

June 2014

WISCONSIN MOTORCYCLISTS' HANDBOOK



DMV service centers

www.dot.state.wi.us/about/locate/dmv/index.htm

DMV web site

www.wisconsin.dmv.gov

Motorcycle crash facts

www.dot.wisconsin.gov/safety/motorist/crashfacts/docs/motorcyclefacts.pdf

Motorcycle license

www.dot.wisconsin.gov/drivers/drivers/apply/types/motorcyc.htm

Motorcycle safety (Motorcycle Safety Course information)

www.dot.wisconsin.gov/safety/vehicle/motorcycle/index.htm

Motorcycle training providers and locations

www.dot.state.wi.us/safety/vehicle/motorcycle/training.htm

Wisconsin Motorcyclists' Handbook

www.dot.wisconsin.gov/drivers/drivers/apply/cycle-handbook.htm

Schedule a skills test appointment

www.dot.wisconsin.gov/drivers/drivers/schedule.htm

For other information or inquiries:

www.wisconsin.dmv.gov

Milwaukee/Waukesha area: (414) 266-1000

All other areas: (608) 264-7447

State Patrol Regions

(1) Southwest Region . . . (608) 846-8500

(2) Southeast Region . . . (262) 785-4700

(3) Northeast Region (920) 929-3700

(4) North Central Region . . . (715) 845-1143

(5) Northwest Region (715) 839-3800

Take a rider course—Get skills test waived

If you are applying for, or interested in applying for, a cycle license, we strongly recommend that you complete a cycle rider course (under certain circumstances, a rider course is required). The Motorcycle Rider Course: Riding and Street Skills (basic rider course) is designed for beginning riders. The course was developed, and the instructors are certified by the Motorcycle Safety Foundation and approved by the Department of Transportation. The course is taught off-street, out of traffic, and motorcycles and helmets are provided. For detailed information, visit www.dot.wisconsin.gov/safety/vehicle/motorcycle/index.htm.

Note: This manual is intended to inform the user of the Rules of the Road (Wisconsin state laws and Administrative Rules), as well as important safety tips. Information in this and other handbooks and manuals published by the Division of Motor Vehicles is not all-inclusive and is subject to change at any time due to new or revised laws.

TABLE OF CONTENTS

Preface	1	Keeping Your Distance	19
Wisconsin Licensing Information ...	3	Lane Positions	19
Requirements for Motorcycle Operation	3	Following Another Vehicle	19
Type 1 Motorcycle	3	Being Followed	20
Type 2 Motorcycle	3	Passing and Being Passed	20
Motor Bicycle	3	Passing	21
Moped	4	Being Passed	21
Class M License in Four Steps	5	Lane Sharing	21
1. Get Cycle Instruction Permit	5	Merging Cars	22
2. Practice Riding	5	Cars Alongside	22
3. Take Motorcycle Skills Test	6	SEE	23
4. Obtain Class M License	6	Search	23
The Motorcycle Skills Test	6	Evaluate	23
The Pre-test Inspection	6	Execute	23
The Skills Test	7	Intersections	24
Motorcycle Laws	8	Blind Intersections	25
Lane Position (Turning)	9	Passing Parked Cars	26
Farm Safety/Rural Driving	10	Parking at the Roadside	26
Railroad Crossings	10	Increasing Conspicuity	27
Preparing to Ride	11	Clothing	27
Wear the Right Gear	11	Headlight(s)	27
Helmet Use	11	Signals	27
Helmet Selection	11	Brake Light(s)	28
Eye and Face Protection	12	Using Your Mirrors	28
Clothing	12	Head Checks	29
Know Your Motorcycle	13	Horn	29
The Right Motorcycle for You	13	Riding at Night	29
Borrowing and Lending	13	Crash Avoidance	30
Get Familiar With the Motorcycle Controls	14	Quick Stops	30
Check Your Motorcycle	14	Swerving or Turning Quickly	31
Know Your Responsibilities	15	Cornering	31
Ride Within Your Abilities	16	Handling Dangerous Surfaces ...	33
Basic Vehicle Control	16	Uneven Surfaces and Obstacles ...	33
Body Position	16	Slippery Surfaces	34
Shifting Gears	17	Railroad Tracks, Trolley Tracks and Pavement Seams	34
Braking	17	Grooves and Gratings	35
Turning	18	Mechanical Problems	35
		Tire Failure	36
		Stuck Throttle	36
		Wobble	36
		Chain Problems	37
		Engine Seizure	37

Animals 37

Flying Objects 37

Getting Off the Road 38

Carrying Passengers and Cargo . . . 38

 Equipment 38

 Instructing Passengers 38

 Riding with Passengers 39

 Carrying Loads 39

Group Riding 39

 Keep the Group Small 39

 Keep the Group Together 40

 Keep Your Distance 40

 Single-File Formation 41

Being in Shape to Ride 42

 Why this Information
 is Important 42

 Alcohol and Other Drugs
 in Motorcycle Operation 42

 Alcohol in the Body 43

 Alcohol Concentration 43

 Alcohol and the Law 44

 Alcohol Laws 44

 Minimize the Risks 45

 Don't Drink or Use Drugs 45

 Step in to Protect Friends 45

Fatigue 46

Earning Your License 46

**Sample Knowledge
Test Questions 47**

On-Cycle Skills Test 48

Motorcycle Rider Courses 49

Learn From the Pros 49

 The Courses 49

 Instructors 50

 Provided For You 50

 You Provide 50

 Who Can Attend 51

Waiver of Skills Test 51

Point Reduction 51

Schedules 51

PREFACE

Motorcycling can be an exciting way to travel. While riding, a cyclist can hear, see and feel things a driver inside a car cannot. But cycling calls for special knowledge, skill, and constant attention.

The chances of being involved and seriously injured in a traffic crash are greater riding a cycle than driving a car.



- A cycle is easily tipped over.
- Weather and road conditions often make cycling difficult.
- A cycle is small. Other drivers, looking for cars and trucks, do not always see the cycle.
- Other drivers often disregard the rights of cyclists.
- In a crash, a cycle offers little protection to the rider.

2012 WISCONSIN MOTORCYCLE STATISTICS

www.dot.wisconsin.gov/safety/motorist/crashfacts/docs/motorcyclefacts.pdf

- 2,398 motorcyclists were injured on Wisconsin roads in 2012. That represents a 14.2% increase from the 2,100 injured in 2011 and a 17% increase from 2002. An additional 136 non-motorcyclists were injured in crashes involving motorcycles in 2012.
- In 2012, 112 motorcyclists, including passengers, were killed in traffic crashes compared to 80 in 2011, a 40% increase. This figure is also 44% higher than the 78 fatalities that occurred in 2002.
- 16–24 year olds account for only 3.8% of the licensed motorcyclists but account for 15.6% of those in crashes in 2012.
- Alcohol and/or speed were the primary contributing factors in 56% of fatal single unit motorcycle crashes in 2012 and in 31% of all single unit crashes.
- Nine out of 10 motorcycle crashes occurred on dry pavement in 2012.

The five most frequent possible contributing circumstances in both fatal and non-fatal motorcycle crashes in 2011 were:

- Failure to control (the motorcycle)
- Inattentive driving
- Speed too fast/conditions
- Driver condition (e.g. alcohol use, driving while sleepy, etc.)
- Exceeding speed limit

**Improve your riding skills and learn from experienced riders.
Consider taking a Motorcycle Rider Course.**

See page 49 for more details.

Studying this manual, taking a motorcycle rider course and practicing your riding skills can reduce your risk and increase your safety.

This manual shows safe riding techniques and contains what you need to know to pass the motorcycle knowledge test. You should also study the *Wisconsin Motorists' Handbook* for safe driving tips and additional information. However, these manuals are not a complete statement of Wisconsin traffic law. For that you should consult the general Statutes of the State of Wisconsin.

Many organizations worked together to develop the material in the following pages:

- Wisconsin Department of Transportation
- National Public Service Research Institute
- Motorcycle Safety Foundation, with support from
- The National Highway Traffic Safety Administration

CONSIDER SAVING A LIFE BY BECOMING AN ORGAN DONOR

You will be asked if you wish to register as an organ, tissue and eye donor when you apply for or renew your identification (ID) card, instruction permit or driver license. Upon death, donors help save and improve lives through transplantation, therapy, research or education. If you are 18 or older, checking the box indicates your legal consent for donation. Check the box to include your name in the donor registry every time you update your driver record. Please share your decision with your family. You can also register online at www.DonorRegistry.Wisconsin.gov.

The Department of Transportation intends for the products and services it offers to be accessible to all. If you need accommodations or do not understand any part of this publication, please email driverrecords.dmv@dot.wi.gov or call (608) 266-2353.

Information in this and other handbooks and manuals published by the Division of Motor Vehicles is subject to change due to passage of new laws. For the latest information visit www.wisconsin.dmv.gov or contact a DMV Service Center.

Visit our web site at www.wisconsin.dmv.gov for more information on driver licensing products and services. If you have additional questions, email them to driverrecords.dmv@dot.wi.gov or call (608) 266-2353.

WISCONSIN LICENSING INFORMATION

REQUIREMENTS FOR MOTORCYCLE OPERATION

All Wisconsin residents who plan to operate a Type 1 motorcycle on public roads must have a Class M (motorcycle) license.

Most Class M license holders also hold a Class D—car and light truck—license. However, if you want to operate only a Type 1 motorcycle, a “motorcycle only” license is available. For more details, email the address or call the phone number listed on page 2 or inquire at your local DMV Service Center.

Type 1 Motorcycle

- A Type 1 motorcycle is a motor vehicle capable of speeds in excess of 30 mph on a dry level hard surface road with no wind, with a power source as an integral part of the vehicle, while carrying
- A 150 lb. operator **AND** is one of the following:
 - Designed and built with two wheels in tandem, seating for the operator and may have a side-car attached.

OR

- Designed and built to have no more than 3 wheels, seating for the operator and no more than 3 passengers, and does not have the operator area enclosed.

Under 18 requirement:

Wisconsin residents under the age of 18 must have proof that they have completed driver education and have successfully complete a basic rider course to be eligible for a Class M license.

Exemptions to rider course requirements for persons under 18:

- If you live more than 50 road miles from a basic rider course site.
- If you have a valid motorcycle license from another jurisdiction.

Non-residents must have appropriate licensing for motorcycle operation from their home state.

New Wisconsin residents with a driver license from another jurisdiction authorizing operation of motorcycles may be able to get a Wisconsin Class M license without taking the knowledge or skills tests.

Residents of Wisconsin who plan to operate any of the following vehicles on public roads need either a Class D (regular or special restricted) or Juvenile Restricted License:

Type 2 Motorcycle

A Type 2 motorcycle is:

- A motor vehicle designed and built to have at least **three wheels** in contact with the ground with a curb weight less than 1,500 lbs. **and,**
- A passenger and operator area with sides permanently enclosed with rigid construction and a top which may be convertible. Examples of Type 2 vehicles are motorized golf carts, Postal Department mailsters, etc.

Motor Bicycle

- A motor bicycle is a bicycle to which a power unit has been added to permit travel at **no more than 30 mph** on dry, level, hard surface, with no wind, and a 150 lb. operator.

Moped

A moped is any of the following vehicles (excluding a tractor) capable of speeds **not more than 30 mph**, with 150 lb. rider on a dry, level, hard surface with no wind, a power source as an integral part of the vehicle, and a seat for the operator:

- A bicycle-type vehicle with fully operative pedals and an engine certified by the manufacturer at not more than 130 cc.

- A Type 1 motorcycle with an automatic transmission and engine certified at not more than 50 cc.

A Class M license or Motorcycle Instruction Permit (CYCI) is not required to operate these vehicles, however a Class D is and safe riding techniques as outlined in this handbook should be followed.

For details on special licensing to operate the above vehicles, contact your local DMV Service Center.

PROTECTIVE GEAR FOR MOTORCYCLE OPERATION

Required

- Helmet, meeting standards, if you are under 18 years of age or if you have a motorcycle instruction permit.
- Eye protection (face shield/goggles/glasses or an approved windshield).^{*} All ages, all circumstances.

Recommended

- Helmet highly recommended if you are 18 or older.
- Gloves.
- Jacket or shirt with long sleeves.
- Long pants.
- Boots or shoes that cover the ankles.
- Faceshield or goggles are recommended for better eye protection, even if you have glasses or an approved windshield.^{*}

^{*} “.....eye protection worn during hours of darkness **may not be tinted or darkened.**” Section 347.485(2) Wis. Stats. (emphasis added). In other words, faceshields, goggles, glasses worn at night must be clear. **Prescription** photosensitive **corrective** lenses are acceptable. The wearing of other tinted or darkened eye protection while operating a motorcycle during hours of darkness is illegal.

CLASS M LICENSE IN FOUR STEPS

1. Get Cycle Instruction Permit

- Study this handbook.
- Be at least 16.
- If under 18, you must have sponsorship of a parent or guardian, and you must have proof you have completed driver education.
- If under 18, you must provide proof of enrollment in a basic rider course. To obtain proof of enrollment, you will need to enroll in a basic rider course (*please see list of motorcycle training providers at www.dot.state.wi.us/safety/vehicle/motorcycle/training.htm*) and pay the required course fees. Ask your basic rider course provider for the blue copy of DMV form MV3575 (Motorcycle Skills Test Waiver Authorization), which you can show at the DMV Service Center as proof of enrollment.
- Pass a test of knowledge of traffic laws as they relate to cycle operation.
- Depending upon what other instruction permits or licenses you have, or wish to have, you may need additional tests such as a Class D knowledge test, highway signs test or vision and hearing screening.
- Upon meeting all requirements and paying a fee, you will receive a Cycle Instruction Permit (CYCI) which is valid for 6 months.
- If you complete a department-approved basic rider course, you are not required to hold a motorcycle instruction permit unless you do any on-street practice riding.
- If you have held 3 CYCIs, you must successfully complete, or be

enrolled in, a basic rider course before applying for a 4th CYCI.

- If you do not reside within 50 highway miles, by the most direct route, of a basic rider course site, you may obtain a 4th CYCI without the rider course requirement.
- If you choose to take the basic rider course and **NOT** obtain a CYCI prior to successfully completing it, the fee for the CYCI is not required when you apply for your Class M.

2. Practice Riding

- You **must** wear an approved helmet, with the chin strap properly fastened, whether operating the cycle or riding as a passenger (*see Protective Gear*).
- You **must** have eye protection (*see Protective Gear*).
- You **may** carry a licensed person as a passenger. However, DMV does not recommend carrying passengers until you are experienced. (*see Carrying Passengers and Cargo*). The licensed person must:
 - have at least 2 years licensed driving experience.
 - have a Class M License.
- During hours of darkness, you **must** be accompanied by a licensed person who:
 - is at least 25 years old.
 - has at least 2 years licensed driving experience.
 - has a Class M license. (The licensed person does not need to be a passenger on your cycle, but must be nearby).
- Practice on low speed, low traffic volume streets first, then gradually move to higher speed, higher traffic volume streets and highways as skill progresses.

