58–59
Thorns, 31
Three-foot pass law, 74
Three-street run-around, 106–107
Ticket agents at airports, 204
Tilt, seat, 9
Timing
 of commute, 176, 194
 of pavement detectors, 112–113
 of trip to airport, 196
 of traffic lights, 101–102
Tire lever, 28, 29
Tire liners, 14, 31
Tire patches, 30
Tires, 22–31
 airless, 23, 241
 flat, 28–31
 new and used, 38
 quick check, 26–27
 size of, 4, 22
 suppliers, 241
Toe clips, 14, 19
Toes, protecting from cold, 214
Tools, 28, 42, 202 (*See also*
 Equipment)
Touring, guides to, 236
Tracks. *See* Train tracks
Traffic, 64–123
Traffic jams, 117–121, 164
Traffic lights, 100–113, 172
 and detectors, 108–113
 on hills, 160
 pedestrian-controlled, 102, 109
 timing, 101–102
Traffic rules, 63, 69
Trailer, 14, 16
Trains, 184–195
 commuter, 190–195
 elevated, riding near pillars for, 120–121
 national service, 241

INDEX

Trains (continued)
 routes of, 190
 subway, 184–189, 219
 tracks of, 159
Transit agencies, 195
Trolleys, 93
Trucks, 162–163
Turning lanes, 82–89,
Turning vehicles, 79–83
Turns
 emergency, 147
 left, 84–89, 111
 right, 92, 93
Turnstiles, 184
Two-wheel hop, 165

U

U locks, 50–51, 54–55, 135
Uglification for security, 36–37
Underwear, 214, 231
Uniform Vehicle Code, 133
UPS charges, 199
Used bikes, 7, 38

V

Vans, drafting, 162
Vehicles
 bikes as, 133
 dealing with, 62–123
 rides from, 162–163
 space between, 114–119
Ventilation
 clothes for, 229
 helmet, 224
Via Rail, 195
Vibration on downhill, 161
View in traffic, 66–68
Visibility, 208–209, 213
Vision, 213
Visor, 209, 225
Voice warning, 76

W

Waiver for luggage fee, 196
WALK signal, 100–102
Walking, 63

Wall-mounted racks
 in homes, 24
 on trains, 192–193
Washing up, 230
Water bottle, 14, 19
 as weapon, 140, 144, 145
Water repellent
 on clothing, 216
 on panniers, 217
Waterproof vs. water-resistant
 clothing, 216
Wax, 32
WD-40, 32
Weather, 214–220
Web sites, recommended, 236
Wet
 bearings, 217
 brakes, 219
 chain, 32
 pavement, 146, 219
 weather, 216–217, 219–220
Wheel axles, lubrication of, 33
Wheel rims, 217
Wheelchair space, 187, 193
Wheels (*See also* Tires)
 aluminum or alloy, 14, 219
 quick check, 26
 quick-release, 14, 18, 48
 removing and replacing, 30
Whistles, 76–77
 suppliers, 238
Wicking fabric, 215
Wind
 and hair, 222
 resistance, and handlebars, 15
 riding into, 154
Windshield, 140
Wire cables, 58
Witnesses of crashes, 129
Woman looking like man, 132
Women's bikes, 4
 suppliers, 238
Work clothes, 228–232
World Wide Web. *See* Web sites
Wound, to treat, 150–151
Wrenches, 202

Y

Yellow lights, 103
Yielding, 69, 122–123
Yuppies selling bikes, 7

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