



EXPERIENCED

RIDER COURSE SUITE™

RIDER
CLASSROOM
CARDS



MSF
MOTORCYCLE
SAFETY FOUNDATION®



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T-CLOCS Pre-Ride Check — Card 1

<p>T - Tires and Wheels</p> <p>Condition</p> <p>Tread</p> <p>Air Pressure</p>	Deficient	OK	Notes
<p>C - Controls</p> <p>(Levers, Cables, Throttle)</p> <p>Condition</p> <p>Operation</p> <p>Routing</p>			
<p>L - Lights</p> <p>Lens/Reflector Condition</p> <p>Illumination</p>			
<p>O - Oil</p> <p>Oil Level</p>			
<p>C - Chassis</p> <p>(Forks, Swing Arm, Shocks, Chain/Belt)</p> <p>Condition</p>			
<p>S - Side Stand</p> <p>Condition</p> <p>Retention</p>			

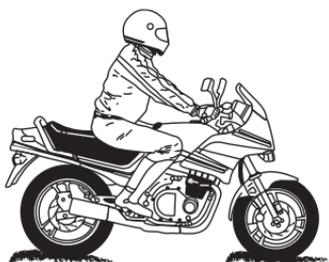
Key Points:

1. T-CLOCS is a system for completing a pre-ride check. It can be used before each ride as a quick safety check and is also a good way to approach a more detailed motorcycle inspection. A habitual check of the motorcycle will help prevent more costly corrective maintenance.
2. Refer to the owner's manual for specific recommendations. It has recommended intervals for maintenance and provides specifics about a particular motorcycle model. It is a good idea to read the owner's manual occasionally to learn more about a motorcycle and its specific maintenance.
3. A pre-ride inspection should be a routine process. Just like a car or truck, a motorcycle will operate like it is new if it is maintained properly and regularly. Not only is there a cost savings but a rider can be assured that the motorcycle will respond precisely to every control input.