3. Take Motorcycle Skills Test

- **or** successfully complete an approved basic motorcycle rider course, and present satisfactory proof of course completion to the driver license examiner. A basic motorcycle rider course may be required.
- Schedule an appointment for a skills test at www.wisconsin.gov. For the skills test, you must:
 - provide a cycle in safe, legal operating condition.
 - wear eye protection.
 - wear an approved helmet.
 - be at least 16.

If you have failed 2 motorcycle-in-traffic skills tests, and you still wish to obtain a Class M license, you

must successfully complete a basic rider course. Then, upon application, your skills test will be waived.

4. Obtain Class M License

Upon satisfactory completion of the skills test, **or** upon presentation of a motorcycle skills test waiver form, and payment of a fee, a Class M license will be issued to you.

Note: Cycle riders with a physical impairment or disability will need to demonstrate their ability to safely operate a motorcycle at a DMV Service Center. This evaluation will determine if restrictions are necessary and cannot be waived by presenting a motorcycle skills test waiver form.

THE MOTORCYCLE SKILLS TEST

The Pre-test Inspection

Your cycle will be inspected before the test. The test will not be given if any of the following equipment defects are found:

- Handlebars defective, repaired or improvised, or handlebars obviously rising more than 30" above the lowest part of the top of the seat when occupied.
- No headlight.
- Defective mechanical signals (if cycle was manufactured with signals, they must be installed and operating).
- Defective or no horn.
- Inadequate seat.
- Foot pegs or foot rest for operator missing.
- Defective/noisy muffler.
- Defective brakes (front or rear). Cycle must have both brakes if manufactured with two brakes.



- No brake light.
- No speedometer.
- Excessively worn tires (tire cord visible or inadequate tread depth).
- No left rear view mirror.
- Expired or no registration. After 30 days expiration, you must show proof that you have applied for registration.

Note: If you take the test on a three wheel cycle you will be restricted to operating on that type cycle.

The Skills Test

The Motorcycle-in-Traffic Test is a series of traffic situations designed to measure how you respond to road and traffic conditions. You will be given a small radio receiver that is worn under the helmet. The examiner will follow several car lengths behind you, giving directions over the radio. During the test, the examiner will score your speed, attention while riding, skill and position in the lane and through intersections, and a number of right and left turns. The following possible test situations will help you prepare:

- Crossing a blind intersection from a stop sign.
- Turning at a blind intersection from a stop sign.
- Crossing an intersection from a stop sign on a street with 2-way traffic.
- Turning right and left from a stop sign.
- Crossing blind intersection with right-of-way.
- Turning at a blind intersection with right-of-way.
- Entering and leaving the street or roadway.
- Controlling speed.
- Making a quick stop.
- Changing lanes.
- Making a U-turn.
- Turning left from a one-way street.
- Crossing an intersection on a one-way street from a stop sign.
- Stopping and starting on a hill.
- Turning left across traffic.
- Preparing for oncoming vehicles turning in front of cycle.
- Stopping behind other vehicles.
- Observing behind the cycle using the mirrors.
- Passing parked vehicles or roadway hazards.
- Meeting and being overtaken by other vehicles.
- Observing proper following distance.

While you ride, the driver license examiner will be observing your:

- Use of front and rear brakes.
- Observation of the traffic and pedestrian scene.
- Obeying stop signs, speed signs and other laws.
- Use of proper mini lanes when turning.
- Position for seeing and being seen.
- Use of turn signals, and possibly hand signals.
- Proper selection of gaps when entering traffic or turning across traffic.
- Speed control.
- Mirror usage and checking blind spots (use of head checks).
- Keeping a proper following distance.
- Lane selection and position within the lane.
- Foot position on pegs, when in motion.

If you have any questions please ask the driver license examiner.

MOTORCYCLE LAWS

Only motorcycles certified by the federal government for highway operation are permitted on the highway. Cycles cannot be attached to any other moving vehicle unless the cycle is being towed for repair.

No person may operate a motor vehicle in Wisconsin, including a motorcycle, unless the owner or operator of the vehicle has liability insurance in effect for the vehicle being operated and carries proof of insurance when driving.

Law enforcement may ask for proof of insurance at any traffic stop or accident. Failure to have insurance could result in up to a \$500 fine. Failure to have proof when requested could result in a \$10 fine.

You do not need proof of insurance when registering a vehicle or obtaining a driver license, unless DMV specifically requested proof of financial responsibility (SR-22) after a revocation or suspension. Refer to Section 344.61–344.65 Wis. Stats. for full details.

Riding “side saddle” is forbidden.

A single passenger may ride upon the motorcycle if the passenger:

- rides on the seat designed for passengers,
- does not ride in front of the operator, and
- rests his/her feet on standard equipment foot rests or pegs. (The passenger must be tall enough so his/her feet reach the pegs.)

More than one passenger may ride upon the motorcycle if the motorcycle is designed for more than one passenger. See the definition of a Type 1 motorcycle.

Motorcyclists are entitled to use a full traffic lane. You may not ride in any part of a lane occupied by another vehicle except when two cyclists agree to ride side by side in one lane.

Operators and passengers under 18 or with a cycle instruction permit must wear approved helmets (U.S. DOT standard at minimum) with the chin straps properly fastened.

All operators must wear eye protection except when the cycle is equipped with a windshield rising at least 15" above the handlebars.

During darkness or times when little light is available, eye protection must not be tinted or darkened.

When riding on a highway, headlight and taillight must be on at all times. During daylight hours, motor driven cycles may be ridden to a repair shop for replacement of a defective headlamp.

Motor driven cycles may be equipped with modulating headlamps and deceleration warning lights.

Some Type 2 motorcycles or mopeds may not be allowed on highways. Check with your local police department or State Patrol.

Operators of Type 2 vehicles are subject to the same rules of the road as Type 1 motorcycle operators, with the following exceptions:

- helmets and eye protection are not required (they are, nevertheless, highly recommended),
- mopeds may be operated 2 abreast in a single lane **only** where the speed limit is 25 mph or less.
- where speed limit is more than 25 mph, mopeds may be operated only single file, in extreme right-hand lane.
- a moped may not carry any passengers.

When facing a red light, you may proceed **CAUTIOUSLY** through the intersection when the light is still red if **ALL** of the following conditions are present:

- You reasonably believe the signal is vehicle activated (if the signal is timed, you may not proceed through a red light no matter how long it takes to change to green);
- No other vehicles are present to activate the signal;
- You have stopped at the signal for at least 45 seconds; and,
- You yield right-of-way to vehicles proceeding through on a green signal and to pedestrians and bicycles in the crosswalk or intersection.

A driver convicted of failure to yield right-of-way (FYR) is required to attend traffic safety school.

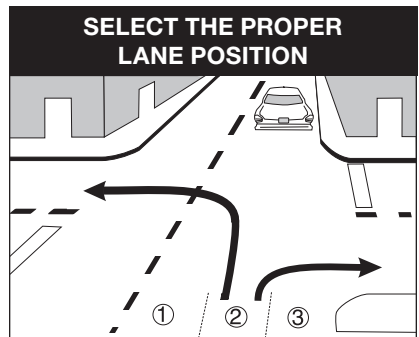
Type 1 motorcycles may park at an angle in a parallel parking area. If parallel or angle parking spaces are marked, three cycles may park in a space. If there is a parking meter installed for the space, and parking regulations are violated, the operator of each cycle parked in the space will receive a citation for violation of time restriction (parking ticket).

Mopeds are considered bicycles for the purposes of parking. Mopeds may be parked on a sidewalk, in a bike rack, or other area designated for bicycle parking. They may not impede the flow of pedestrian traffic.

LANE POSITION (TURNING)

You are entitled to full use of a traffic lane. However, incorrect positioning within the lane as you approach a turn can be hazardous. Knowing how to make a safe turn is a vital part of safe riding.

Proper lane position will increase visibility, communicate your intentions and protect your lane. As you ride, mentally divide your traffic lane into thirds. As you approach the turn, evaluate which path is safest.



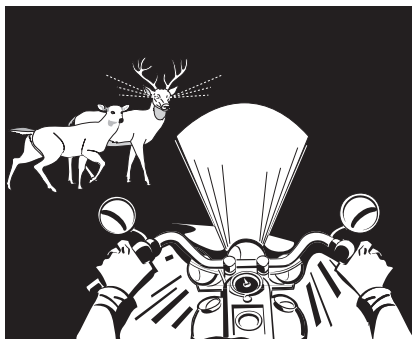
When making a RIGHT turn, you should position yourself so traffic cannot fit between you and the

curb. In addition, you want to control your lane of traffic so others do not try to squeeze through on the left side as well. However, you will also need to evaluate the condition of the roadway—loose gravel, parked cars, etc., when determining the best path.

For a LEFT turn, the approach should be similar to prevent other drivers from sharing your lane or passing you in the turn.

FARM SAFETY/ RURAL DRIVING

You should be aware of special hazards in rural areas of Wisconsin. These may include slow moving tractors, horse drawn wagons or carriages, farm machinery exiting fields or on the roadway, wide machinery, debris on the road (such as mud and manure), and livestock on or crossing the highway. Farm machinery operators may have difficulty seeing or hearing other traffic, and the machinery may not have brake lights or turn signals.



Be alert for deer, especially during the dusk to dawn hours and when you see "Deer Crossing" signs. Scan the sides of the road for motion during the day and the reflection of your headlight in the eyes of deer at night. Reduce speed and sound the horn if you see a deer near the road. There may be other deer nearby. If you must avoid a deer, brake first, then swerve if necessary. Do not combine braking with swerving. Separate the two to maintain control.

RAILROAD CROSSINGS

Motorcyclists should approach all highway-rail intersections VERY slowly and be alert to the possibility of rough crossings.

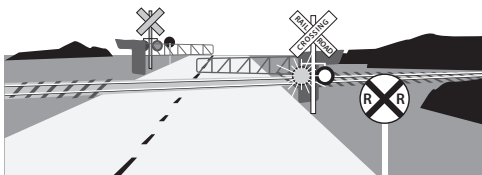
Expect a train on any track in any direction at every highway-rail intersection.

Never ride onto a railroad crossing until you are sure you can clear the tracks on the other side without stopping. Do not stop on the tracks and DO NOT SHIFT gears while crossing tracks.

If the gates are down, stay in your lane and do not cross the tracks until the gates are raised and the red lights stop flashing. It is against the law to drive around gates.

When you are at a multiple-track crossing and the last car of the closest train passes by, before starting to cross, look and listen carefully for another train on another track coming from either direction.

Trains appear to be moving much slower than they are. Do not take a chance and try to beat a train at a crossing. If there is any doubt, stop and wait for the train to pass.



PREPARING TO RIDE

What you do before you start a trip goes a long way toward determining whether or not you'll get where you want to go safely. Before taking off on any trip, a safe rider makes a point to:

- Wear the right gear.
 - Become familiar with the motorcycle.
 - Check the motorcycle equipment.
 - Be a responsible rider.
-

Wear the Right Gear

When you ride, your gear is “right” if it protects you. In any crash, you have a far better chance of avoiding serious injury if you wear:

- An approved helmet.
- Face or eye protection.
- Protective clothing.

Helmet Use

Crashes are not rare events—particularly among beginning riders. And one out of every five motorcycle crashes results in head or neck injuries. Head injuries are just as severe as neck injuries—and far more common. Crash analyses show that head and neck injuries account for a majority of serious and fatal injuries to motorcyclists. Research also shows that, with few exceptions, head and neck injuries are reduced by the proper wearing of an approved helmet.

Some riders don't wear helmets because they think helmets will limit their view to the sides. Others wear helmets only on long trips or when riding at high speeds. Here are some facts to consider:

- An approved helmet lets you see as far to the sides as necessary. A study of more than 900 motorcycle crashes, where 40% of the riders wore helmets, did not find

even one case in which a helmet kept a rider from spotting danger.

- Most crashes happen on short trips (less than five miles long), just a few minutes after starting out.
- Most riders are riding slower than 30 mph when a crash occurs. At these speeds, helmets can cut both the number and the severity of head injuries by half.

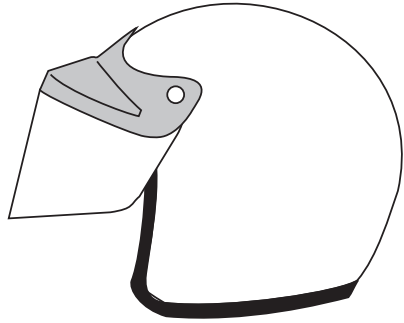
No matter what the speed, helmeted riders are three times more likely to survive head injuries than those not wearing helmets at the time of the crash.

Helmet Selection

There are two primary types of helmets, providing two different levels of coverage—full face and three-quarter.

Whichever style you choose, you can get the most protection by making sure that the helmet:

- Meets U.S. Department of Transportation (DOT) and state standards. The Motorcycle Safety Foundation (MSF) recommends helmets with a label from the Snell Memorial Foundation which gives you an added assurance of quality.
- Fits snugly, all the way around.
- Has no obvious defects such as cracks, loose padding or frayed straps.



Whatever helmet you decide on, keep it securely fastened on your head when you ride. Otherwise, if you are involved in a crash, it's likely to fly off your head before it gets a chance to protect you.

Eye and Face Protection

A plastic shatter-resistant faceshield can help protect your whole face in a crash. It also protects you from wind, dust, dirt, rain, insects, and pebbles thrown up from cars ahead. These problems are distracting and can be painful. If you have to deal with them, you can't devote your full attention to the road.

Goggles protect your eyes, though they won't protect the rest of your face like a faceshield does. A windshield is not a substitute for a faceshield or goggles. Most windshields will not protect your eyes from the wind. Neither will eyeglasses or sunglasses. Glasses won't keep your eyes from watering, and they might blow off when you turn your head while riding.

To be effective, eye or faceshield protection must:

- Be free of scratches.
- Be resistant to penetration.

- Give a clear view to either side.
- Fasten securely, so it does not blow off.
- Permit air to pass through, to reduce fogging.
- Permit enough room for eyeglasses or sunglasses, if needed.

Tinted eye protection should not be worn at night or any other time when little light is available.

Clothing

The right clothing protects you in a collision. It also provides comfort, as well as protection from heat, cold, debris, and hot and moving parts of the motorcycle.

- Jacket and pants should cover arms and legs completely. They should fit snugly enough to keep from flapping in the wind, yet loosely enough to move freely. Leather offers the most protection. Sturdy synthetic material provides a lot of protection as well. Wear a jacket even in warm weather to prevent dehydration. Many are designed to protect without getting you overheated, even on summer days.

- Boots or shoes should be high and sturdy enough to cover your ankles and give them support. Soles should be made of hard, durable slip resistant material. Keep heels short so they do not catch on rough surfaces. Tuck laces in so they won't catch on your motorcycle.
- Gloves allow a better grip and help protect your hands in a crash. Your gloves should be made of leather or similar durable material.

In cold or wet weather, your clothes should keep you warm and dry, as well as protect you from injury. You cannot control a motorcycle well if you are numb. Riding for long periods in cold weather can cause severe chill and fatigue. A winter jacket should resist wind and fit snugly at the neck, wrists and waist. Good-quality rainsuits designed for motorcycle riding resist tearing apart or ballooning up at high speeds.

