

The Law Offices of Joe Bornstein - Maine Lawyers Working For Maine People®

# MOTORCYCLE SAFETY HANDBOOK



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Dear Maine Motorcycle Enthusiast,

Mainers like us know the beauty of our state. The open road runs from beaches to lakes to forests and mountains, and is perfect for rides everywhere in between.

But with all types of driving come accidents. At my law firm, we see firsthand the effects of serious motorcycle accidents and the results are often severe. That's why we created this booklet to help educate Mainers on basic rider safety.

The following pages are taken directly from the "**State of Maine Motorist Handbook and Study Guide**" and focus solely on motorcycle safety. Taking a few minutes to review these pages will not only educate you on the rules of the road, but also provide helpful riding tips.

Each year in Maine, on average there are 17 fatalities and over 600 motorcycle accidents. Our attorneys know the risks bikers face on the road. More often than not it is other drivers who are responsible due to driver inattention or not sharing the road. Wearing proper safety gear can help save lives.

Whether you are young or old, an experienced rider, or new to motorcycles, it is always wise to familiarize yourself with safety tips to help "Share the Road." Because when it comes to enjoying Maine's highways and byways, a safe ride is always a fun and enjoyable ride.

Warm wishes for a safe ride,

A handwritten signature in black ink that reads "Joe Bornstein".

Joe Bornstein

JLB/wdb

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# Motorcycles or Mopeds

## **Defining a Motorcycle or Moped**

### **Definition of a Motorcycle**

Motorcycle means a motor vehicle that has a seat or a saddle for the use of the rider and is designed to travel with only 2 or 3 ten-inch or larger diameter wheels in ground contact and has a motor with a cylinder capacity of more than 50 cubic centimeters or an electric motor with a capacity of not less than 1500 watts. Any class of operator's license with a motorcycle endorsement or valid instruction permit is required.

### **Mopeds**

Moped means a motorized device designed to travel with only 2 or 3 ten-inch or larger diameter wheels in contact with the ground and that; may have fully operative pedals for propulsion by human power; has an electric or a liquid fuel motor with a cylinder capacity displacement not exceeding 50 cubic centimeters or an electric motor with a capacity under 1500 watts; and is equipped with a power drive system that functions only directly or automatically and does not require clutching or shifting by the operator after the drive system is engaged. Moped does not include an electric personal assistive mobility device. Any class of operator's license, valid motorcycle or moped instruction permit is required.

### **Operating a Moped**

Although a license or special permit is required to operate a moped, it is ridden much the same way as a bicycle. A moped may only be operated in single file and as far as practicable to the right side of the road at all times, except when making a left turn. In preparing for a left turn, look over your left shoulder to make sure the way is clear, signal and move carefully into position just to the right of the centerline of the road. The turn should be completed in this same position on the roadway entered. Once the turn is completed, look over the right shoulder to make sure the way is clear, signal and carefully maneuver back to the far right side of the road. It is advisable to read the information contained in this study guide on Motorcycles or Mopeds as well as Bicycle Driving Recommendations.

### **Motorized Scooter**

Motorized scooter means a scooter that has 2 or 3 wheels less than ten inches in diameter in ground contact or is powered by a motor having a maximum piston displacement of less than 25 cubic centimeters or an electric motor with a capacity not exceeding 750 watts. Motorized scooter does not include an electric personal assistive mobility device. Any class of operator's license or valid instruction permit is required.

## **Motorcycle Requirements**

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### **Who May Operate a Motorcycle or Moped?**

Any resident of the state who has a motorcycle permit or a valid Maine motorcycle license. Any nonresident possessing a valid motorcycle license from the state or country of their legal residence.

### **How to Obtain a Motorcycle License**

- Be at least 16 years of age. Completion of basic driver education is required if under age 18. Completion of a prescribed motorcycle driver education program consisting of an 8-hour block of instructions, is also required for all applicants.
- Applications may be obtained at any Motor Vehicle Branch Office.
- Written and road tests specifically for motorcycles are required.
- After passing the written test, a Learner's Permit will be issued which is valid for two years.
- On a Learner's Permit you may not operate a motorcycle other than daylight hours.
- The Secretary of State is authorized to waive the requirement of a road examination for a motorcycle endorsement on receipt of a certificate demonstrating that the person successfully completed the Basic Rider Course: (BRC). If the road examination is waived the motorcycle endorsement prohibits the holder from carrying a passenger for a period of 60 days following the date of issuance of the endorsement.

**Note:** The Basic Rider Course (BRC) is the 15 hour motorcycle hands on rider course and is the only course acceptable for waiver of the motorcycle road test.

### **Other Motorcycle Requirements**

#### **Lights**

All motorcycles must have an approved headlight on while in operation. (Type approval provided by the Department of Transportation.) In addition:

- Your dimmer switch (high-low) beam should be positioned so that your thumb can exercise control without removing your hand from the handlebars.
- Always check your lighting system if there is a chance that you will be riding in dusk or evening hours.
- If you have been on rough terrain, your headlights may have been jarred out of focus; adjustments may be necessary to maintain proper alignment.

#### **Rearview Mirror**

All motorcycles shall be equipped with a rearview mirror which affords the operator a clear view of the highway in the rear for a distance of at least 200 feet.

## Helmets

- Every person under the age of 18 years who rides as a passenger must wear protective headgear.
- Every person who operates on a Learner's Permit must wear protective headgear.
- For one year following successful completion of the driving test every operator must wear protective headgear.

## Proper Gear

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### We Recommend: Proper Gear (Clothing, Helmets and Vision)

In any accident, you have a far better chance of avoiding serious injury if you are wearing an approved helmet, face or eye protection and proper protective clothing.

## Helmets

An approved safety helmet can prevent serious head injury. Wearing a helmet is not only good sense; in some cases; it's the law.

One of every five motorcycle accidents reported results in head or neck injuries – the worst kind of injuries you can get. Head injuries are your greatest threat. Wearing a securely fastened helmet is the single most important thing you can do to improve your chances of surviving an accident. 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 accidents failed to find even one case in which a helmet kept a rider from spotting danger.
- Most accidents happen on short trips (less than five miles long), just a few minutes after starting out.
- Even low-speed accidents can be fatal. Most riders are going slower than 30 MPH when they get hurt. At these speeds, helmets can cut both the number and the severity of head injuries by half.