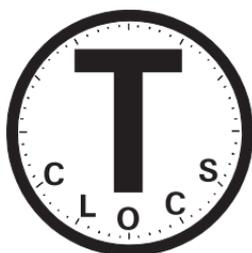


The 4 Preps — Card 2

Size/Fit



Motorcycle



Protective Gear



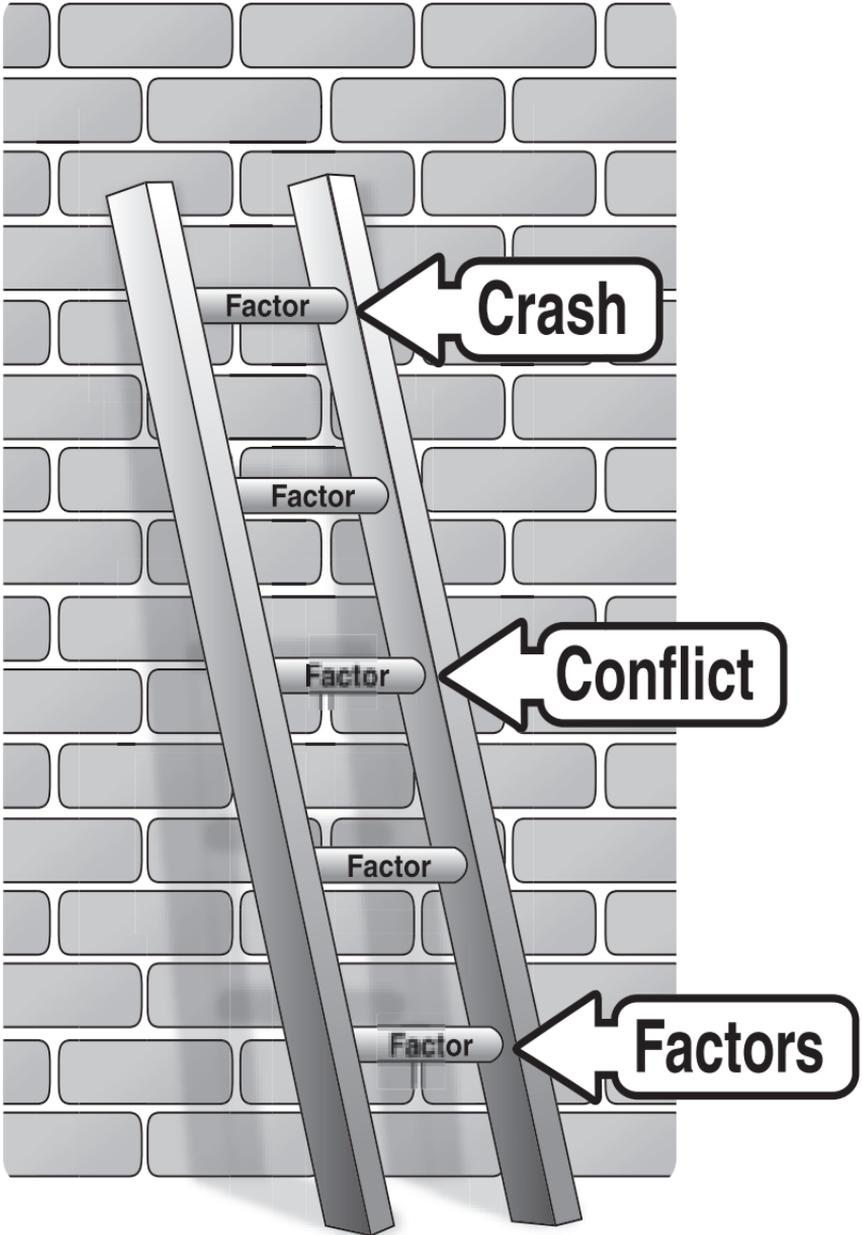
Mental



Key Points:

1. Preparation is a key to safe and responsible riding. A rider can be at a better advantage when prepared.
2. How a rider fits a motorcycle can affect handling. It is important that controls can be reached easily and that the operation is smooth without requiring too much strength or effort.
3. T-CLOCS is a system for a pre-ride check. It is also useful for more extensive maintenance procedures. A motorcycle will operate like it is new if properly maintained.
4. Protective gear is for comfort and protection. Riders should dress for the ride, not for the crash. A helmet manufactured to meet the U.S. Department of Transportation standards is critically important. Other important protective gear is eye protection, long sleeves and sturdy pants, full-fingered gloves and over-the-ankle footwear. Well-designed motorcycle gear keeps a rider comfortable and better protected in the event of a fall.
5. Riding safely requires a rider's mind to be distraction-free and safety focused. Inattention is a major factor in motorcycle crashes. A safe rider will watch for hazards well ahead and keep the eyes and mind searching and evaluating constantly.
6. Carrying a passenger may require some adjustments to the suspension and tires. Refer to a motorcycle's owner's manual to discover specific adjustments. Follow the manufacturer's recommendations.
7. Refer often to the owner's manual to review proper and recommended setup and adjustments. This is important when first riding a motorcycle as well as during routine inspections.
8. Aging affects the ability to read the gauges, so larger and well-lighted dials may be beneficial. Older riders can benefit from gauges that have large letters and numerals. Instrument clusters that are well illuminated for night riding can be advantageous too.