- Be familiar with the motorcycle controls.
- Check the motorcycle before every ride.
- Keep it in safe riding condition between rides.
- Avoid add-ons and modifications that make your motorcycle harder to handle.

THE RIGHT MOTORCYCLE FOR YOU

First, make sure your motorcycle is right for you. It should “fit” you. Your feet should reach the ground while you are seated on the motorcycle.

At minimum, your street-legal motorcycle should have:

- Headlight, taillight and brakelight.
- Front and rear brakes.
- Turn signals.
- Horn.
- Two mirrors.

BORROWING AND LENDING

Borrowers and lenders of motorcycles, beware. Crashes are fairly common among beginning riders—especially in the first months of riding. Riding an unfamiliar motorcycle adds to the problem.

If you borrow a motorcycle, get familiar with it in a controlled area. And if you lend your motorcycle to friends, make sure they are licensed and know how to ride before allowing them out into traffic.

No matter how experienced you may be, ride extra carefully on any motorcycle that's new or unfamiliar to you. More than half of all crashes occur on motorcycles ridden by the operator for less than six months.

1. Test Yourself

A plastic shatter-resistant faceshield:

- A. Is not necessary if you have a windshield.
- B. Only protects your eyes.
- C. Helps protect your whole face.

Answers appear on page 47.

KNOW YOUR MOTORCYCLE

There are plenty of things on the highway that can cause you trouble. Your motorcycle should not be one of them. To make sure that your motorcycle won't let you down:

- Read the owner's manual first.
- Start with the right motorcycle for you.

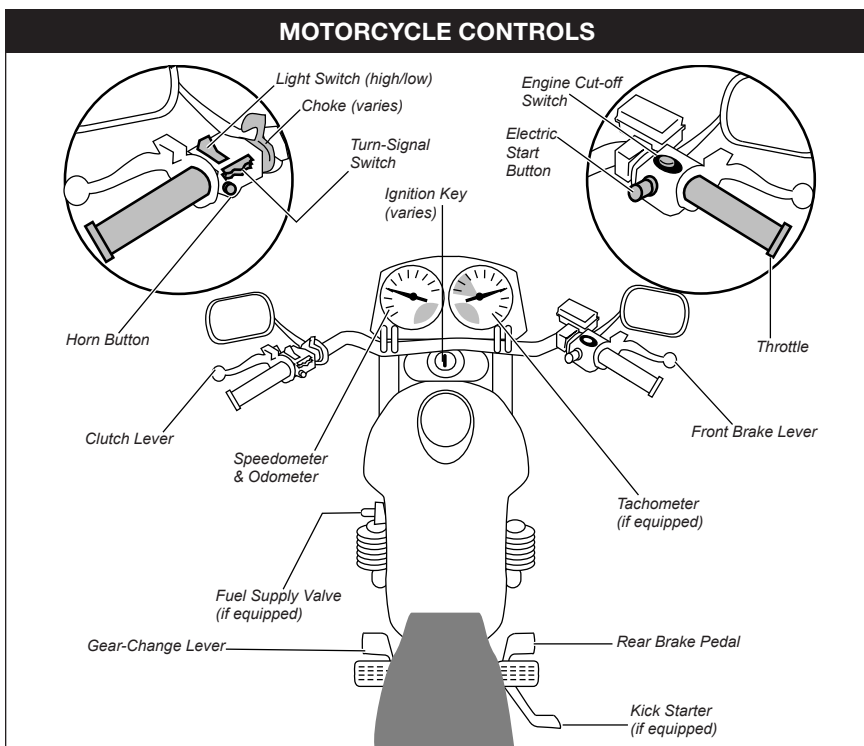
Get Familiar With the Motorcycle Controls

Make sure you are completely familiar with the motorcycle before you take it out on the street. Be sure to review the owner's manual. This is particularly important if you are riding a borrowed motorcycle. If you are going to use an unfamiliar motorcycle:

- Make all the checks you would on your own motorcycle.
- Find out where everything is, particularly the turn signals, horn,

headlight switch, fuel-control valve, and engine cut-off switch. Find and operate these items without having to look for them.

- Know the gear pattern. Work the throttle, clutch, and brakes a few times before you start riding. All controls react a little differently.
- Ride very cautiously and be aware of surroundings. Accelerate gently, take turns more slowly, and leave extra room for stopping.



Check Your Motorcycle

A motorcycle needs more frequent attention than a car. A minor technical failure in a car seldom leads to anything more than an inconvenience for the driver.

If something's wrong with the motorcycle, you'll want to find out about it before you get in traffic. Make a complete check of your motorcycle before every ride.

Before mounting the motorcycle make the following checks:

- **Tires:** Check the air pressure, general wear and tread.
- **Fluids:** Oil and fluid levels. At a minimum, check hydraulic fluids and coolants weekly. Look under the motorcycle for signs of an oil or gas leak.
- **Headlights and Taillight:** Check them both. Test your switch to make sure both high and low beams are working.
- **Turn Signals:** Turn on both right and left turn signals. Make sure all lights are working properly.
- **Brake Light:** Try both brake controls, and make sure each one turns on the brake light.

Once you have mounted the motorcycle, complete the following checks before starting out:

- **Clutch and Throttle:** Make sure they work smoothly. The throttle should snap back when you let go. The clutch should feel tight and smooth.
- **Mirrors:** Clean and adjust both mirrors before starting. It's difficult to ride with one hand while you try to adjust a mirror. Adjust each mirror so you can see the lane behind and as much as possible of the lane next to you. When properly adjusted, a mirror may show the edge of your arm or shoulder: but it's the road behind and to the side that's most important.
- **Brakes:** Try the front and rear brake levers one at a time. Make sure each one feels firm and holds the motorcycle when the brake is fully applied.
- **Horn:** Try the horn. Make sure it works.

In addition to the checks you should make before every trip, check the following items at least once a week: wheels, cables, fasteners, and fluid checks. Follow your owner's manual to get recommendations.

2. Test Yourself

More than half of all crashes:

- A. Occur at speeds greater than 35 mph.
- B. Happen at night.
- C. Involve riders who have ridden their motorcycles less than six months.

Answers appear on page 47.

KNOW YOUR RESPONSIBILITIES

“Accident” implies an unforeseen event that occurs without anyone's fault or negligence. Most often in traffic, that is not the case. In fact, most people involved in a crash can usually claim some responsibility for what takes place. Consider a situation where someone decides to try to squeeze through an intersection on a yellow light turning red. Your light turns green. You pull into the intersection without checking for possible latecomers. That is all it takes for the two of you to tangle. It was the driver's responsibility to stop. And it was your responsibility to look before pulling out. Neither of you held up your end of the deal. Just because someone else is the first to start the chain of events leading to a crash, doesn't leave any of us free of responsibility.

As a rider you can't be sure that other operators will see you or yield the right of way. To lessen your chances of a crash occurring:

- **Be visible:** wear proper clothing, use your headlight, ride in the best lane position to see and be seen.
- **Communicate your intentions:** use the proper signals, brake light, and lane position.
- **Maintain an adequate space cushion:** following, being followed, lane sharing, passing and being passed.
- **Scan your path of travel** 12 seconds ahead.

- **Identify and separate** multiple hazards.
- **Be prepared to act:** remain alert and know how to carry out proper crash-avoidance skills.

Blame doesn't matter when someone is injured in a crash. There is rarely a single cause of any crash. The ability to ride aware, make critical decisions, and carry them out separates responsible riders from all the rest. Remember, it is up to you to keep from being the cause of, or an unprepared participant in, any crash.

RIDE WITHIN YOUR ABILITIES

This manual cannot teach you how to control direction, speed, or balance. That's something you can learn only through practice. But control begins with knowing your abilities and riding within them, along with knowing and obeying the rules of the road.

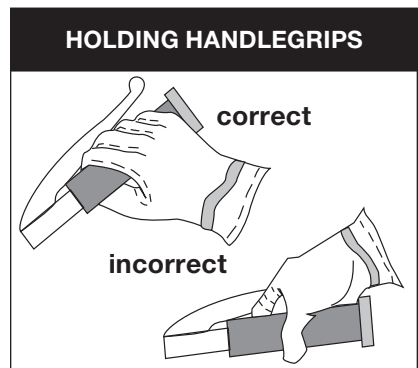
Basic Vehicle Control

Body Position

To control a motorcycle well:

- **Posture:** Sit so you can use your arms to steer the motorcycle rather than to hold yourself up.
- **Seat:** Sit far enough forward so that arms are slightly bent when you hold the handlegrips. Bending your arms permits you to press on the handlebars without having to stretch.
- **Hands:** Hold the handlegrips firmly to keep your grip over rough surfaces. Start with your right wrist flat. This will help you keep from accidentally using too much throttle. Also, adjust the handlebars so your hands are even with or below your elbows. This permits you to use the proper muscles for precision steering.
- **Knees:** Keep your knees against the gas tank to help you keep your balance as the motorcycle turns.

- **Feet:** Keep your feet firmly on the footpegs to maintain balance. Don't drag your feet. If your foot catches on something, you can be injured and it could affect your control of the motorcycle. Keep your feet near the controls so you can get to them fast if needed. Also, don't let your toes point downward—they may get caught between the road and the footpegs.



Shifting Gears

There is more to shifting gears than simply getting the motorcycle to pick up speed smoothly. Learning to use the gears when downshifting, turning, or starting on hills is important for safe motorcycle operation.

Shift down through the gears with the clutch as you slow or stop. Remain in first gear while you are stopped so that you can move out quickly if you need to.

Make certain you are riding slowly enough when you shift into a lower gear. If not, the motorcycle will lurch, and the rear wheel may skid. When riding downhill or shifting into first gear you may need to use the brakes to slow enough before downshifting safely. Work towards a smooth, even clutch release, especially when downshifting.

It is best to change gears before entering a turn. However, sometimes shifting while in the turn is necessary. If so, remember to do so smoothly. A sudden change in power to the rear wheel can cause a skid.

Braking

Your motorcycle has two brakes—one each for the front and rear wheels. Use both of them at the same time. The front brake is more powerful and can provide at least three-quarters of your total stopping power. The front brake is safe to use if you use it properly.

Remember:

- **Use both brakes** every time you slow or stop. Using both brakes for even “normal” stops will permit you to develop the proper habit or skill of using both brakes properly in an emergency. Squeeze the front brake and press down on the rear. Grabbing at the front brake or jamming down on the rear can cause the brakes to lock, resulting in control problems.
- If you **know the technique**, using both brakes in a turn is possible, although it should be done very carefully. When leaning the motorcycle some of the traction is used for cornering. Less traction is available for stopping. A skid can occur if you apply too much brake. Also, using the front brake incorrectly on a slippery surface may be hazardous. Use caution and squeeze the brake lever, never grab.
- Some motorcycles have **integrated braking systems** that link the front and rear brakes together by applying the rear brake pedal. (Consult the owner’s manual for a detailed explanation on the operation and effective use of these systems.)

Turning

Riders often try to take curves or turns too fast. When they can't hold the turn, they end up crossing into another lane of traffic or going off the road. Or, they overreact and brake too hard, causing a skid and loss of control. Approach turns and curves with caution.

Use four steps for better control:

- SLOW
- LOOK
- LEAN
- ROLL

SLOW: Reduce speed before the turn by closing the throttle and, if necessary, applying both brakes.

LOOK: Look through the turn to where you want to go. Turn just your head, not your shoulders, and keep your eyes level with the horizon.

LEAN: To turn, the motorcycle must lean. To lean the motorcycle, press on the handgrip in the direction of the turn. Press left—lean left—go left. Press right—lean right—go right. Higher speeds and/or tighter turns require the motorcycle to lean more.

ROLL: Roll on the throttle through the turn to stabilize suspension. Maintain steady speed or accelerate gradually through the turn. This will help keep the motorcycle stable.

In normal turns, the rider and the motorcycle should lean together at the same angle.

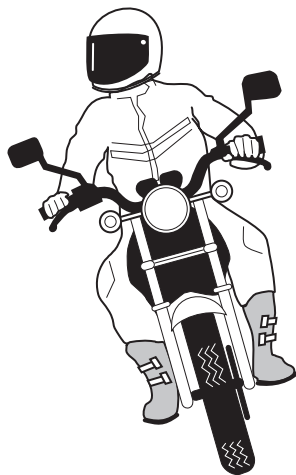
3. Test Yourself

When riding, you should:

- Turn your head and shoulders to look through turns.
- Keep your knees away from the gas tank.
- Turn just your head and eyes to look where you are going.

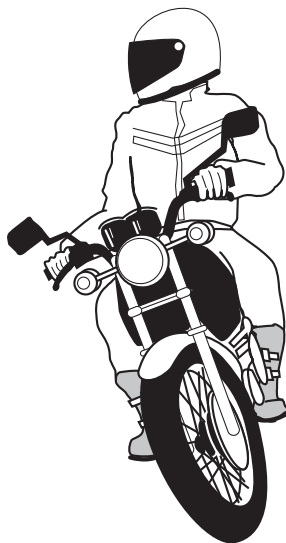
Answers appear on page 47.

NORMAL TURNING



In slow tight turns, counterbalance by leaning the motorcycle only and keeping your body straight.

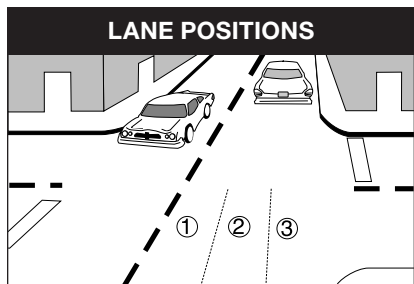
SLOW TURNING



KEEPING YOUR DISTANCE

The best protection you can have is distance—a “cushion of space”—all around your motorcycle. If someone else makes a mistake, distance permits you:

- **Time to react.**
- **Space to maneuver.**



Lane Positions

In some ways the size of the motorcycle can work to your advantage. Each traffic lane gives a motorcycle three paths of travel, as indicated in the above illustration.

Your lane position should:

- Increase your ability to see and be seen.
- Avoid others' blind spots.
- Avoid surface hazards.
- Protect your lane from other drivers.
- Communicate your intentions.
- Avoid wind blast from other vehicles.
- Provide an escape route.

Select the appropriate path to maximize your space cushion and make yourself more easily seen by others on the road.

In general, there is no single best position for riders to be seen and to maintain a space cushion around the motorcycle. No portion of the lane need be avoided—including the center.

Position yourself in the portion of the lane where you are most likely to be seen and you can maintain a space cushion around you. Change position as traffic situations change. Ride in path 2 or 3 if vehicles and other potential problems are on your left only. Remain in path 1 or 2 if hazards are on your right only. If vehicles are being operated on both sides of you, the center of the lane, (path 2), is usually your best option.

The oily strip in the center portion that collects drippings from cars is usually no more than two feet wide. Unless the road is wet, the average center strip permits adequate traction to ride on safely. You can operate to the left or right of the grease strip and still be within the center portion of the traffic lane. Avoid riding on big buildups of oil and grease usually found at busy intersections or toll booths.