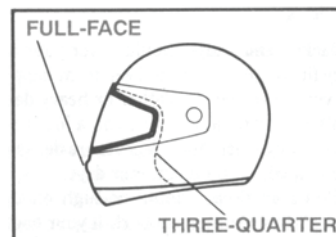
No matter what the speed, non-helmeted riders are **three times** more likely to die from head injuries than are riders who are wearing helmets at the time of the accident.

## Helmet Selection

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

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

- Meets U.S. Department of Transportation (DOT) and state standards. Helmets with labels from the American National Standards Institute (ANSI) or the Snell Memorial Foundation give you added assurance of quality.
- Fits snugly, all the way around.
- Has no obvious defects such as cracks, loose padding, or frayed straps.



Not all helmet damage is obvious. If you're thinking about buying a used helmet, first make sure it's made by a company that will check it for damage. Then have the manufacturer check it before you pay for it.

Whatever helmet you decide on, make sure to keep it securely fastened on your head when you ride. Otherwise, if you have an accident, it's likely to fly off your head before it gets a chance to protect you.

### **Eye and Face Protection**

A plastic face shield can help protect your whole face in an accident. It also protects you from wind, dust, dirt, rain, insects, and stones thrown up from cars ahead.

Goggles can protect your eyes from all these things, though they won't protect the rest of your face like a face shield does. Most windshields will not protect your eyes from wind. 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 face protection must:

- Be free of scratches.
- Be made of material that does not shatter.
- Give a clear view to either side.
- Fasten securely, so it cannot blow off.
- Allow air to pass through, to reduce fogging.
- Allow 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**

**Jacket and pants** should cover your arms and legs completely. Make sure they fit snugly enough to keep from flapping in the wind, yet loosely enough to let you move freely. Leather or heavy denim clothing is best; however, sturdy synthetic material can give you a lot of protection as well. Wear a jacket even in warm weather. Many jackets are designed to protect you without getting you overheated, even on summer days.

**Boots or shoes** should be high enough to cover your ankles and sturdy enough to give them support. If your boots or shoes have laces, be sure they're tucked in so they won't catch on your motorcycle.

**Gloves** allow a better grip and help protect your hands in a collision. Your gloves should be made of leather or heavy cloth.

In cold or wet weather your clothes should keep you warm and dry, as well as protect you from injury. A winter jacket should resist wind and fit snugly at the neck, wrists, and waist. Rain suits should be of good quality and designed for riding.

## **Operating Hints**

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Cycle riders as well as automotive drivers must be jointly responsible for the welfare of one another when operating their vehicles. Courtesy on the road means considering the other person first, regardless of who has the right of way. This is more than the golden rule of good defensive driving, it is common sense.

### **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:

- Start with the right motorcycle for you.
- 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 cycle 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 cycle.

At minimum, your street-legal cycle should have:

- Headlight, taillight, and brake light
- Front and rear brakes
- Turn signals
- Horn
- Two mirrors

### **Borrowing and Lending**

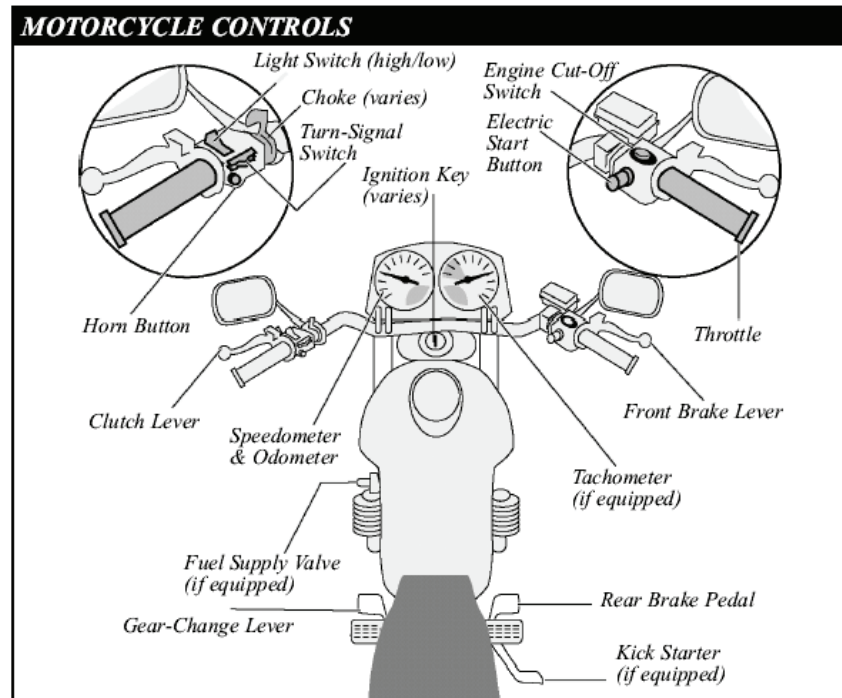
Borrowers and lenders of motorcycles, beware. Collisions are fairly common among beginning riders – especially in the first months of riding. Riding an unfamiliar cycle adds to the problem. If you borrow a motorcycle, get familiar with it in a controlled area. And if you lend your motorcycle to friends, 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 bike that's new or unfamiliar to you. More than half of all collisions occur on motorcycles ridden by the operator for less than six months.



## Get Familiar with the Motorcycle Controls

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



- Make all the checks you would on your own cycle.
- 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 differently.
- Ride very cautiously. Accelerate gently, take turns more slowly, and leave extra room for stopping.

## Check the Motorcycle

If something's wrong with the motorcycle, you'll want to find out about it *before* you get in traffic. Here are the things you should check before *every ride*.

While walking to the motorcycle take a good look at your *tires*. If one looks low, check the pressure. The motorcycle will not handle properly if the air pressure is too low and could result in tire failure.

Look under the bike for signs of an oil or gas leak. If there is a puddle, determine the cause and get the leak fixed.

Before mounting the motorcycle make the following checks:

- **Fluids** – Oil and fuel levels
- **Headlight and Taillight** – Check them both. Test your dimmer to make sure both high and low beams are working.
- **Turn Signals** – Turn on both right and left turn signals. Make sure all four lights flash.
- **Brake Light** – Try both brake controls, and make sure *each one* turns on the brake light.
- **Hydraulic Fluids** – Check sight windows when accessible. At a minimum, check weekly.
- **Coolants** – Check reservoir when accessible. At a minimum, check weekly.

Once you have mounted the motorcycle the following checks should be completed before starting out:

- **Clutch and Throttle** – Make sure they work smoothly. The throttle should snap back when you let go.
- **Mirrors** – Clean and adjust both mirrors before starting out, because it's difficult to ride with one hand while you try to adjust a mirror. Adjust each mirror to let you 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.