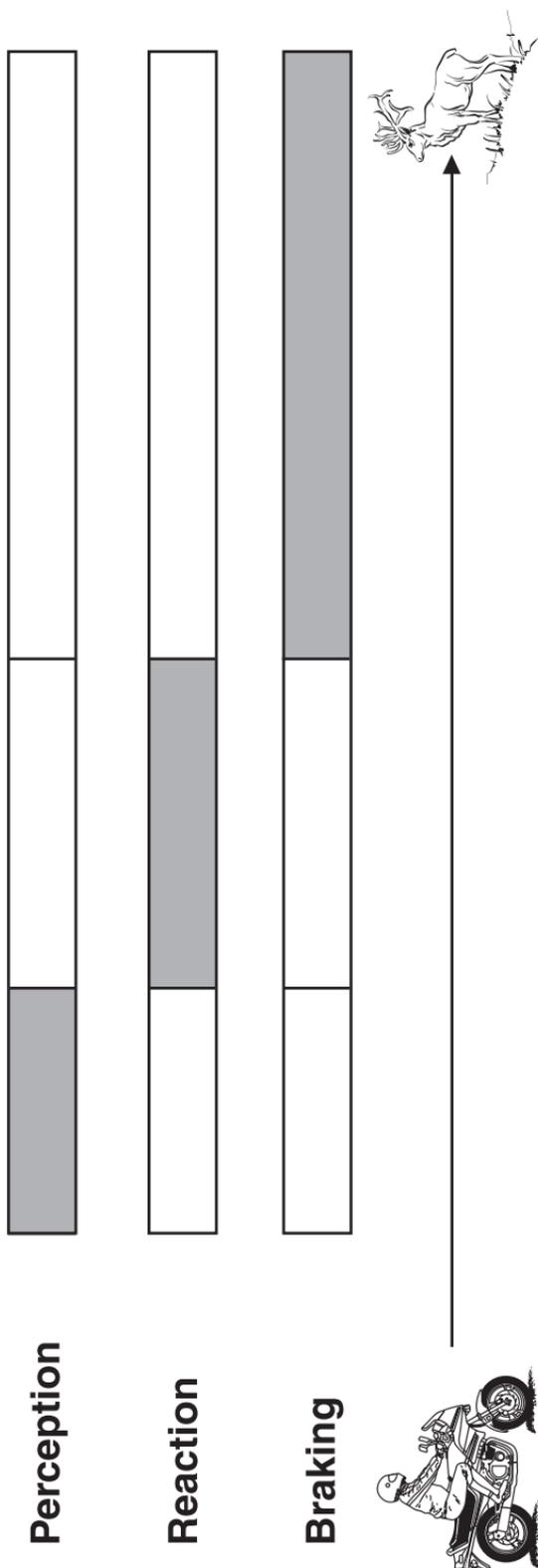
Ladder of Risk — Card 3



Key Points:

1. The Ladder of Risk is a way to think about risk management. Each rung of the ladder can be thought of as a factor that contributes to risk. The more factors there are, the more risk there is.
2. Good riders stay low on the ladder and minimize the factors that might accumulate and lead to a crash. A good strategy is to reduce the factors over which a motorcyclist has control, such as speed, lane position and path of travel.
3. Factors are introduced into the traffic mix by the rider, the motorcycle, and the road and traffic conditions. The rider can contribute to risk by not paying complete attention or riding too fast for conditions. A motorcycle can contribute to risk by having under-inflated tires or lights not functioning properly. The road can contribute factors by having bumps, ridges or a loose and slippery surface. Traffic can contribute to risk by drivers that are less than perfect in their ability to see and react to others in traffic.
4. Some riders take more risks than others. Statistics show that younger riders and older riders have more than their share of crashes. Riders who are just learning to ride and riders who are getting older should take special precautions to minimize risk and reduce their vulnerability.
5. Riders can reduce risk to a certain degree if they choose to. Riders can apply a thinking strategy to ensure a safe and adequate safety margin. Good riders will think about what they can do to improve their safety. A rider can control such things as how fast to ride through a curve or how much time and space to have when negotiating an intersection.
6. Part of riding safely is to reduce moment-to-moment risks. Different riding situations produce different risks. Riders must be aware of situations as they develop. When approaching a curve or an intersection, riders can take specific actions to increase their margin of safety.
7. Aging can result in additional factors that could increase risk, such as changes in vision, reaction to hazards, and control manipulation. Aging affects visual acuity as well as the ability to see at night. Older riders can have greater difficulty in identifying factors as they accumulate in traffic, particularly when changing lanes or selecting a gap in traffic. Aging affects strength and could adversely affect the ability to brake and swerve with precision.