Following Another Vehicle

“Following too closely” is a major factor in crashes involving motorcyclists. In traffic, motorcycles need as much distance to stop as cars. A minimum of two seconds following distance is recommended under ideal driving conditions. Less than perfect riding conditions require increasing available time and space. To gauge your following distance:

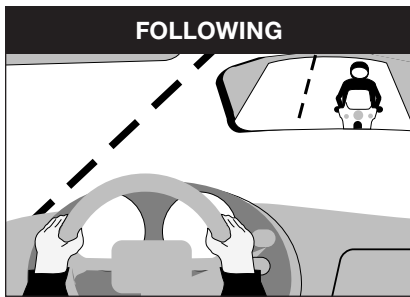
- Pick out a marker, such as a pavement marking or lamppost, on or near the road ahead.
- When the rear bumper of the vehicle ahead passes the marker, count off the seconds: “one-thousand-one, one-thousand-two.”
- If you reach the marker before you reach “two,” you are following too closely.

A two-second following distance leaves space to stop or swerve if the driver ahead stops suddenly. It also permits a better view of potholes and other hazards in the road.

A larger cushion of space is needed if your motorcycle will take longer than normal to stop. If the pavement is slippery, if you cannot see through the vehicle ahead or if traffic is heavy and someone may squeeze in front of you, open up more following distance.

Keep well behind the vehicle ahead even when you are stopped. This will make it easier to get out of the way if someone bears down on you from behind. It will also give you a cushion of space if the vehicle ahead starts to back up for some reason.

When behind a car, ride where the driver can see you in the rearview mirror. Riding in the center portion of the lane should put your image in the middle of the rearview mirror—where a driver is most likely to see you.



Riding at the far side of a lane may permit a driver to see you in a sideview mirror. But remember that most drivers don't look at their sideview mirrors nearly as often as they check the rearview mirror. If the traffic situation allows, the center portion of the lane is usually the best place for you to be seen by the drivers ahead and to prevent lane sharing by others.

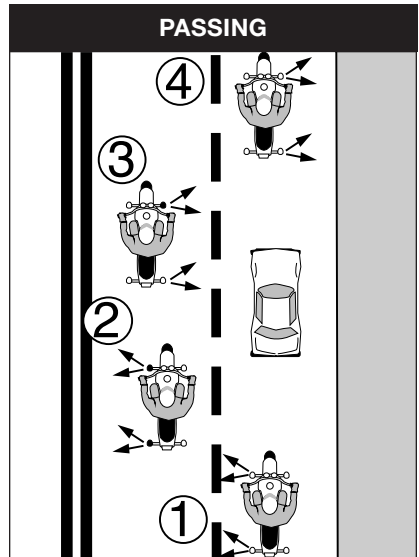
Being Followed

Speeding up to lose someone following too closely only ends up with someone tailgating you at a higher speed.

A better way to handle tailgaters is to get them in front of you. When someone is following too closely, change lanes and let them pass. If you can't do this, slow down and open up extra space ahead of you to allow room for both you and the tailgater to stop. This will also encourage them to pass. If they don't pass, you will have given yourself and the tailgater more time and space to react in case an emergency does develop ahead.

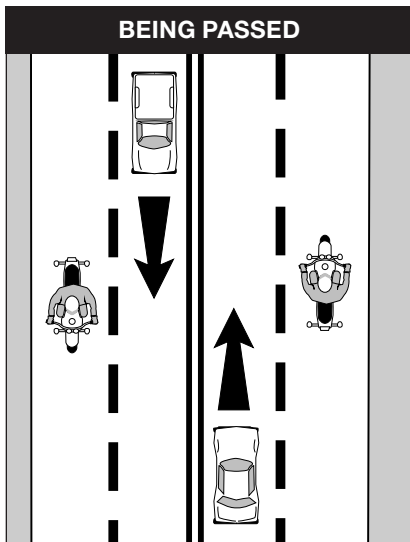
PASSING AND BEING PASSED

Passing and being passed by another vehicle is not much different than with a car. However, visibility is more critical. Be sure other drivers see you, and that you see potential hazards.



Passing

1. Ride in the left portion of the lane at a safe following distance to increase your line of sight and make you more visible. Signal and check for oncoming traffic. Use your mirrors and turn your head to look for traffic behind.
2. When safe, move into the left lane and accelerate. Select a lane position that doesn't crowd the car you are passing and provides space to avoid hazards in your lane.
3. Ride through the blind spot as quickly as possible.
4. Signal again, and complete mirror and headchecks before returning to your original lane and then cancel signal.



Remember, passes must be completed within posted speed limits, and only where permitted. Know your signs and road markings!

Being Passed

When you are being passed from behind or by an oncoming vehicle, stay in the center portion of your lane. Riding any closer to them could put you in a hazardous situation. Avoid being hit by:

- **The other vehicle:** A slight mistake by you or the passing driver could cause a sideswipe.
- **Extended mirrors:** Some drivers forget that their mirrors hang out farther than their fenders.
- **Objects thrown from windows:** Even if the driver knows you're there, a passenger may not see you and might toss something on you or the road ahead of you.
- **Blasts of wind from larger vehicles:** They can affect your control. You have more room for error if you are in the middle portion when hit by this blast than if you are on either side of the lane.

Do not move into the portion of the lane farthest from the passing vehicle. It might invite the other driver to cut back into your lane too early.

Lane Sharing

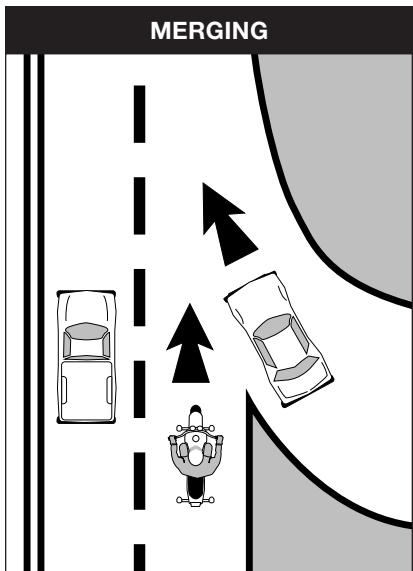
Cars and motorcycles need a full lane to operate safely. Lane sharing is usually prohibited. Riding between rows of stopped or moving cars in the same lane can leave you vulnerable to the unexpected. A hand could come out of a window; a door could open; a car could turn suddenly. Discourage lane sharing by others. Keep a center-portion position whenever drivers might be tempted to squeeze by you. Drivers are most tempted to do this:

- In heavy, bumper-to-bumper traffic.
- When they want to pass you.
- When you are preparing to turn at an intersection.

- When you are getting in an exit lane or leaving a highway.

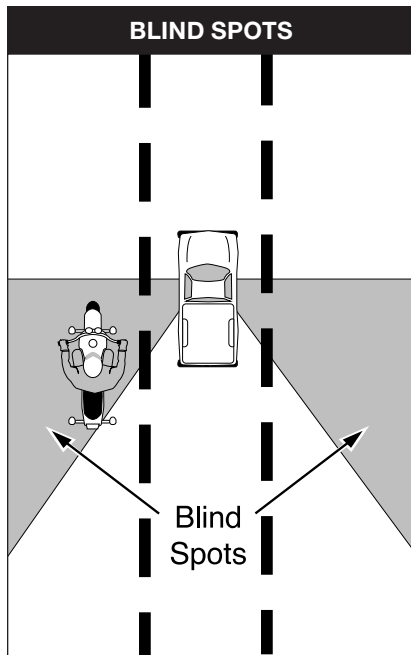
Merging Cars

Drivers on an entrance ramp may not see you on the highway. Give them plenty of room. Change to another lane if one is open. If there is no room for a lane change, adjust speed to open up space for the merging driver.



Cars Alongside

Do not ride next to cars or trucks in other lanes if you do not have to. You might be in the blind spot of a car in the next lane, which could switch into your lane without warning. Cars in the next lane also block your escape if you come upon danger in your own lane. Speed up or drop back to find a place clear of traffic on both sides.



4. Test Yourself

Usually, a good way to handle tailgaters is to:

- Change lanes and let them pass.
- Use your horn and make obscene gestures.
- Speed up to put distance between you and the tailgater.

Answers appear on page 47.

SEE

Good experienced riders remain aware of what is going on around them. They improve their riding strategy by using SEE, a three-step process used to make appropriate judgments, and apply them correctly in different traffic situations:

- Search
- Evaluate
- Execute

Let's examine each of these steps.

Search

Search aggressively ahead, to the sides and behind by checking mirrors and blind spots to avoid potential hazards even before they arise. How assertively you search, and how much time and space you have, can eliminate or reduce harm. Focus even more on finding potential escape routes in or around intersections, shopping areas and school and construction zones.

Search for factors such as:

- Oncoming traffic that may turn left in front of you.
- Traffic coming from the left and right.
- Traffic approaching from behind.
- Hazardous road conditions.

Be especially alert in areas with limited visibility. Visually "busy" surroundings could hide you and your motorcycle from others.

Evaluate

Think about how hazards can interact to create risks for you. Anticipate potential problems and have a plan to reduce risks.

▪ **Road and surface**

characteristics: Potholes, guard rails, bridges, telephone poles and trees won't move into your path but may influence your riding strategy.

▪ **Traffic control devices:**

Look for traffic signals, including regulatory signs, warning signs, and pavement markings to help you evaluate circumstances ahead.

▪ **Vehicles and other traffic:**

May move into your path and increase the likelihood of a crash.

Think about our time and space requirements in order to maintain a margin of safety. You must leave yourself time to react if an emergency arises.

Execute

Carry out your decision.

To create more space and minimize harm from any hazard:

- **Communicate** your presence with lights and/or horn.
- **Adjust your speed** by accelerating, stopping or slowing.
- **Adjust your position** and/or direction.

Apply the old adage "one step at a time" to handle two or more hazards. Adjust speed to permit two hazards to separate. Then deal with them one at a time as single hazards. Decision making becomes more complex with three or more hazards. Weigh the consequences of each and give equal distance to the hazards.

In potential high risk areas, such as intersections, shopping areas and school and construction zones, cover the clutch and both brakes to reduce the time you need to react.

5. Test Yourself

To reduce your reaction time, you should:

- A. Ride slower than the speed limit.
- B. Cover the clutch and the brakes.
- C. Shift into neutral when slowing.

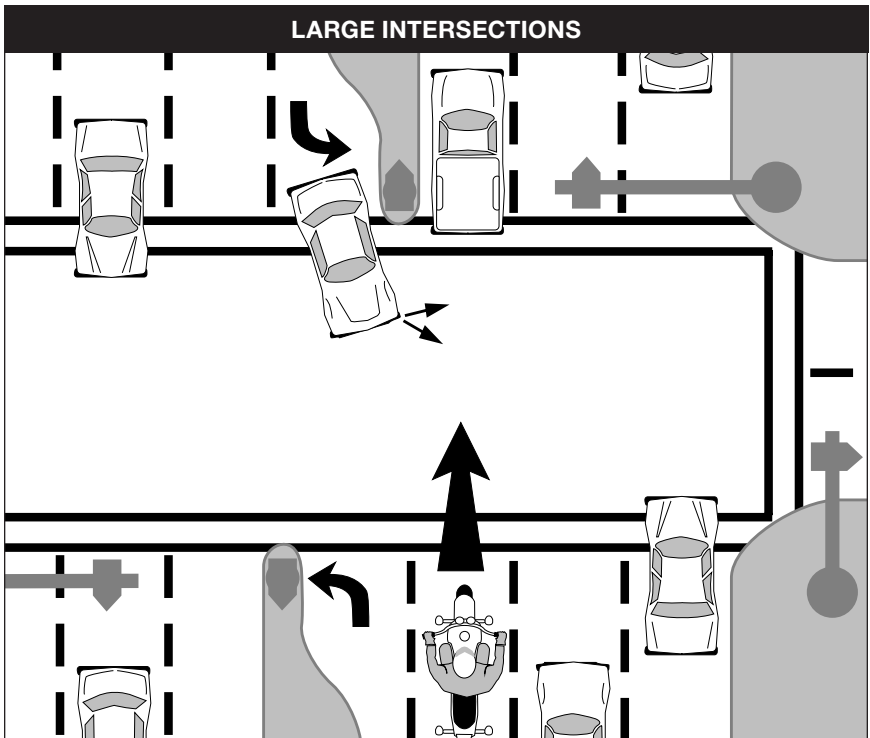
Answers appear on page 47.

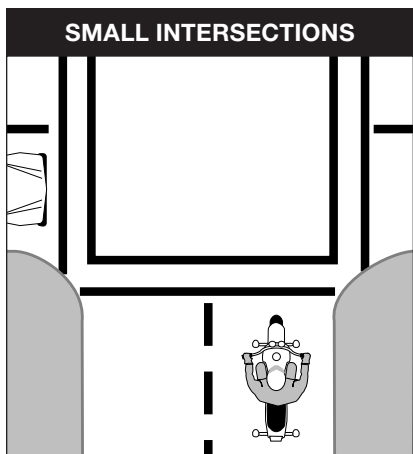
INTERSECTIONS

The greatest potential for conflict between you and other traffic is at intersections. An intersection can be in the middle of an urban area or at a driveway on a residential street—anywhere traffic may cross your path of travel. Over one-half of motorcycle/car crashes are caused by drivers entering a rider's right-

of-way. Cars that turn left in front of you, including cars turning left from the lane to your right, and cars on side streets that pull into your lane, are the biggest dangers. Your use of SEE at intersections is critical. There are no guarantees that others see you. Never count on “eye contact” as a sign that a driver will yield. Too often, a driver looks right at a motorcyclist and still fails to “see” him. The only eyes that you can count on are your own. If a car can enter your path, assume that it will. Good riders are always “looking for trouble”—not to get into it, but to stay out of it.

Increase your chances of being seen at intersections. Ride with your headlight on in a lane position that provides the best view of oncoming traffic. Provide a space cushion around the motorcycle that permits you to take evasive action.



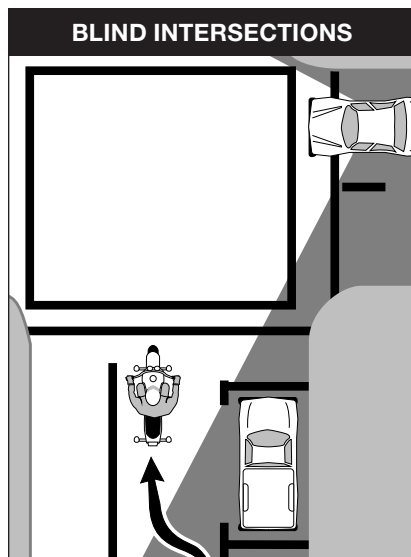


As you approach the intersection, select a lane position to increase your visibility to the driver. Cover the clutch and both brakes to reduce reaction time.

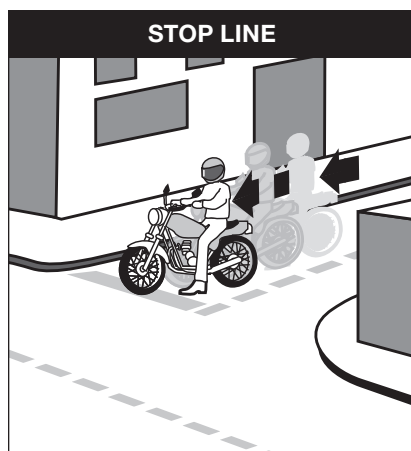
Reduce your speed as you approach an intersection. After entering the intersection, move away from vehicles preparing to turn. Do not radically change speed or position. The driver might think that you are preparing to turn.