### **Control for Safety**

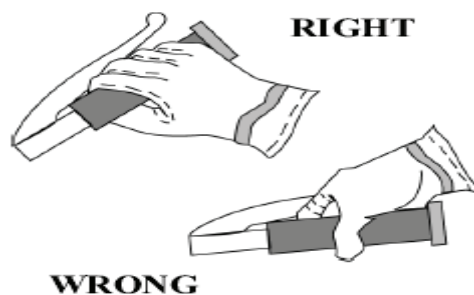
This manual cannot teach you how to control direction, speed, or balance. That's something you can learn only through a lot of practice. However, control begins with knowing your abilities and riding within them and the rules of the road.

### **Body Position**

To control a motorcycle well, your body must be in the proper position.

- **Posture** – You should sit fairly erect. This lets you use your arms to steer the motorcycle rather than to hold yourself up.
- **Seat** – Sit far enough forward so that your arms are slightly bent when you hold the handle grips. Bending your arms lets you turn the handlebars without having to stretch.

- **Hands** - Hold the handle grips firmly. This will help keep your grip if the motorcycle bounces. Start with your right wrist down. This will help you keep from accidentally using too much throttle – especially if you need to reach for the brake suddenly. Also, ensure that the handlebars are adjusted so your hands are even with, or below, your elbows. This allows you to use the proper muscles for precision steering.



- **Knees** – Keep your knees against the gas tank. This will help you to keep your balance as the motorcycle turns.
- **Feet** – Keep your feet firmly on the foot pegs. Firm footing can help your balance. Don't drag your foot along the ground. If your foot catches on something, you could lose control of the motorcycle. Keep your feet near the controls. This lets you get to the controls fast if you have to use them. Also, don't let your toes drop down – they may get caught between the road and the foot peg.

## Turning

Riders often try to take curves 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

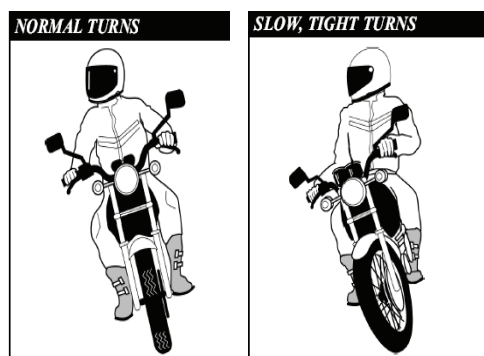
### LOOK

### 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, push on the hand grip in the direction of the turn. Push left-lean left-go left. Push right-lean right-go right. Higher speeds and/or tighter turns require the motorcycle to lean more.

1. Left: In normal turns, the rider and the motorcycle should lean together at the same angle.
2. Right: In slow tight turns, lean the motorcycle only and keep your body straight.



- **ROLL** – Roll on the throttle through the turn. Maintain steady speed or accelerate gradually. Avoid decelerating in the turn.

## **Braking**

Your motorcycle has two brakes. You need to use both of them. The front brake is more powerful. It provides *about three-quarters* of your motorcycle's total stopping power. The front brake is not dangerous if you learn to use it properly. Here are some things to remember about braking:

- Use both brakes *every* time you slow down or stop. If you use only the rear brake for “normal” stops, you may not develop the habit or the skill to use the front brake properly when you really need to stop quickly.
- Apply both brakes *at the same time*. Some people believe that the rear brake should be applied first. That is not a good idea. The sooner you apply the front brake, the sooner it will start slowing you down.
- Remember, you *can* use both brakes in a turn. Some motorcycles have integrated braking systems which link the front and rear brakes together on application of the rear brake pedal. Using the front brake is dangerous only if the road is very slippery and you use the brake incorrectly. Otherwise, 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 available is used for cornering. So if you use the brakes when leaned, less traction is available for stopping. A skid can occur when too much brake is applied.

## **Leaving a Parking Space**

When leaving a parking space, position the cycle at approximately a 45 degree angle. This puts you in the best position to observe oncoming traffic before you move into the street.

## **Turns and Cornering**

Approach your turn in the proper lane and assume this position well in advance. At least 100 feet before making a turn, signal what you intend to do. Always finish your turn in the proper lane. Arm and hand signals are the same as for other vehicles.