Total Stopping Distance

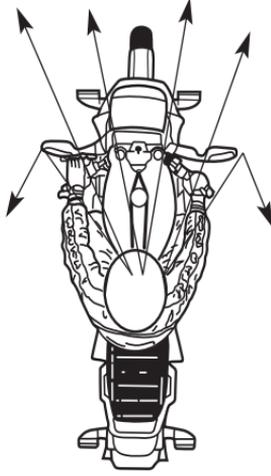


Total Stopping Distance

Key Points:

1. Total Stopping Distance consists of 3 parts. Riders can put themselves at an advantage by thinking about how to improve behavior and performance in each of the three parts.
2. Perception time/distance is the time it takes or the distance a rider travels from when factors are developing until recognized as a problem. Riders can improve perception time by seeing the big picture and watching well ahead for factors that could affect a line of sight or a path of travel.
3. Reaction time/distance is the time it takes or the distance a rider travels from when a problem is perceived until braking begins. Riders can improve reaction by anticipating problems and having a prepared response. For example, covering the brakes or being ready to press in the direction of a swerve can save precious feet that could make a difference.
4. Braking time/distance is the time it takes or the distance a rider travels from when brakes are applied until stopped. Braking distance can be improved by having a well-maintained motorcycle and by practicing quick stops often. It is wise to find an empty parking lot to refine good braking skills so an emergency braking response is quick and precise.
5. The safety margin comes mostly from increasing the time and distance to perceive factors and recognize the interaction of factors. Riders have the best opportunity to increase their safety margin by looking for and identifying the factors that interact to cause risk. This way they can adjust speed and lane position to avoid the need to make an emergency response.
6. Carrying a passenger increases total stopping distance. This is because of the increased weight the motorcycle is carrying.
7. Total stopping distance is lengthened due to slower reaction times associated with aging. Older riders may not identify traffic hazards or respond to emergencies as well as they did when they were younger. A solution is to allow more time and space and rely on better perceptive capabilities as well as wiser use of a safety strategy.

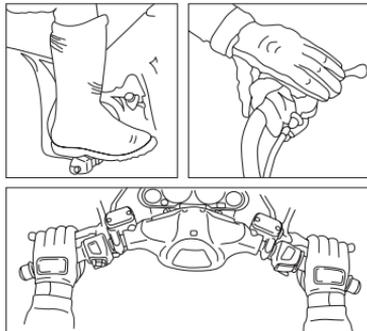
Search



Evaluate



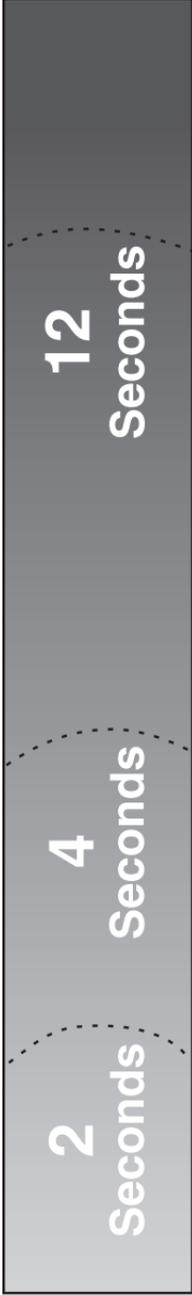
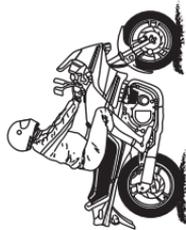
Execute



Key Points:

1. SEE (Search, Evaluate, Execute) is a strategy to reduce risk. It means to search for factors that will increase risk or affect time and space margins, to think about how factors can interact to form risky situations, and to react to potential problems by adjusting speed or lane position before an emergency response is required.
2. We search for factors that affect safety margins. A safety margin is the time and space riders create to avoid making an emergency response. This can be related to other traffic or it can be related to rider-specific risks such as speed through curves where there is a chance for a fall or running off the road. Factors could be things riders introduce themselves like inattention or riding too fast for conditions, or even a cavalier attitude that nothing will even happen because "I'm a good rider and can react in time to anything that happens." Factors could be things related to the motorcycle such as low tire pressure or poorly maintained brakes. Factors could be things related to road conditions such as gravel or debris in a curve or obstacles such as mufflers or rocks. Factors could be things related to traffic such as poorly illuminated signs or road markings, or even inattentive or poorly skilled drivers of other vehicles.
3. Risks are evaluated by determining the interaction of several factors. A thinking motorcyclist is one who plays the "what if" game by constantly figuring out what can happen to increase risk. Examples might be imagining that an approaching car will fail to yield, or imagining that around the next curve is loose gravel on the road. It is more than just reacting quickly to problems but rather figuring out what could happen.
4. Being able to evaluate factors before a conflict occurs requires attention. Paying complete attention to the riding task is not easy. There are many things that can distract from complete attention toward safety.
5. Riding safely (keeping a safety margin) is more a skill of the eyes and mind than of the hands and feet, but we need both kinds of skill. It has been said that superior riders are those who utilize a superior riding strategy so as not to have to use their superior maneuvering skills.
6. Riders should have a planned escape for potential conflicts. Since the four-second immediate path generally corresponds to total stopping distance, riders can avoid a mishap if they have at least four seconds of space to stop or maneuver.
7. The effects of aging can have a detrimental influence on visual acuity and night vision. The ability of the eyes to gather light diminishes with age and affects the ability to see clearly at night. The harmful effects of glare also increase.