Blind Intersections

If you approach a blind intersection, move to the portion of the lane that will bring you into another driver's field of vision at the earliest possible moment. In this picture, the rider has moved to the left portion of the lane—away from the parked car—so the driver on the cross street can see him as soon as possible. Remember, the key is to be seen as soon as possible and remain visible to others while protecting your space.



If you have a stop sign or stop line, stop there first. Then edge forward and stop again, just short of where the cross-traffic lane meets your lane. From that position, lean your body forward and look around buildings, parked cars, or bushes to see if anything is coming. Just make sure your front wheel stays out of the cross lane of travel while you're looking.



Passing Parked Cars

When passing parked cars, stay toward the left of your lane. You can avoid problems caused by doors opening, drivers getting out of cars, or people stepping from between cars. If oncoming traffic is present, it is usually best to remain in the center-lane position to maximize your space cushion.

A bigger problem can occur if the driver pulls away from the curb without checking for traffic behind. Even if he does look, he may fail to see you.

In either event, the driver might cut into your path. Slow down or change lanes to make room for someone cutting in.

Cars making a sudden U-turn are the most dangerous. They may cut you off entirely, blocking the whole roadway and leaving you with no place to go. Since you can't tell what a driver will do, slow down and get the driver's attention. Sound your horn and continue with caution.

Parking at the Roadside

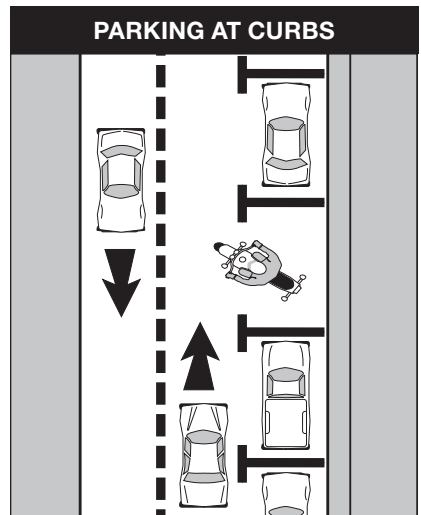
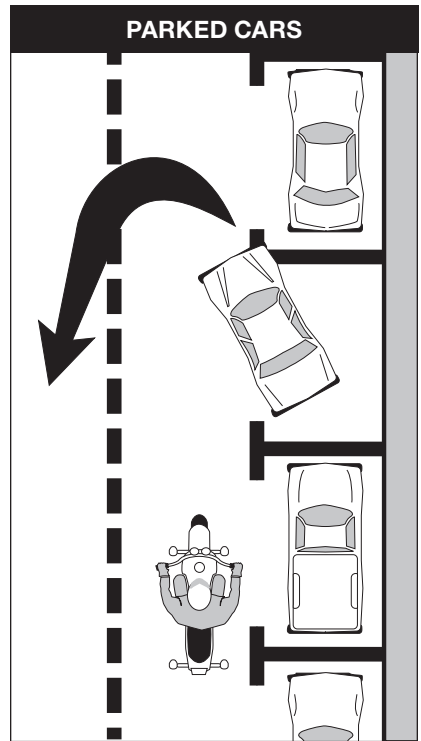
Park at a 90° angle to the curb with your rear wheel touching the curb.

6. Test Yourself

Making eye contact with other drivers:

- A. Is a good sign they see you.
- B. Is not worth the effort it takes.
- C. Doesn't mean that the driver will yield.

Answers appear on page 47.



INCREASING CONSPICUITY

In crashes with motorcyclists, drivers often say that they never saw the motorcycle. From ahead or behind, a motorcycle's outline is much smaller than a car's. Also, it's hard to see something you are not looking for, and most drivers are not looking for motorcycles. More likely, they are looking through the skinny, two-wheeled silhouette in search of cars that may pose a problem to them.

Even if a driver does see you coming, you aren't necessarily safe. Smaller vehicles appear farther away, and seem to be traveling slower than they actually are. It is common for drivers to pull out in front of motorcyclists, thinking they have plenty of time. Too often, they are wrong.

However, you can do many things to make it easier for others to recognize you and your cycle.

Clothing

Most crashes occur in broad daylight. Wear bright colored clothing to increase your chances of being seen. Remember, your body is half of the visible surface area of the rider/motorcycle unit.

Bright orange, red, yellow or green jackets or vests are your best bets for being seen. Your helmet can do more than protect you in a crash. Brightly colored helmets can also help others see you.

Any bright color is better than drab or dark colors. Reflective, bright colored clothing (helmet and jacket or vest) is best.

Reflective material on a vest and on the sides of the helmet will help drivers coming from the side spot

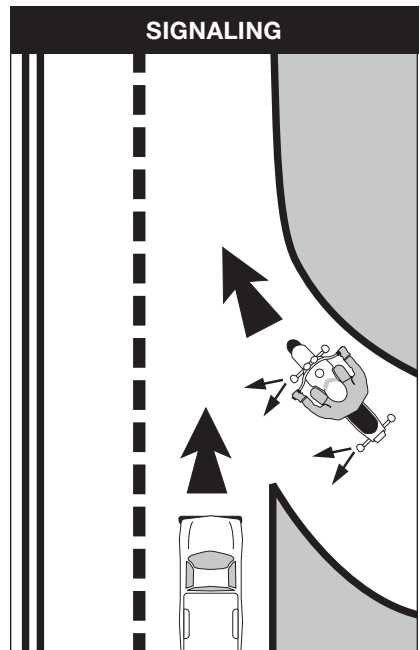
you. Reflective material can also be a big help for drivers coming toward you or from behind.

Headlight(s)

The best way to help others see your motorcycle is to keep the headlight(s) on—at all times (although motorcycles sold in the U.S. since 1978 automatically have the headlights on when running.) Studies show that, during the day, a motorcycle with its light(s) on is twice as likely to be noticed. Use of the high beam during the day increases the likelihood that oncoming drivers will see you. Use low beam at night, in inclement weather and when meeting and following other traffic.

Signals

The signals on a motorcycle are similar to those on a car. They tell others what you plan to do.



However, due to a rider's added vulnerability, signals are even more important. Use them anytime you plan to change lanes or turn. Use them even when you think no one else is around. It's the car you don't see that's going to give you the most trouble. Your signal lights also make you easier to spot. That's why it's a good idea to use your turn signals even when what you plan to do is obvious.

When you enter onto a freeway, drivers approaching from behind are more likely to see your signal blinking and make room for you.

Turning your signal light on before each turn reduces confusion and frustration for the traffic around you. Once you turn, make sure your signal is off or a driver may pull directly into your path, thinking you plan to turn again. Use your signals at every turn so drivers can react accordingly. Don't make them guess what you intend to do.

Brake Light(s)

Your motorcycle's brake lights are usually not as noticeable as the brake lights on a car—particularly when your taillight(s) is/are on. (It/They goes/go on with the headlight(s)). If the situation will permit, help others notice you by flashing your brake light(s) before you slow down. It is especially important to flash your brake light(s) before:

- You slow more quickly than others might expect (turning off a high-speed highway).
- You slow where others may not expect it (in the middle of a block or at an alley).

If you are being followed closely, it's a good idea to flash your brake light before you slow. The tailgater may be

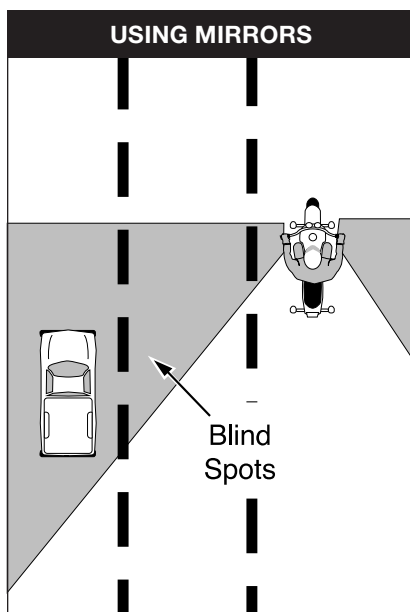
watching you and not see something ahead that will make you slow down. This will hopefully discourage them from tailgating and warn them of hazards ahead they may not see.

Using Your Mirrors

While it's most important to keep track of what's happening ahead, you can't afford to ignore situations behind. Traffic conditions change quickly. Knowing what's going on behind is essential for you to make a safe decision about how to handle trouble ahead.

Frequent mirror checks should be part of your normal scanning routine. Make a special point of using your mirrors:

- **When you are stopped** at an intersection. Watch cars coming up from behind. If the driver isn't paying attention, he could be on top of you before he sees you.
- **Before you change lanes.** Make sure no one is about to pass you.



- **Before you slow down.** The driver behind may not expect you to slow, or may be unsure about where you will slow. For example, you signal a turn and the driver thinks you plan to turn at a distant intersection, rather than at a nearer driveway.

Some motorcycles have rounded (convex) mirrors. These provide a wider view of the road behind than do flat mirrors. They also make cars seem farther away than they really are. If you are not used to convex mirrors, get familiar with them. (*While you are stopped, pick out a parked car in your mirror. Form a mental image of how far away it is. Then, turn around and look at it to see how close you came.*) Practice with your mirrors until you become a good judge of distance. Even then, allow extra distance before you change lanes.

Head Checks

Checking your mirrors is not enough. Motorcycles have “blind spots” like cars. Before you change lanes, turn your head, and look to the side for other vehicles.

On a road with several lanes, check the far lane and the one next to you. A driver in the distant lane may head for the same space you plan to take.

Frequent head checks should be your normal scanning routine, also. Only by knowing what is happening all around you, are you fully prepared to deal with it.

Horn

Be ready to use your horn to get someone’s attention quickly. It is a good idea to give a quick beep before passing anyone that may move into your lane.

Here are some situations:

- **A driver in the lane next to you** is driving too closely to the vehicle ahead and may want to pass.
- **A parked car** has someone in the driver’s seat.
- **Someone is in the street**, riding a bicycle or walking.

In an emergency, press the horn button loud and long. Be ready to stop or swerve away from the danger.

Keep in mind that a motorcycle’s horn isn’t as loud as a car’s, therefore, use it, but don’t rely on it. Other strategies may be appropriate along with the horn.

Riding at Night

At night it is harder for you to see and be seen. Picking your headlight or taillight out of the car lights around you is not easy for other drivers. To compensate, you should:

- **Reduce Your Speed:** Ride even slower than you would during the day—particularly on roads you don’t know well. This will increase your chances of avoiding a hazard.
- **Increase Distance:** Distances are harder to judge at night than during the day. Your eyes rely upon shadows and light contrasts to determine how far away an object is and how fast it is coming. These contrasts are missing or distorted under artificial lights at night. Open up a greater following distance than during daylight. And allow more distance to pass and be passed.
- **Use the Car Ahead:** The headlights of the car ahead can give you a better view of the road than even your high beam can. Taillights bouncing up and down can alert you to bumps or rough pavement.

- **Use Your High Beam:**
Get all the light you can. Use your high beam whenever you are not following or meeting a car. Be visible, wear reflective materials when riding at night.
- **Be flexible about lane position.**
Change to whatever portion of the lane is best able to help you see, be seen, and keep an adequate space cushion.

7. Test Yourself

Reflective clothing should:

- Be worn at night.
- Be worn during the day.
- Be worn day and night.

Answers appear on page 47.

CRASH AVOIDANCE

No matter how careful you are, there will be times when you find yourself in a tight spot. Your chances of getting out safely depend on your ability to react quickly and properly. Often, a crash occurs because a rider is not prepared or skilled in crash-avoidance maneuvers.

Know when and how to stop or swerve, two skills critical to avoiding a crash. It is not always desirable or possible to stop quickly to avoid an obstacle. Riders must also be able to swerve around an obstacle. Determining the skill necessary for the situation is important as well.

Studies show that most crash-involved riders:

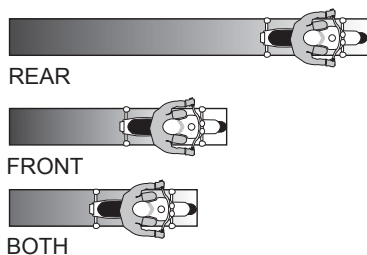
- **Underbrake** the front tire and overbrake the rear.
- **Did not separate braking** from swerving or did not choose swerving when it was appropriate.

The following information offers some good advice.

Quick Stops

To stop quickly, apply both brakes at the same time. Don't be shy about using the front brake, but don't "grab" it, either. Squeeze the brake lever firmly and progressively. If the front wheel locks, release the front brake immediately then reapply it firmly. At the same time, press down on the rear brake. If you accidentally lock the rear brake on a good traction surface, keep it locked until you have completely stopped. Even with a locked rear wheel, you can control the motorcycle on a straightaway if it is upright and going in a straight line.

STOPPING DISTANCE



Always use both brakes at the same time to stop. The front brake can provide 70% or more of the potential stopping power.

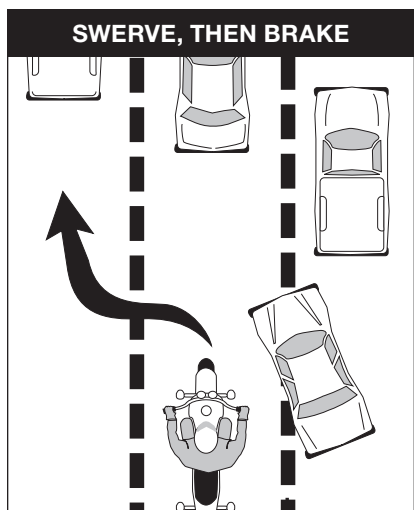
If you must stop quickly while turning or riding a curve, the best technique is to straighten the bike upright first and then brake. However, it may not always be possible to straighten the motorcycle and then stop. If you must brake while leaning, apply light brakes and reduce the throttle. As you slow, you can reduce your lean angle and apply more brake pressure

until the motorcycle is straight and maximum brake pressure is possible. You should “straighten” the handlebars in the last few feet of stopping, the motorcycle should then be straight up and in balance.

Swerving or Turning Quickly

Sometimes you may not have enough room to stop, even if you use both brakes properly. An object might appear suddenly in your path. Or the car ahead might squeal to a stop. The only way to avoid a crash may be to turn quickly, or swerve around it.

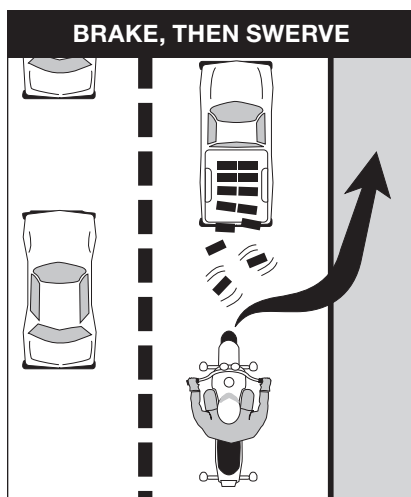
A swerve is any sudden change in direction. It can be two quick turns, or a rapid shift to the side. Apply a small amount of hand pressure to the handgrip located on the side of your intended direction of escape. This will cause the motorcycle to lean quickly. The sharper the turn(s), the more the motorcycle must lean.