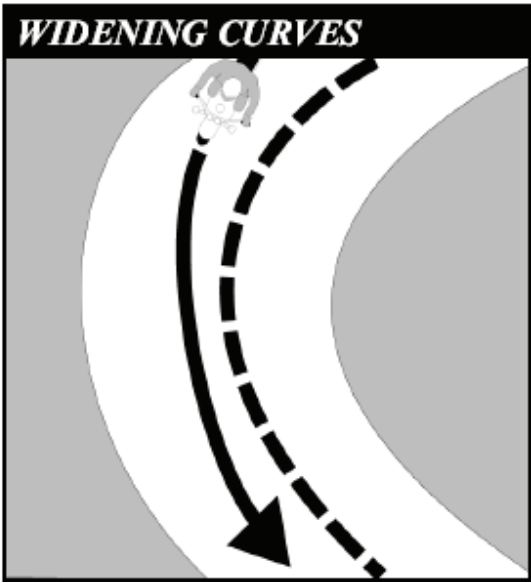
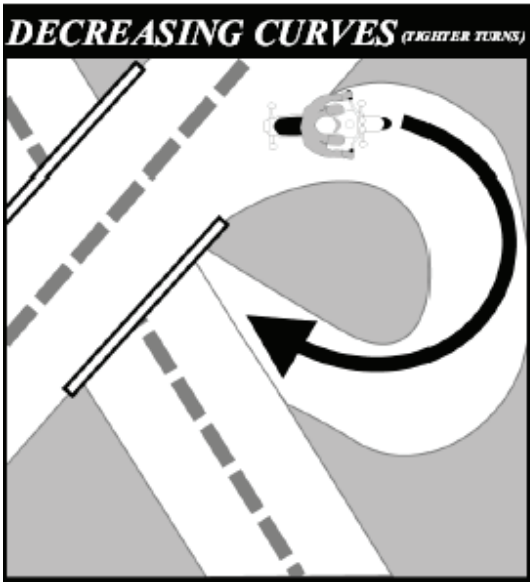
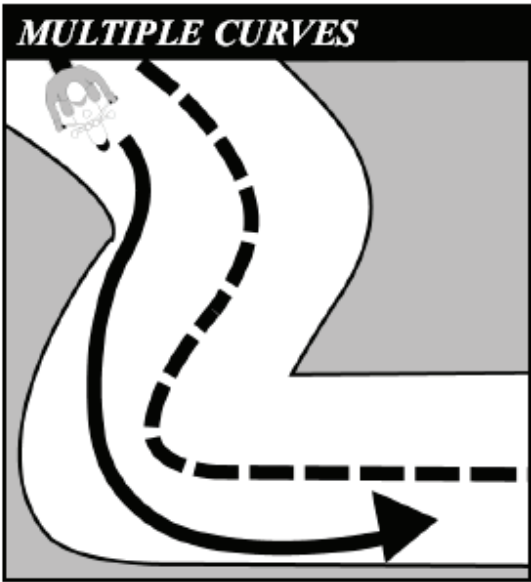
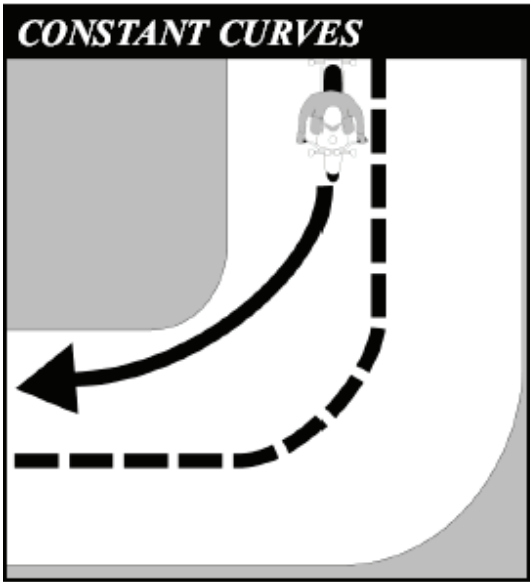
Protect yourself on both sides while preparing for and completing a turn. Compensate for the size of your vehicle by positioning within a lane to prevent another vehicle from crowding you too far right or left. (Position your cycle so that another vehicle may not turn in the same direction at the same time within the same lane.)

- **On Curves** – 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 the 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 towards 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 centerline, or debris blocking part of your lane.



## Being Seen

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### Turn Signals

Turn signals do two things for you. First, they tell others what you plan to do. Use them anytime you plan to change lanes. Use them even when you think no one else is around. It is the car you do not see that is going to give you the most trouble. Second, your signal lights make you easier to spot. Drivers behind you are more likely to see your turn signal than your taillight. That is why it is a good idea to use your turn signals even when what you plan to do is obvious. For example, when you are on a freeway entrance ramp, drivers on the freeway are more likely to see you – and therefore, make room for you – if you use your turn signal.

Not turning off a signal is just as bad as not turning it on. A driver may think you plan to turn again and pull directly into your path. Once you have made your turn, check your signal to make sure it is off.

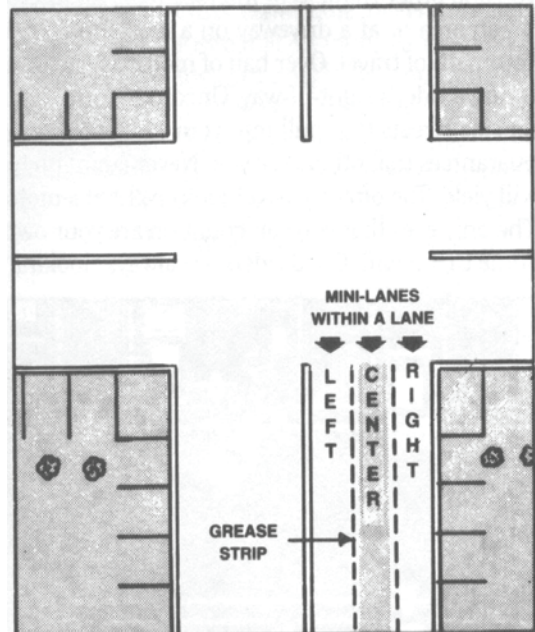
### Position for Being Seen

Though size of the motorcycle can make it harder for other drivers to spot you, you can make size work to your advantage. A car driver has very little choice about where he positions his car in a lane. However, each marked lane gives a motorcyclist three possible paths of travel.

Each “mini-lane” is approximately four feet wide. By selecting the appropriate “mini-lane”, you can make yourself more easily seen by others on the road.

In general, there is no *best* position for riders when it comes to being seen, however, no portion of the lane need be avoided – including the center. Some people feel that riding in the center portion is dangerous. They argue that the grease strip which often appears in this portion (formed by droppings from other vehicles) is slippery and will cause riders to fall. Such fears are overblown.

Grease strips are usually no more than two feet wide. Since the center portion of the lane is four feet wide, you can operate to the left or right of the grease strip and still be within the center portion. Unless the road is wet with rain, the average grease strip gives just as much traction as the rest of the pavement. Of course, big build-ups of grease – as may be found at very busy intersections or toll booths – should be avoided.



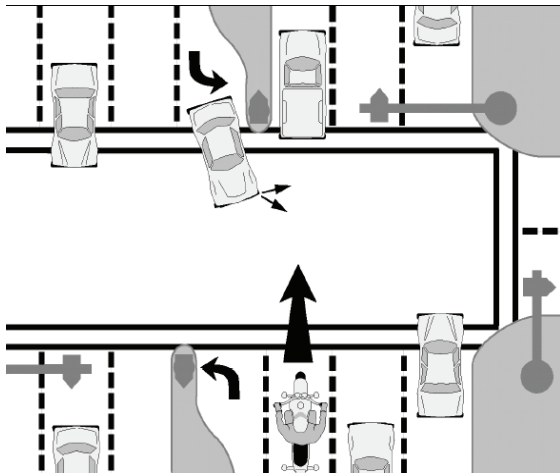
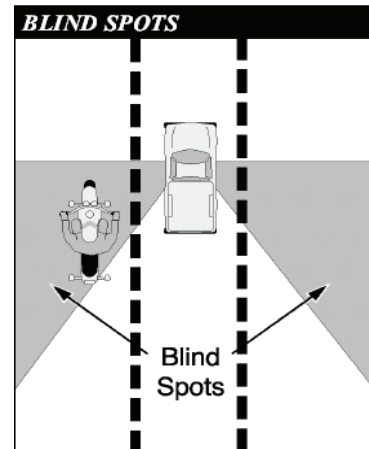
The main idea of positioning yourself to be seen is this: Ride in the portion of the lane where it is *most* likely that you will be seen. In other words, ride where it will be most difficult for other drivers to miss seeing you. Here are some ways to do this.

## Stay Out of Blind Spots

Either pass the other vehicle or drop back. When you pass a car, get through the blind spot as quickly as you can. Approach with care. But once you are alongside, speed up and get by quickly.

## 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 of a residential section-anywhere traffic may cross your path of travel. Over half of motorcycle/car collisions are caused by drivers entering a rider's right-of-way. Oncoming cars that turn left in front of you, and cars on side streets that pull into your lane, are the two biggest dangers. 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 motorcycle 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.

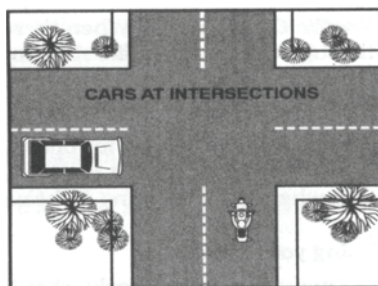


Increase your chances of being seen at intersections. Ride with your headlight on in a lane position that provides the best view of oncoming traffic. Provide a space cushion around the motorcycle that permits you to take evasive action. As you approach the intersection, select a lane position to increase your visibility to the driver. Cover the clutch and both brakes to reduce reaction time.

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

## Blind Intersections

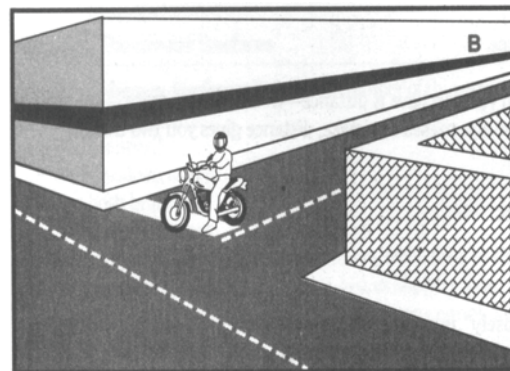
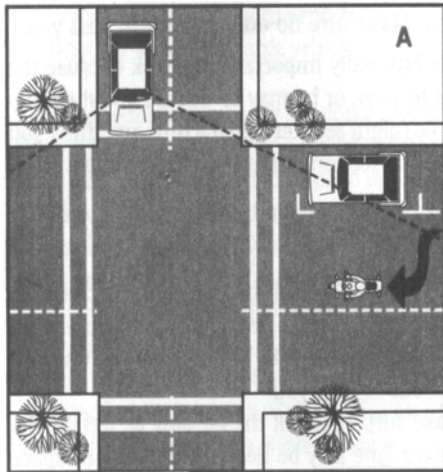
If you approach a blind intersection, move to the portion of the lane that will bring you into another driver's field of sight at the earliest possible moment. In the picture below, the rider has moved to the left portion of the lane – away from the parked car – so the driver on the cross street can see him as soon as possible.



Remember, the key is to see as much as possible and remain visible to others while protecting your space.

If you have a 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.

**(Illustrations A & B)**



### **The Road Ahead**

**Road Conditions** – Keep checking the road surface ahead for slippery spots, bad bumps, broken pavement, loose gravel, wet leaves or objects in your path.

**Traffic Conditions** – When there is a car directly in front of you, look over or through the car for traffic stopping or turning further down the road; and check the roadside for cars that may pull away from the curb or cut into your lane from side streets or driveways.

**Escape Routes** – Look for open space where you can leave the road in a hurry if you have to. Scanning the road and roadside for escape spots is most important when you are riding in heavy traffic.

### **Using Your Mirrors**

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

- When you are stopped at an intersection watch for cars coming up from behind. If the driver is not paying attention they could be right on top of you before he sees you.
- Anytime you plan to change lanes make sure no one is about to pass you.



- Anytime you slow down it is especially important to check because the driver behind may not expect you to slow, or he may be unsure about exactly where you will slow. For example, he might see you signal a turn and think you plan to slow for a turn at a distant intersection rather than a nearer driveway.

### **Head Checks**

Mirrors do a pretty good job of letting you see behind, but motorcycles have “blind spots” just like cars. Before you change lanes, make sure to make a head check: turn your head and look at traffic to the side. This is the only way you can be sure of spotting a car just about to pass you.

On a road with several lanes, make sure to check the far lanes as well as the one next to you. A driver in the distant lane may be headed for the same space you plan to take.

### **Keeping Your Distance**

The best protection you can have is distance – a ‘cushion of space’ – all around your cycle. If someone else makes a mistake, distance gives you two things:

- Time to react.
- Some place to go.

### **Distance in Front**

“Following too closely” is a major factor in accidents caused by motorcyclists. Motorcycles usually need as much distance to stop as do cars.

How much distance do you need to keep from following too closely? Normally, you will need a distance of two seconds between yourself and the vehicle ahead. Here’s how to gauge your following distance:

- Pick out a marker – a pavement marking or lamp post, for instance – on or near the road ahead.
- When the rear bumper of the vehicle ahead passes your marker, start counting off the seconds: “one-second-one, one-second-two.”
- If you reach your marker before you reach “two”, you are following too closely.

### **Distance to the Sides:**

***Passing Vehicles:*** When you are being passed from behind or by an oncoming vehicle, keep in the center portion of your lane. If you ride any closer to them, you could be hit by:

- The other vehicle
- Extended mirrors
- Something thrown from windows
- Blasts of wind from large vehicles

***Cars at Intersections:*** If a car can enter your path at an intersection, assume that it will. Approach the intersection slowly and be ready to give way if the other vehicle starts to move. It is not a good idea to move away from the driver automatically. If he sees you slow down and move to one side of the lane, he may think you plan to turn – and he might pull out in front of you.

***Lane Sharers:*** Cars and motorcycles need a full lane to operate safely and legally. Drivers should not share lanes with motorcycles; motorcyclists should not share lanes with cars.

***Merging Cars:*** Do not assume that drivers on an entrance ramp can see you on the highway. Give them plenty of room. Change to another lane if it is open. If there is no room for a lane change, adjust speed accordingly to open up space for the merging driver to pull into.

## **Handling Dangerous Surfaces**

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***Handling Slippery Surfaces:*** There are a number of things you must do to ride safely on slippery surfaces:

- Reduce speed
- Avoid sudden moves
- Use both brakes
- Avoid slippery areas

***Very Slippery Surfaces:*** You may encounter, from time to time, wet wooden surfaces or wet leaves in the fall. These are just as slippery as an ice patch.