Keep your body upright and allow the motorcycle to lean in the direction of the turn while keeping your knees against the tank and your feet solidly on the pegs. Let the motorcycle move underneath you. Make your escape route the target of your vision. Press on the opposite handgrip once you clear the obstacle to return to your original direction of travel. To swerve to the left, press the left handgrip, then press the right to recover. To swerve to the right, press right, then left.

IF BRAKING IS REQUIRED, SEPARATE IT FROM SWERVING.

Brake before or after—
never while swerving.

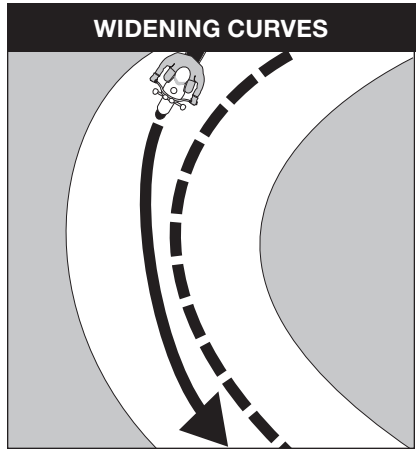
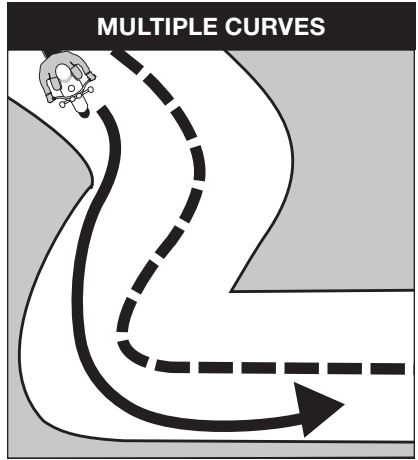
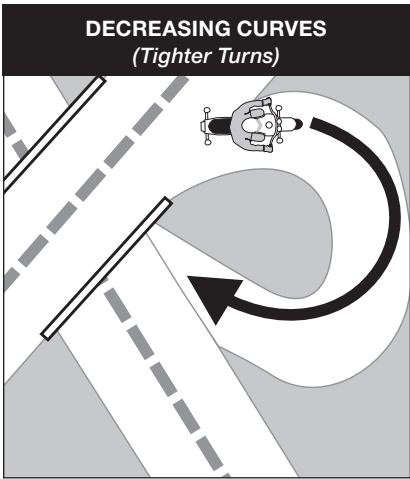
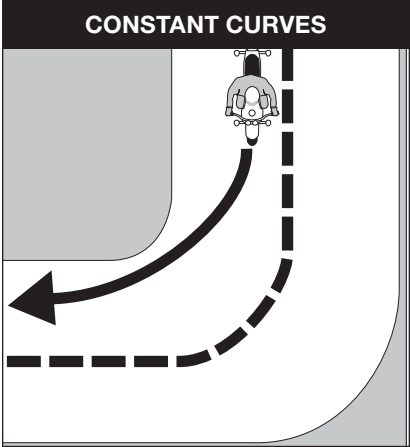


Cornering

A primary cause of single-vehicle crashes is motorcyclists running wide in a curve or turn and colliding with the roadway or a fixed object.

Every curve is different. Be alert to whether a curve remains constant, gradually widens, gets tighter, or involves multiple turns. Ride within your skill level and posted speed limits.

Your best path may not always follow the curve of the road. Change lane position depending on traffic, road conditions and curve of the road. If no traffic is present, start at the outside of a curve to increase your line of sight and the effective radius of the turn. As you turn, move toward the inside of the curve, and as you pass the center, move to the outside to exit.



Another alternative is to move to the center of your lane before entering a curve—and stay there until you exit. This permits you to spot approaching traffic as soon as possible. You can also adjust for traffic “crowding” the center line, or debris blocking part of your lane.

8. Test Yourself

The best way to stop quickly is to:

- A. Use the front brake only.
- B. Throttle down and use the front brake.
- C. Use both brakes at the same time.

Answers appear on page 47.

HANDLING DANGEROUS SURFACES

Your chance of falling or being involved in a crash increases whenever you ride across:

- Uneven surfaces or obstacles.
- Slippery surfaces.
- Railroad tracks.
- Grooves and gratings.

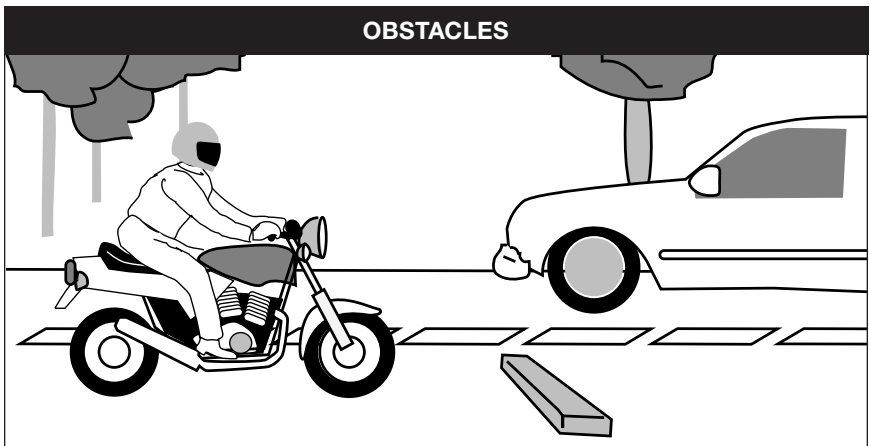
Uneven Surfaces and Obstacles

Watch for uneven surfaces such as bumps, broken pavement, potholes, or small pieces of highway trash.

Try to avoid obstacles by slowing or going around them. If you must go over the obstacle, first, determine if it is possible. Approach it at as close to a 90° angle as possible. Look where you want to go to control your path of travel. If you have to ride over the obstacle, you should:

- Slow down as much as possible before contact.
- Make sure the motorcycle is straight.
- Rise slightly off the seat with your weight on the footpegs to absorb the shock with your knees and elbows, and avoid being thrown off the motorcycle.
- Just before contact, roll on the throttle slightly to lighten the front end.

If you ride over an object on the street, pull off the road and check your tires and rims for damage before riding any farther.



Slippery Surfaces

- Motorcycles handle better when ridden on surfaces that permit good traction. Surfaces that provide poor traction include:
- **Wet pavement**, particularly just after it starts to rain and before surface oil washes to the side of the road.
- **Gravel roads**, or where sand and gravel collect.
- **Mud, snow, and ice.**
- **Lane markings, steel plates and manhole covers**, especially when wet.

To ride safely on slippery surfaces:

- **Reduce Speed:** Slow down before you get to a slippery surface to lessen your chances of skidding. Your motorcycle needs more distance to stop. And, it is particularly important to reduce speed before entering wet curves.
- **Avoid Sudden Moves:** Any sudden change in speed or direction can cause a skid. Be as smooth as possible when you speed up, shift gears, turn or brake.
- **Use Both Brakes:** The front brake is still effective, even on a slippery surface. Squeeze the brake lever gradually to avoid locking the front wheel. Remember, gentle pressure on the rear brake.
- **The center of a lane** can be hazardous when wet. When it starts to rain, ride in the tire tracks left by cars. Often, the left tire track will be the best position, depending on traffic and other road conditions as well.
- **Watch for oil spots** when you put your foot down to stop or park. You may slip and fall.
- **Dirt and gravel** collect along the sides of the road: especially on curves and ramps leading to

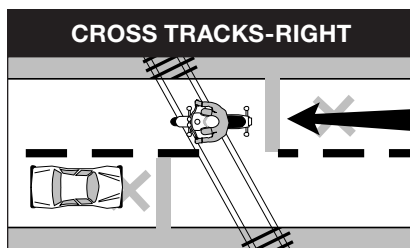
and from highways. Be aware of what's on the edge of the road, particularly when making sharp turns and getting on or off freeways at high speeds.

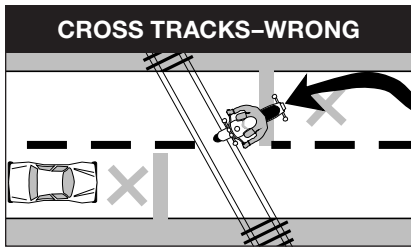
- **Rain dries and snow melts faster** on some sections of a road than on others. Patches of ice tend to crop up in low or shaded areas and on bridges and overpasses. Wet surfaces or wet leaves are just as slippery. Ride in the least slippery portion of the lane and reduce speed.

Cautious riders steer clear of roads covered with ice or snow. If you can't avoid a slippery surface, keep your motorcycle straight up and proceed as slowly as possible. If you encounter a large surface so slippery that you must coast, or travel at a walking pace, consider letting your feet skim along the surface. If the motorcycle starts to fall, you can catch yourself. Be sure to keep off the brakes. If possible, squeeze the clutch and coast. Attempting this maneuver at anything other than the slowest of speeds could prove hazardous.

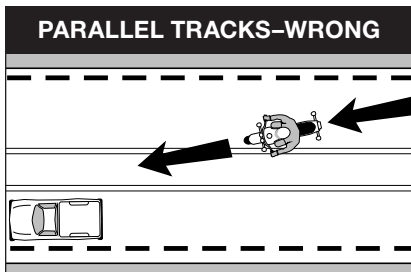
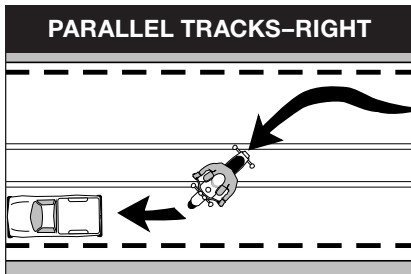
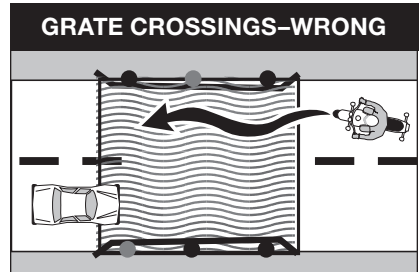
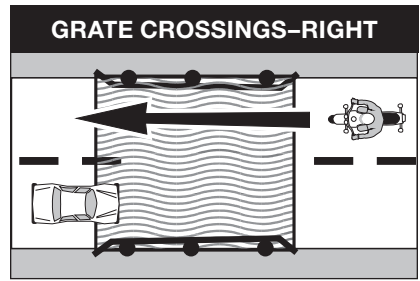
Railroad Tracks, Trolley Tracks and Pavement Seams

Usually it is safer to ride straight within your lane to cross tracks. Turning to take tracks head-on (at a 90° angle) can be more dangerous—your path may carry you into another lane of traffic.





For track and road seams that run parallel to your course, move far enough away from tracks, ruts, or pavement seams to cross at an angle of at least 45°. Then, make a quick, sharp turn. Edging across could catch your tires and throw you off balance.



Grooves and Gratings

Riding over rain grooves or bridge gratings may cause a motorcycle to weave. The uneasy, wandering feeling is generally not hazardous. Relax, maintain a steady speed and ride straight across. Crossing at an angle forces riders to zigzag to stay in the lane. The zigzag is far more hazardous than the wandering feeling.

9. Test Yourself

When it starts to rain it is usually best to:

- A. Ride in the center of the lane.
- B. Pull off to the side until the rain stops.
- C. Ride in the tire tracks left by cars.

Answers appear on page 47.

MECHANICAL PROBLEMS

You can find yourself in an emergency the moment something goes wrong with your motorcycle. In dealing with any mechanical problem, take into account the road and traffic conditions you face. Here are some guidelines that can help you handle mechanical problems safely.

Tire Failure

You will seldom hear a tire go flat. If the motorcycle starts handling differently, it may be a tire failure. This can be dangerous. You must be able to tell from the way the motorcycle reacts. If one of your tires suddenly loses air, react quickly to keep your balance. Pull off and check the tires.

If the front tire goes flat, the steering will feel “heavy.” A front-wheel flat is particularly hazardous because it affects your steering. You have to steer well to keep your balance.

If the rear tire goes flat, the back of the motorcycle may jerk or sway from side to side.

If either tire goes flat while riding:

- **Hold handlegrips firmly**, ease off the throttle, and keep a straight course.
- If braking is required, however, **gradually apply the brake of the tire that isn't flat**, if you are sure which one it is.
- **When the motorcycle slows**, edge to the side of the road, (disengage) squeeze clutch and stop.

Stuck Throttle

Twist the throttle back and forth several times. If the throttle cable is stuck, this may free it. If the throttle stays stuck immediately operate the engine cut-off switch and pull in the clutch at the same time. This will remove power from the rear wheel, though engine noise may not immediately decline. Once the motorcycle is “under control,” pull off and stop.

After you have stopped, check the throttle cable carefully to find the source of the trouble. Make certain the throttle works freely before you start to ride again.

Wobble

A “wobble” occurs when the front wheel and handlebars suddenly start to shake from side to side at any speed. Most wobbles can be traced to improper loading, unsuitable accessories, or incorrect tire pressure. If you are carrying a heavy load, lighten it. If you can't, shift it. Center the weight lower and farther forward on the motorcycle. Make sure tire pressure, spring preload, air shocks, and dampers are at the settings recommended for that much weight. Make sure windshields and fairings are mounted properly. Check for poorly adjusted steering; worn steering parts; a front wheel that is bent, misaligned, or out of balance; loose wheel bearings or spokes; and swingarm bearings. If none of these are determined to be the cause, have the motorcycle checked out thoroughly by a qualified professional.

Trying to “accelerate out of a wobble” will only make the motorcycle more unstable. Instead:

- **Grip the handlebars firmly**, but don't fight the wobble.
- **Close the throttle gradually** to slow down. Do not apply the brakes; braking could make the wobble worse.
- **Move your weight** as far forward and down as possible.
- **Pull off the road** as soon as you can to fix the problem.

10. Test Yourself

If your motorcycle starts to wobble:

- A. Accelerate out of the wobble.
- B. Use the brakes gradually.
- C. Grip the handlebars firmly and close the throttle gradually.

Answers appear on page 47.

Chain Problems

A chain that slips or breaks while you're riding could lock the rear wheel and cause your cycle to skid. Chain slippage or breakage can be avoided by proper maintenance.

- **Slippage:** If the chain slips when you try to speed up quickly or ride uphill, pull off the road. Check the chain and sprockets. Tightening the chain may help. If the problem is a worn or stretched chain or worn or bent sprockets, replace the chain, the sprockets, or both before riding again.
- **Breakage:** You'll notice an instant loss of power to the rear wheel. Close the throttle and brake to a stop.

Engine Seizure

When the engine "locks" or "freezes" it is usually low on oil. The engine's moving parts can't move smoothly against each other, and the engine overheats. The first sign may be a loss of engine power or a change in the engine's sound. Squeeze the clutch lever to disengage the engine from the rear wheel. Pull off the road and stop. Check the oil. If needed, oil should be added as soon as possible or the engine will seize. When this happens, the effect is the same as a locked rear wheel. Let the engine cool before restarting.