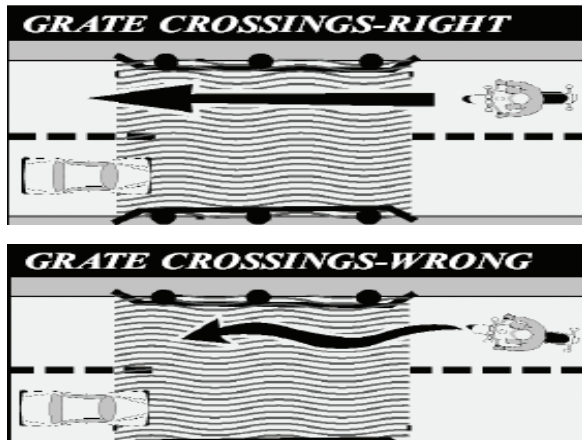
Avoid all of these surfaces if at all possible. If you cannot, keep your bike straight up and proceed as slowly as possible. If you cannot, keep your bike straight up and proceed as slowly as possible, letting your feet skim along the surface so you can catch yourself if the bike starts to fall. Be sure to keep off the brakes while you are on a very slippery surface.

## **Uneven Surfaces and Obstacles**

Watch for uneven surfaces such as rumble strips, bumps, broken pavement, potholes, or railroad tracks. If you have to ride over them or obstacles such as a piece of tire tread or tailpipe, here is what you should do:

- Slow down to reduce jolt.
- Make sure the motorcycle is straight up.
- Rise slightly off the seat with your weight on the foot pegs so you can absorb the shock with your knees and elbows.

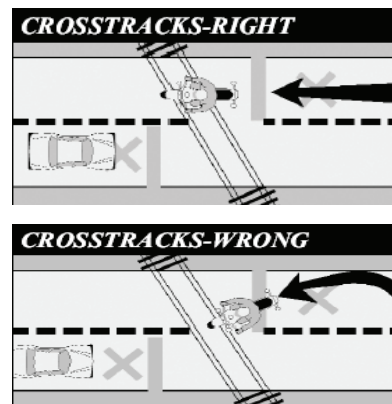
## Grooves and Grating



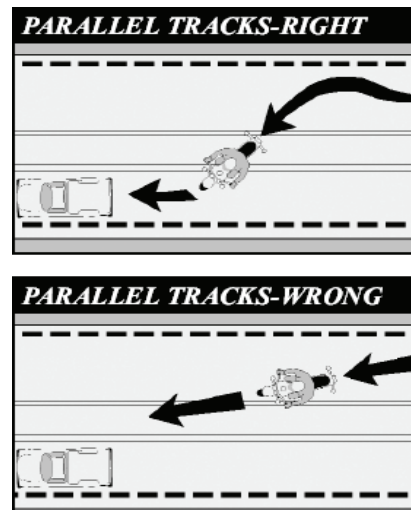
Riding over rain grooves or bridge gratings will cause a motorcycle to weave. The uneasy, wandering feeling is generally not hazardous. Relax, maintain speed and ride straight across. Crossing at an angle forces riders to zigzag to stay in the lane. The zigzag is far more hazardous than the wandering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

## 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 degree angle) can be more dangerous – your path may carry you into another lane of traffic.



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



## Riding at Night

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At night it is harder for you to see and be seen. With only one headlight, it is more difficult to see the condition of the road or something lying in your path; and other drivers may have a hard time picking your headlight or taillight out of the stronger lights of cars around you. Here are some methods that will help you ride safely at night:

- **Reduce Your Speed** – If something is lying in the road ahead, you will not be able to see it until you are very close to it.
- **Increase Distance** – No one can judge distances as well at night as during the day. Allow yourself extra distance at night. Open up a three-second following distance; and give yourself more distance in which to pass.
- **Use the Car Ahead** – If a car is ahead of you, make the most of it. The car’s headlights can give you a better view of the road ahead than even your high beam can; and keep an eye on the car’s taillights and brake lights. 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.

## Dealing With Emergencies

### Quick Stops

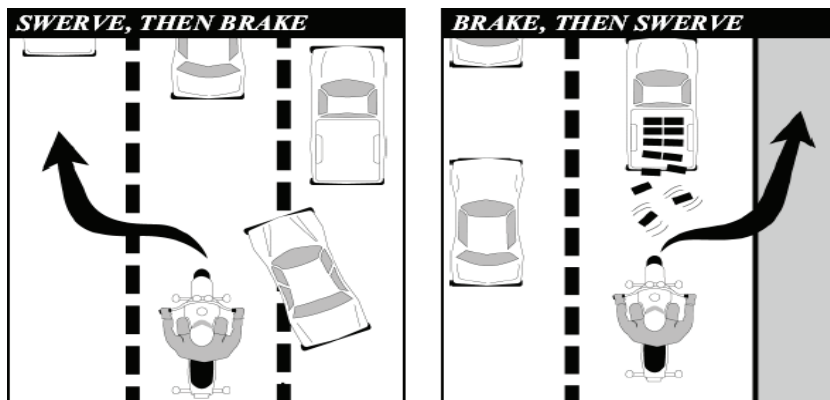
To stop quickly, apply both brakes. Don’t be shy about using the front brake, but don’t “grab” at it, either. Squeeze the brake lever steadily and firmly, applying the front brake as fully as you can *without* locking the front wheel. At the same time, apply the rear brake hard without locking it.

If you are *on a straightaway*, even with a locked rear wheel, you can still control the cycle and stop quickly *as long as your motorcycle is upright and going in a straight line*.

If you must stop quickly *while turning*, conditions may not always permit you to straighten up the motorcycle and then stop. In such cases, apply the brakes and start slowing the motorcycle. As you slow down, you can reduce your lean angle and apply more brake pressure until the motorcycle is straight and maximum brake pressure is possible. In either case, remember that the motorcycle should be straight up when you come to a full stop. If you “straighten” the handlebar in the last few feet of stopping, you know the motorcycle will 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 collision may be to turn quickly, swerve, or ride over the obstacle. A swerve is two quick turns, one right after the first. It is performed with a small amount of hand pressure on the handgrip in the direction you wish to go to get the motorcycle to lean quickly. The sharper the turn(s), the more the bike must lean.