ANIMALS

Naturally, you should do everything you safely can to avoid hitting an animal. If you are in traffic, however, remain in your lane. Hitting something small is less dangerous to you than hitting something big—like a car.

Motorcycles seem to attract dogs. If you are chased, downshift and approach the animal slowly. As you approach it, accelerate away and leave the animal behind. Don't kick at an animal. Keep control of your motorcycle, and look to where you want to go.

For larger animals (deer, elk, cattle) brake and prepare to stop. They are unpredictable.

11. Test Yourself

If you are chased by a dog:

- A. Kick it away.
- B. Stop until the animal loses interest.
- C. Approach the animal slowly, then speed up.

Answers appear on page 47.

FLYING OBJECTS

From time to time riders are struck by insects, cigarette butts thrown from cars or pebbles kicked up by the tires of the vehicle ahead.

If you are wearing face protection, it might get smeared or cracked, making it difficult to see. Without face protection, an object could hit you in the eye, face or mouth. Whatever happens, keep your eyes on the road and your hands on the handlebars. When safe, pull off the road and repair the damage.

GETTING OFF THE ROAD

If you need to leave the road to check the motorcycle (or just to rest for a while), be sure you:

- **Check the roadside:** Make sure the surface of the roadside is firm enough to ride on. If it is soft grass, loose sand, or if you're just not sure about it, slow way down before you turn onto it.
- **Signal:** Drivers behind might not expect you to slow down. Give a clear signal that you will be slowing down and changing direction. Check your mirror and make a head check before you take any action.
- **Pull off the road:** Get as far off the road as you can. It can be very hard to spot a motorcycle by the side of the road. You don't want someone else pulling off at the same place you are.
- **Park carefully:** Loose and sloped shoulders can make setting the side or center stand difficult.

CARRYING PASSENGERS AND CARGO

Only experienced riders should carry passengers or large loads. The extra weight changes the way the motorcycle handles, balances, turns, speeds up, and slows down. Before taking a passenger or heavy load on the street, practice away from traffic.

Equipment

To carry passengers safely:

- **Equip and adjust** your motorcycle to carry passengers.
- **Instruct the passenger** before you start.
- **Adjust your riding technique** for the added weight.

Equipment should include:

- **A proper seat** large enough to hold both of you without crowding. You should not sit any farther forward than you usually do.
- **Footpegs** for the passenger. Firm footing prevents your passenger from falling off and pulling you off, too.
- **Protective equipment:** the same protective gear recommended for operators.

Adjust the suspension to handle the additional weight. You will probably need to add a few pounds of pressure to the tires if you carry a passenger. (Check your owner's manual for appropriate settings.) While your passenger sits on the seat with you, adjust the mirror and headlight according to the change in the motorcycle's angle.

Instructing Passengers

Even if your passenger is a motorcycle rider, provide complete instructions before you start. Tell your passenger to:

- **Get on** the motorcycle only after you have started the engine.
- **Sit as far forward as possible** without crowding you.
- **Hold firmly** to your waist, hips, or belt.
- **Keep both feet on the pegs**, even when stopped.
- **Keep legs away** from the muffler(s), chains or moving parts.
- **Stay directly behind you**, leaning as you lean.
- **Avoid unnecessary** talk or motion.

Also, tell your passenger to tighten his or her hold when you:

- **Approach** surface problems.
- **Are about to start** from a stop.
- **Warn that you will** make a sudden move.

Riding with Passengers

Your motorcycle will respond more slowly with a passenger on board. The heavier your passenger, the longer it will take to slow down, speed up, or turn—especially on a light motorcycle.

- **Ride a little slower**, especially when taking curves, corners, or bumps.
- **Start slowing earlier** as you approach a stop.
- **Open up a larger cushion of space** ahead and to the sides.
- **Wait for larger gaps** to cross, enter, or merge in traffic.

Warn your passenger of special conditions—when you will pull out, stop quickly, turn sharply, or ride over a bump. Turn your head slightly to make yourself understood, but keep your eyes on the road ahead.

12. Test Yourself

Passengers should:

- A. Lean as you lean.
- B. Hold on to the motorcycle seat.
- C. Sit as far back as possible.

Answers appear on page 47.

Carrying Loads

Most motorcycles are not designed to carry much cargo. Small loads can be carried safely if positioned and fastened properly.

- **Keep the Load Low:** Fasten loads securely, or put them in saddle bags. Piling loads against a sissybar or frame on the back of the seat raises the motorcycle's center of gravity and disturbs its balance.

- **Keep the Load Forward:** Place the load over, or in front of, the rear axle. Tank bags keep loads forward, but use caution when loading hard or sharp objects. Make sure a tank bag does not interfere with handlebars or controls. Mounting loads behind the rear axle can affect how the motorcycle turns and brakes. It can also cause a wobble.
- **Distribute the Load Evenly:** Load saddlebags with about the same weight. An uneven load can cause the motorcycle to drift to one side.
- **Secure the Load:** Fasten the load securely with elastic cords (bungee cords or nets). Elastic cords with more than one attachment point per side are more secure. A tight load won't catch in the wheel or chain, causing it to lock up and skid. Rope tends to stretch and knots come loose, permitting the load to shift or fall.
- **Check the Load:** Stop and check the load every so often to make sure it has not worked loose or moved.

GROUP RIDING

If you ride with others, do it in a way that promotes safety and doesn't interfere with the flow of traffic. Ask about, and become familiar with, the groups' unique hand signals.

Keep the Group Small

Small groups make it easier and safer for car drivers who need to get around them. A small number isn't separated as easily by traffic or red lights. Riders won't always be hurrying to catch up. If your group is larger than four or five riders, divide it up into two or more smaller groups.

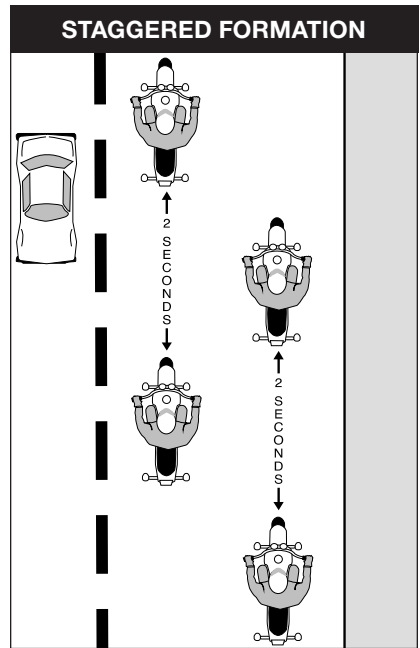
Keep the Group Together

- **Plan:** The leader should look ahead for changes and signal early so “the word gets back” in plenty of time. Start lane changes early to permit everyone to complete the change.
- **Put Beginners Up Front:** Place inexperienced riders just behind the leader. That way the more experienced riders can watch them from the back.
- **Follow Those Behind:** Let the tailender set the pace. Use your mirrors to keep an eye on the person behind. If a rider falls behind, everyone should slow down a little to stay with the tailender.
- **Know the Route:** Make sure everyone knows the route. Then, if someone is separated they won't have to hurry to keep from getting lost or taking a wrong turn. Plan frequent stops on long rides.

Keep Your Distance

Maintain close ranks but at the same time keep a safe distance to allow each rider in the group time and space to react to hazards. A close group takes up less space on the highway, is easier to see and is less likely to be separated. However, it must be done properly.

- **Don't Pair Up:** *Never* operate directly alongside another rider. There is no place to go if you need to avoid an oncoming vehicle in your lane, pothole or something lying in the road. To talk, wait until you are both stopped.
- **Staggered Formation:** This is the best way to keep ranks close yet maintain an adequate space cushion. The leader rides in the left side of the lane, while the second rider stays one second behind in the right side of the lane.



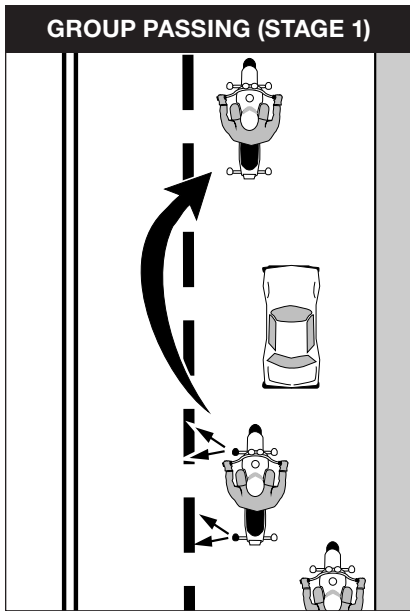
A third rider maintains in the left position, two seconds behind the first rider. The fourth rider would keep a two-second distance behind the second rider. This formation keeps the group close and permits each rider a safe distance from others ahead, behind and to the sides.

- **Passing in Formation:** Riders in a staggered formation should pass one at a time.
- **First, the lead rider should pull out** and pass when it is safe. After passing, the leader should return to the left position and continue riding at passing speed to open room for the next rider.
- **After the first rider passes safely,** the second rider should move up to the left position and watch for a safe chance to pass. After passing, this rider should return to the right position and open up room for the next rider.

Some people suggest that the leader should move to the right side after passing a vehicle. This is not a good idea. It encourages the second rider to pass and cut back in before there is a large enough space cushion in front of the passed vehicle. It's simpler and safer to wait until there is enough room ahead of the passed vehicle to allow each rider to move into the same position held before the pass.

Single-File Formation

It is best to move into a single-file formation when riding curves, turning, entering or leaving a highway.

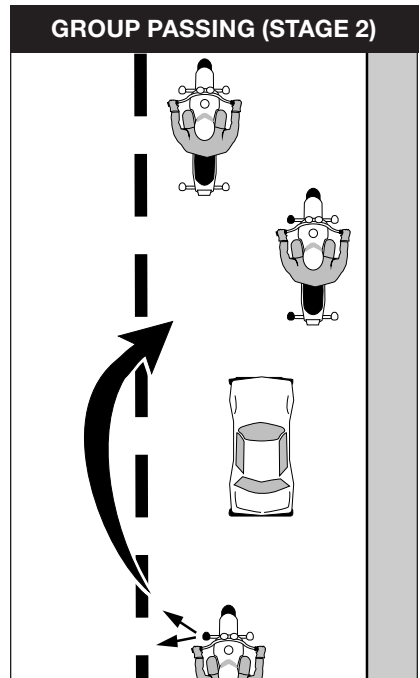


13. Test Yourself

When riding in a group, inexperienced riders should position themselves:

- A. Just behind the leader.
- B. In front of the group.
- C. At the tail end of the group.

Answers appear on page 47.



BEING IN SHAPE TO RIDE

Riding a motorcycle is a demanding and complex task. Skilled riders pay attention to the riding environment and to operating the motorcycle, identifying potential hazards, making good judgments, and executing decisions quickly and skillfully. Your ability to perform and respond to changing road and traffic conditions is influenced by how fit and alert you are. Alcohol and other drugs, more than any other factor, degrade your ability to think clearly and to ride safely. As little as one drink can have a significant effect on your performance, as can certain drugs—prescription or not.



Let's look at the risks involved in riding after drinking or using drugs. What to do to protect yourself and your fellow riders is also examined.

Why This Information is Important

Alcohol is a major contributor to motorcycle crashes, particularly fatal crashes. Studies show that 40% to 45% of all riders killed in motorcycle crashes had been drinking. One-third of those riders had a blood alcohol concentration above legal limits. The rest had only a few drinks in their systems—enough to impair riding skills. In the past, drug levels have been harder to distinguish or have not been separated from drinking violations for the traffic records. But riding “under the influence” of either alcohol or drugs poses physical and legal hazards for every rider. Drinking and drug use is a bigger problem among motorcyclists than it is among automobile drivers. Motorcyclists are more likely to be killed or severely injured in a crash. In crashes that involve

abuse of substances, injuries occur in 90% of motorcycle crashes compared to 33% of automobile crashes. On a yearly basis, 2,100 motorcyclists are killed and about 50,000 are seriously injured in this type of crash. These statistics are too overwhelming to ignore.

By becoming knowledgeable about the effects of alcohol and other drugs, you will see that riding and substance abuse don't mix. Take positive steps to protect yourself and to prevent others from injuring themselves.

Alcohol and Other Drugs in Motorcycle Operation

No one is immune to the effects of alcohol or drugs. Friends may brag about their ability to hold their liquor or perform better on drugs, but alcohol or drugs makes them less able to think clearly and perform physical tasks skillfully.

Judgment and the decision-making processes needed for vehicle operation are affected long before legal limits are reached.

Many over-the-counter, prescription, and illegal drugs have side effects that increase the risk of riding. It is difficult to accurately measure the involvement of particular drugs in motorcycle crashes. But we do know what effects various drugs have on the process involved in riding a motorcycle. We also know that the combined effects of alcohol and other drugs are more dangerous than either is alone.

Alcohol in the Body

Alcohol enters the bloodstream, tissue and organs quickly. Unlike most foods and beverages, it does not need to be digested. Within minutes after being consumed, it reaches the brain and begins to affect the drinker. The major effect alcohol has is to slow down and impair bodily functions—both mental and physical. Whatever you do, you do less well after consuming alcohol.

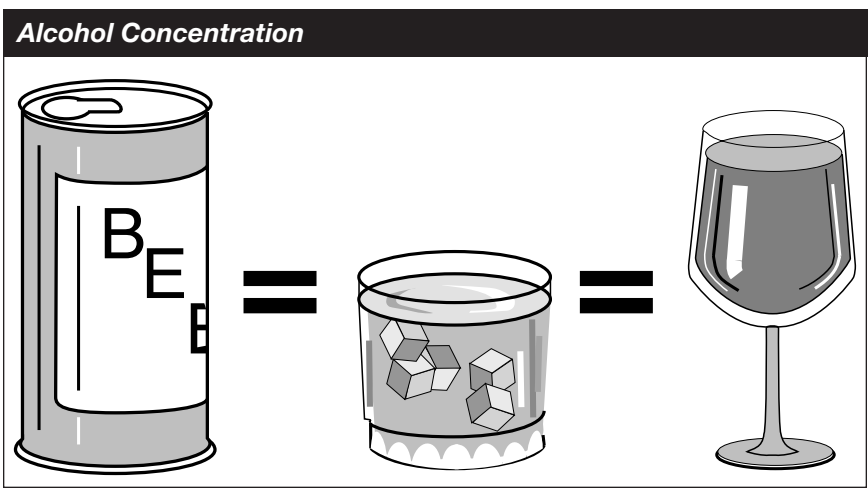
Alcohol Concentration

Alcohol Concentration (AC) is the amount of alcohol in the body. Generally, it takes 1½ to 2 hours to eliminate from your body the alcohol in one drink. However, a variety of other factors may also influence the level of alcohol retained. The more alcohol in your body, the greater the degree of impairment. Three factors play a major part in determining AC:

- **The amount** of alcohol you consume.
- **How fast** you drink.
- **Your body weight.**

Other factors also contribute to the way alcohol affects your system. Your gender, physical condition and food intake are just a few that may cause your AC level to be even higher. But the full effects of these are not completely known.

Alcohol may still accumulate in your body even if you are drinking at a rate of one drink per hour. Abilities and judgment can be affected by that one drink.