Press on the inside of the handgrip in your intended direction of escape. Then press on the inside of the opposite handgrip to return to your original direction of travel once you have cleared the hazard. To swerve to the left, push the inside of the handgrips to the left, then push to the right to recover. Keep your knees snugly against the tank and your feet on the pegs. Make your escape route the target of your vision.

Try to stay in your own lane. Change lanes only if you have enough time to make sure there are no vehicles in the other lane. You should be able to squeeze by most obstacles without leaving your lane.

IF BRAKING IS REQUIRED, SEPARATE IT FROM SWERVING. Brake before or after – never while swerving.

## **Mechanical Problems**

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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 cycle starts handling differently, it may be a tire failure. This can be dangerous. You must be able to tell from the way your cycle 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 will jerk from side to side. If either tire goes flat while riding:

- Hold the handle grips firmly and keep a straight course.
- 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 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 cycle. Make sure tire pressure, spring pre-load, 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 swing arm 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 cycle more unstable. Instead:

- Grip the handlebars firmly, but don’t fight the wobble.
- Close the throttle gradually to slow the motorcycle. 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 fix the problem.

## **Chain Problems**

A chain that slips or breaks while you are 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 will notice an instant loss of power to the rear wheel. Close the throttle and brake to stop.

## **Engine Seizure**

When the engine “locks” or “freezes” it is usually low on oil. The engine is 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.

## **Carrying Passengers and Cargo**

You should avoid carrying passengers or large loads until you have gained a lot of experience riding alone. The extra weight changes the way the motorcycle handles, balances, turn, speeds up, and slows down; and before taking a passenger or heavy load on the street, practice in a safe, off-road area.

## **Instructing Passengers**

To prepare your passenger for riding tell him or her to:

- Get on the motorcycle 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 at all times, even when the motorcycle is stopped.
- Keep their legs away from the muffler.
- Stay directly behind you, leaning as you lean.
- Avoid any unnecessary talk or motion.

## **Carrying Loads**

- **Keep the Load Low** – Fasten loads to the seat, or put them in saddle bags.
- **Never Carry Packages in Your Hand** while operating a motorcycle
- **Keep the Load Forward** – Place the load over or in front of the rear axle.
- **Distribute the Load Evenly** – If you have saddle bags, make sure each is loaded with about the same weight.
- **Secure the Load** – Fasten the load securely with elastic cords (bungee cords). Never attach any load to handlebars.
- **Check the Load** – Stop and check the load every so often. Make sure it has not worked loose or moved.

## **Group Riding**

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If you ride with others, do it in a way that promotes safety and doesn't interfere with the flow of traffic.

### **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 leaders 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 behind the leader, where more experienced riders can watch them.

- **Follow Those Behind** – Let the tail ender 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 tail ender.
- **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.

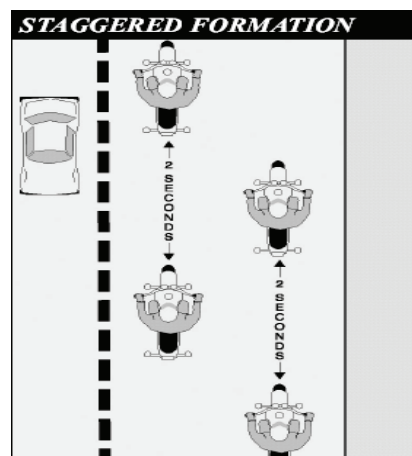
### Keep Your Distance

Maintain close ranks at a safe distance. 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 have to avoid a car or something on the road. To talk, wait until you are both stopped.

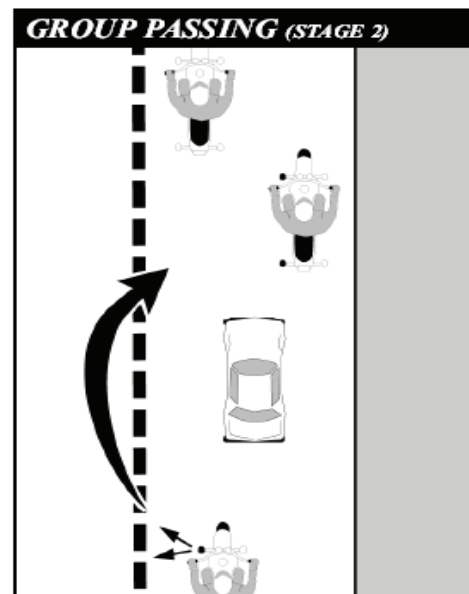
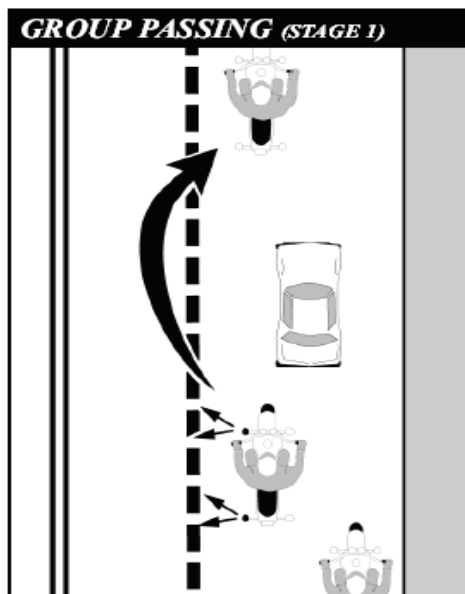
**Staggered Formation** – This is the best way to keep ranks close yet maintain an adequate space cushion. The leader rides in the left side of the lane, while the second rider stays one second behind in the right side of the lane

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.





When 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.

### **Important Motorcycle Safety Information**

- Motorcycles are vehicles with the same rights and privileges as any vehicle on the roadway.
- Allow the motorcyclist a full lane width. Although it may seem as though there is enough room in the traffic lane for an automobile and a motorcycle, remember the motorcycle needs the room to maneuver safely. Do not share the lane.
- Approximately one-half of all motorcycle crashes involve another vehicle. Nearly 40 percent were caused by the other vehicle turning left in front of the motorcyclist.
- Motorcycles are small and may be difficult to see. Motorcycles have a much smaller profile than vehicles, which can make it more difficult to judge speed and distance of an approaching motorcycle.
- Always signal your intentions before changing lanes or merging with traffic. This allows the motorcyclist to anticipate traffic flow and find a safe lane position.
- Remember that motorcyclists are often hidden in a vehicle's blind spot or missed in a quick look due to their smaller size. Always make a visual check for motorcycles by checking mirrors and blind spots before entering or leaving a lane of traffic and at intersections.
- Don't be fooled by a flashing turn signal on a motorcycle-motorcycle signals are usually not self canceling and riders sometimes forget to turn them off. Wait to be sure the motorcycle is going to turn before you proceed.
- Remember the road conditions which are minor annoyances to you pose major hazards to motorcyclists. Motorcyclists may change speed or adjust their positions within a lane suddenly in reaction to road and traffic conditions such as potholes, gravel, wet or slippery surfaces, pavement seams, railroad crossings and grooved pavement.
- Allow more following distance, three or four seconds, following a motorcycle so the motorcyclist has enough time to maneuver or stop in an emergency. In dry conditions motorcyclists can stop more quickly than a car.

### **Part VI Practice Questions:**

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1. What should you do if, while driving, your motorcycle begins to wobble?
2. True or false? A plastic face shield is not necessary if you have a windshield.
3. When riding in a group, inexperienced riders should position themselves where?
4. What does a yellow traffic sign mean? What does an orange traffic sign mean?
5. List three times you should not pass.
6. How many drinks does it take to affect your driving?
7. To swerve correctly you should do what?
8. If a tire goes flat while riding, it is usually best to do what?
9. The front brake supplies how much of the potential stopping power?
10. To whom must you yield right of way?

# GEAR UP FOR SAFETY

## What To Wear / What Not To Wear

### **HELMET**

Your most important piece of gear protects against head injury, windblast, cold and flying objects. Full face helmet recommended.

### **GLOVES**

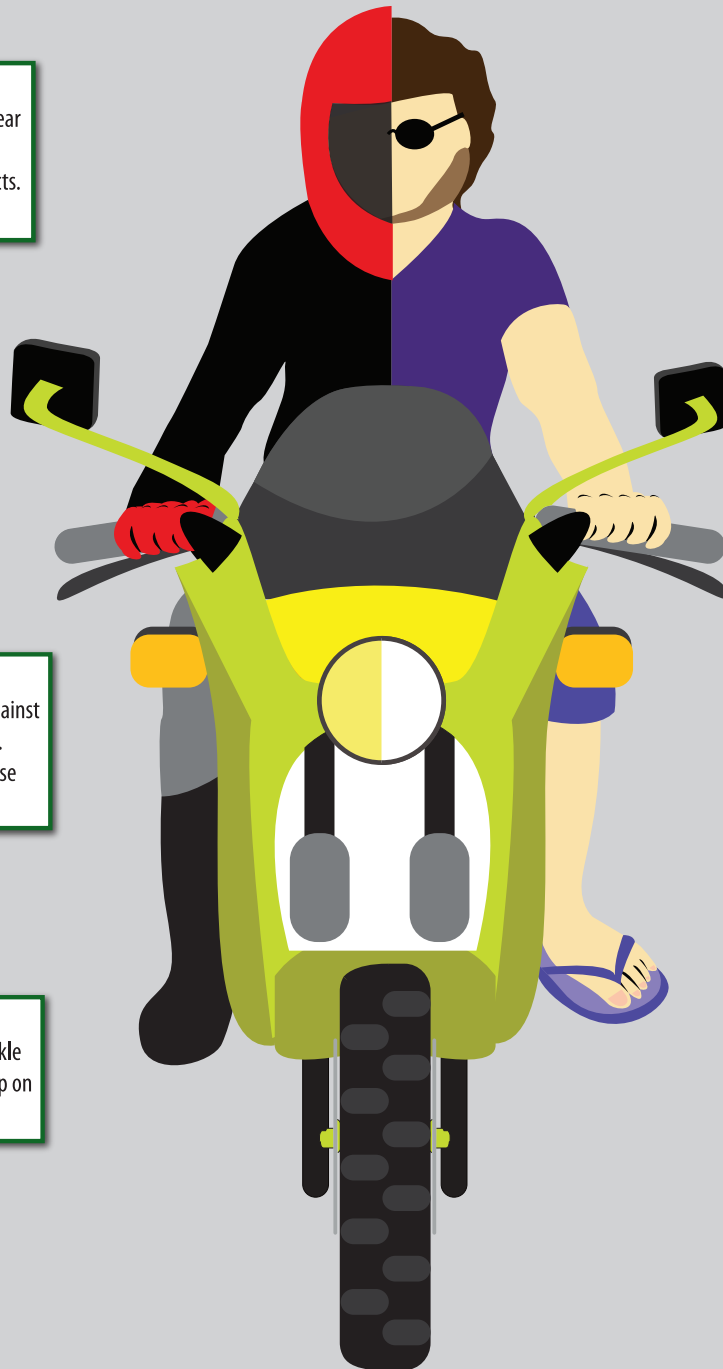
Protect your hands.

### **JACKET & PANTS**

Long sleeves & pants protect against sunburn, road rash & windburn. Light colors or reflectives increase your visibility.

### **BOOTS**

Protect you against foot and ankle injuries and give you a good grip on footpegs or road surfaces.



# 9 Steps To Take If You've Been In A Motorcycle Accident

- 1. STOP** - State law requires that you not leave the scene of an accident.
- 2. TAKE SAFETY PRECAUTIONS** - Use flags, flares, etc., to prevent further accidents.
- 3. MEDICAL ATTENTION** - See that any injured parties receive medical attention. If you have any symptoms, seek medical attention immediately - this protects your health and documents the injury.
- 4. CALL THE POLICE** - Contact the State, local or city police. Give the facts but don't admit responsibility.
- 5. IDENTIFY OTHER DRIVER** - Obtain name, address, phone number and insurance information.
- 6. VERIFY INFORMATION** - Make sure the license is current and the registration number matches the license plate number on the vehicle. Make note of the time, weather, road, and lighting conditions.
- 7. IDENTIFY ALL WITNESSES** - Get their names, addresses, phone numbers and comments.
- 8. WITH THE DIGITAL CAMERA ON YOUR CELL PHONE** - Take as many photos as you can of the accident scene, skid marks, debris in the roadway, resting positions of the vehicles, property damage of all vehicles involved in the accident, and the injuries to you and others. Make a diagram of the scene.
- 9. CONTACT YOUR INSURER AND THE LAW OFFICES OF JOE BORNSTEIN AT 1-800-CALL-JOE (1- 800-225-5563)** to speak with our legal team - DELAY MAY AFFECT YOUR RIGHTS.

## Motorcycle Accident - Scene Map

Indicate North by an arrow.

Notes

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