A 12-ounce can of beer, a mixed drink with one shot of liquor and a 5-ounce glass of wine all contain the same amount of alcohol.

The faster you drink, the more alcohol accumulates in your body. If you drink two drinks in an hour, at the end of that hour at least one drink will remain in your bloodstream.

There are times when a larger person may not accumulate as high a concentration of alcohol for each drink consumed. They have more blood and other bodily fluids. But because of individual differences it is better not to take the chance that abilities and judgment have not been affected. Whether or not you are legally intoxicated is not the real issue. Impairment of judgment and skills begins well below the legal limit.

Alcohol and the Law

Alcohol Laws

- **Operating While Intoxicated (OWI):** You can be arrested for driving under the influence of alcohol if you have a Prohibited Alcohol Concentration (PAC).
- **Consequences of Conviction:** Years ago, first offenders had a good chance of getting off with a small fine and participation in alcohol-abuse classes. Today the laws of most states impose stiff penalties on drinking operators. And those penalties are mandatory, meaning that judges must impose them.

If you are found guilty of an OWI violation and it is your first conviction, you will be fined and your license will be revoked for six months or more. The penalties are even more

severe for second and subsequent convictions. You could face a minimum one-year revocation with no occupational license during that period. All vehicles that have your name on the title or registration may be subject to immobilization. If it is your third or greater conviction, your vehicle could be seized. And, to top it all off, in Wisconsin OWI convictions remain on your driving record for life.

Implied Consent: If a police or traffic officer asks you to take a PAC test, you must comply. If you refuse, you will lose your driver license for at least one year.

Absolute Sobriety or “Not a Drop”: Drivers under age 21 can be arrested for driving with any amount of alcohol in their body.

Drugged Driving: Use of ANY measurable amount of a controlled substance is considered to be operating impaired and will be treated the same as an Operating While Intoxicated offense. (Examples of restricted controlled substances are marijuana, heroin, LSD, PCP, cocaine, hallucinogens, narcotics and methamphetamine.)

If you are stopped and an officer believes you are under the influence of a controlled substance, they may ask you to take a blood test which will be used to identify a detectable amount of a controlled substance. Refusal to take this blood test will be treated the same as refusal to take a chemical test for alcohol. Your license will be revoked.

Should you have a valid prescription for a controlled substance, you can claim a defense by providing proof that you had a valid prescription for that drug at the time of the incident.

Minimize the Risks

Your ability to judge how well you are riding is affected first. Although you may be performing more and more poorly, you think you are doing better and better. The result is that you ride confidently, taking greater and greater risks. Minimize the risks of drinking and riding by taking steps before you drink. Control your drinking or control your riding.

Don't Drink or Use Drugs

Don't Drink Or Use Drugs:

Once you start, your resistance becomes weaker. Setting a limit or pacing yourself are poor alternatives at best. Your ability to exercise good judgment is one of the first things affected by alcohol or drug use. Even if you have tried to drink or use drugs in moderation, you may not realize to what extent your skills have suffered from their impairing effects.

Or, Don't Ride: If you haven't controlled your drinking or drug use, you must control your riding.

Leave the motorcycle home—so you won't be tempted to ride. Arrange another way to get home.

Wait—If you exceed your limit, wait until your system eliminates the alcohol or drug and its' impairing effects. Remember, it takes 1½ to 2 hours to eliminate each drink you have consumed. It may take much longer to eliminate the drugs.

Step in to Protect Friends

People who have used drugs or have had too much to drink are unable to make a responsible decision. It is up to others to step in and keep them from taking too great a risk. No one wants to do this—it's uncomfortable, embarrassing and thankless. You are rarely thanked for your efforts at the time. But the alternatives are often worse.

There are several ways to keep friends from hurting themselves:

- **Arrange a safe ride:**
Provide alternative ways for them to get home.
- **Slow the pace of drinking:**
Involve them in other activities.
- **Keep them there:** Use any excuse to keep them from getting on their motorcycle. Serve them food and coffee to pass the time. Explain your concerns for their risks of getting arrested or hurt, or hurting someone else.
- **Get friends involved:**
Use peer pressure from a group of friends to intervene.

It helps to enlist support from others when you decide to step in. The more people on your side, the easier it is to be firm and the harder it is for the rider to resist. While you may not be thanked at the time, you will never have to say, "If only I had..."

FATIGUE

Riding a motorcycle is more tiring than driving a car. On a long trip, you'll tire sooner than you would in a car. Avoid riding when you are tired. Fatigue can affect your control of the motorcycle.

- **Protect yourself from the elements:** Wind, cold, and rain make you tire quickly. Dress warmly. A windshield is worth its' cost if you plan to ride long distances.
- **Limit your distance:** Experienced riders seldom try to ride more than about six hours a day.
- **Take frequent rest breaks:** Stop, and get off the motorcycle at least every two hours.

- **Don't drink or use drugs:** Artificial stimulants often result in extreme fatigue or depression when they start to wear off. Riders are unable to concentrate on the task at hand.

14. Test Yourself

If you wait an hour for each drink before riding:

- A. You cannot be arrested for drinking and riding.
- B. Your riding skills will not be affected.
- C. Side effects from the drinking may still remain.

Answers appear on page 47.

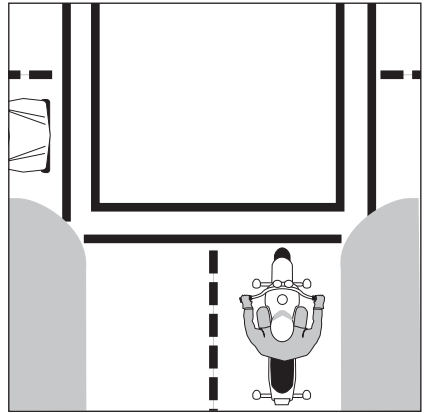
EARNING YOUR LICENSE

Safe riding requires knowledge and skill. Licensing tests are the best measurement of the skills necessary to operate safely in traffic. Assessing your own skills is not enough. People often overestimate their own abilities. It's even harder for friends and relatives to be totally honest about your skills. Licensing exams are designed to be scored more objectively.

To earn your license, you must pass a knowledge test and an on-cycle skill test. Knowledge test questions are based on information, practices, and ideas from this manual. They require that you know and understand road rules and safe riding practices. An on-cycle skill test will either be conducted in an actual traffic environment or in a controlled, off-street area.

SAMPLE KNOWLEDGE TEST QUESTIONS

- It is **MOST** important to **flash your brake light** when:
 - Someone is following too closely.
 - You will be slowing suddenly.
 - There is a stop sign ahead.
- The **FRONT** brake supplies **how much of the potential stopping power?**
 - About one-quarter.
 - About one-half.
 - About three-quarters.
- To **swerve correctly**:
 - Shift your weight quickly.
 - Turn the handlebars quickly.
 - Press the handgrip in the direction of the turn.
- If a tire goes flat while riding, and you must stop, it is usually best to:
 - Relax on the handlegrips.
 - Shift your weight toward the good tire.
 - Brake on the good tire and steer to the side of the road.



- In the image above, the car on the left is waiting to enter the intersection. It is best to:
 - Make eye contact with the driver.
 - Reduce speed and be ready to react.
 - Maintain speed and position.

ANSWERS TO SAMPLE KNOWLEDGE TEST (above)

- | | | |
|------|------|------|
| 1. B | 2. C | 3. C |
| 4. C | 5. B | |

ANSWERS TO TEST YOURSELF (throughout the book)

- | | | |
|-------|-------|-------|
| 1. C | 2. C | 3. C |
| 4. A | 5. B | 6. C |
| 7. C | 8. C | 9. C |
| 10. C | 11. C | 12. A |
| 13. A | 14. C | |

ON-CYCLE SKILLS TEST

Basic vehicle control and crash-avoidance skills are included in on-cycle tests to determine your ability to handle normal and hazardous traffic situations. You may be tested for your ability to:

- Know your motorcycle and your riding limits.
- Accelerate, brake, and turn safely.
- See, be seen and communicate with others.
- Adjust speed and position to the traffic situation.
- Stop, turn and swerve quickly.
- Make critical decisions and carry them out.

Examiners may score on factors related to safety such as:

- Selecting safe speeds to perform maneuvers.
- Choosing the correct path and staying within boundaries.
- Completing normal and quick stops.
- Completing normal and quick turns, or swerves.

To receive an unrestricted class “M” license, you must:

- Pass a motorcycle in traffic (MIT) skills test using a two wheel motorcycle

OR

- Pass a basic motorcycle rider course using a two wheel motorcycle.

If you pass a motorcycle in traffic test (MIT) or a sidecar/trike course using a three wheel motorcycle, your license will be restricted to operating only that type of motorcycle.

MOTORCYCLE RIDER COURSES



LEARN FROM THE PROS

For many people, motorcycling is a fun and energy-efficient means of transportation or recreation. However, motorcycling requires skill, concentration and reasonable precautions. Although it's possible to learn to ride a cycle on your own, trial and error is a tough teacher of motorcycling skills. That's why virtually all motorcycling groups have endorsed the following:

- Motorcycle Safety Foundation's **Basic Rider Course (BRC)**; a curriculum designed for two, in-line wheel motorcycles, which must be balanced by the rider.
- **Experienced Rider Course (ERC)** for experienced motorcycle riders. See page 3 for requirements for persons under 18.
- **United Side Car Association Sidecar Safety Program Sidecar/Trike Novice Course.** The Sidecar class uses a motorcycle with a sidecar. The Trike is a three-wheel motorcycle, like a tricycle with an engine.

- The **Sidecar/Trike Advanced Course** for the experienced sidecarists and trikers.

The Courses

The **BRC** is designed for beginning riders. It was developed by the Motorcycle Safety Foundation and approved by the Wisconsin Department of Transportation. It consists of 6 hours of classroom and 10 hours of on-cycle instruction including the following:

- Preparing to ride.
- Turning, shifting and braking.
- Street strategies.
- Special situations.
- Increasing riding skills.
- Maintenance and insurance.

The **ERC** is designed for experienced riders with 3,000 miles recent experience, at least half of which are urban. This course is not offered at all facilities and the curriculum may vary. The curriculum was developed by the Motorcycle Safety Foundation and is approved by the Wisconsin Department of

Transportation. It consists of 5 hours of on-cycle instruction and covers:

- Risk awareness, acceptance and management.
- Rider responsibility.
- Being prepared to ride.
- Traction management.
- Review of basic riding and advanced riding skills.
- On-cycle practice of basic riding skills and advanced riding skills.

The **Sidecar/Trike Novice Course** is designed for beginners, those who have concerns about balancing a two-wheel motorcycle, or those who want to try something different. It consists of 8 hours of classroom and 8 hours of on-cycle instruction. The course teaches:

- Preparing to ride.
- Turning, shifting and braking.
- Street strategies.
- Special situations.
- Increasing riding skills.
- Accident avoidance skills.

The **Sidecar/Trike Advanced Course** is designed for those who are already driving a sidecar rig or a trike. It consists of 4 hours of classroom and 4 hours of on-cycle instruction. The course covers:

- Turning and braking a weighted or unweighted side car.
- Street strategies.
- Special situations.
- Review basic driving skills and advanced driving skills.

The curriculum for both the Sidecar/Trike Novice and the Advanced courses was developed by the Evergreen Safety Council Sidecar/Trike Education Program (ESC-S/TEP) and is approved by the Wisconsin Department of Transportation. For more information, course locations and schedules, visit www.esc.org/stepnational.html.

Instructors

Instructors for the BRC and ERC courses are certified by the Motorcycle Safety foundation and are approved by the Wisconsin Department of Transportation. Please see list of motorcycle training providers at www.dot.state.wi.us/safety/vehicle/motorcycle/training.htm and find a location near you. All instructors are motorcycle riders who have completed 65 hours of instructor training. The instructors for the Sidecar/Trike courses are trained by the Evergreen Safety Council Sidecar/Trike Education Program and have completed 40 hours of instructor training.

Provided For You

A helmet may be provided. Lightweight motorcycles are provided for class use. Sidecar rigs may be available for use at some facilities, but it is recommended that you use your own sidecar rig or trike. You must provide your own vehicles for the experienced riders/advanced riders classes. All student-owned vehicles must be street-legal and insured.

You Provide

You provide the following protective clothing:

- Boots with walking heels, high enough to cover ankles;
- Long pants of denim or other heavy material;
- Full fingered leather gloves, unlined but not too thin;
- Long sleeved jacket or shirt, made from denim or other heavy material.

You may provide your own helmet and eye protection if you choose.

Who Can Attend

Any Wisconsin resident 15½ years of age or older may attend. However, you must be 16 and have proof that you have completed driver education before you can obtain a CYCI and/or Class M license. It is necessary that you know how to balance and ride a bicycle. Parents must sign for you if you are under the age of 18.

WAIVER OF SKILLS TEST

The motorcycle skills test, ordinarily required for a Class M license, may be waived if you successfully complete an approved Basic Rider Course, or a Sidecar/Trike Novice Course. Other requirements for waiver are:

- You must pass the motorcycle knowledge test and be at least 16 years of age.
- If taking the course on a three-wheel vehicle, the Class M license will be restricted to “three-wheel vehicles,” only.

Note: An approved Basic Rider Course taken outside Wisconsin may be sufficient for waiver of Wisconsin skills test. Be sure to bring your waiver form or course completion card to DMV when you come to get your Class M license.

POINT REDUCTION

Successful completion of a basic or experienced rider course may be utilized for driver license record point reduction purposes. Up to 3 points accumulated while operating a motorcycle may be forgiven. Phone the number or email the address listed on the inside front cover for details.

SCHEDULES

WisDOT approved training programs are held at Technical Colleges across the state and other locations.

Schedules vary from site to site, but in most cases evening, daytime and weekend courses are scheduled to meet local needs. Please see list of motorcycle training providers at www.dot.state.wi.us/safety/vehicle/motorcycle/training.htm and contact a provider near you for their exact schedule and fees.

For the beginning or experienced Rider Course nearest you, visit
www.dot.state.wi.us/safety/vehicle/motorcycle/training.htm

call toll free:

**1-800-DOT-WMSP
(1-800-368-9677)**



Thank you to the Motorcycle Safety Foundation
for most of the information contained in this manual.

Additional thanks to the Wisconsin Department
of Transportation's Bureau of Transportation Safety,
Wisconsin Motorcycle Safety Program, and
the National Highway Traffic Safety Administration
for development and funding of the cover design.

Diagrams and drawings used in this manual are for reference only
and are not to correct scale for size of vehicles and distances.

The following is a statement from the Motorcycle Safety Foundation:
The information contained in this publication is offered for the benefit of those
who have an interest in riding motorcycles. The information has been compiled
from publications, interviews and observations of individuals and organizations
familiar with the use of motorcycles, accessories, and training. Because there are
many differences in product design, riding styles, Federal, State and local laws,
there may be organizations and individuals who hold differing opinions. Consult
your local regulatory agencies for information concerning the operation of
motorcycles in your area. Although the Motorcycle Safety Foundation will
continue to research, field test and publish responsible viewpoints on the
subject, it disclaims any liability for the views expressed herein.



BDS110 June 2014