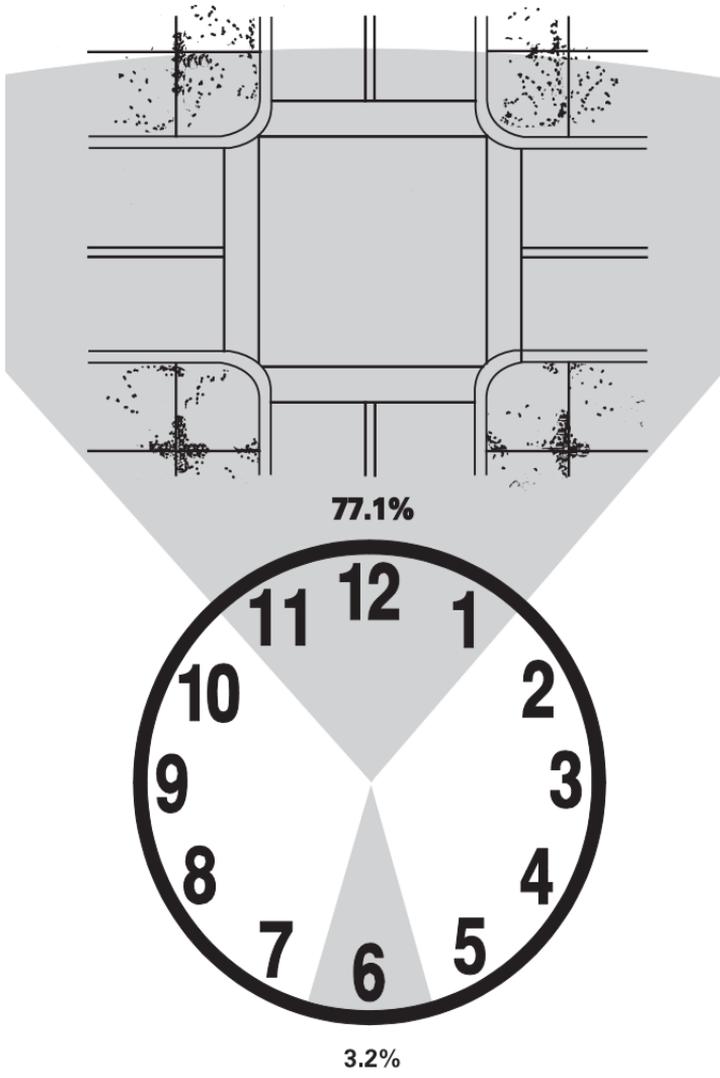
RiderRadarSM



Key Points:

1. RiderRadarSM is a means to identify factors ahead and it works at any speed. Riders should constantly scan ahead for potential problems.
2. 12 seconds is the anticipated path of travel. It is where riders should generally look for factors that could develop into a hazard.
3. 4 seconds is the immediate path of travel and approximates total stopping distance. It is the minimum time we need to stop or maneuver for an emergency.
4. 2 seconds is the minimum recommended following distance. It works at any speed, but riders can put themselves at a greater advantage with a four second interval.
5. Having a 4 second immediate path means to always have an escape planned 4 seconds to the front areas. This is especially true when approaching an intersection.
6. Due to the effects of aging, it is wise to increase the margin of safety by adding time to following distance, and by allowing more time and space to perceive and react to a conflict in traffic. This is largely due to increased reaction time.

Car/Motorcycle Crashes — Card 7

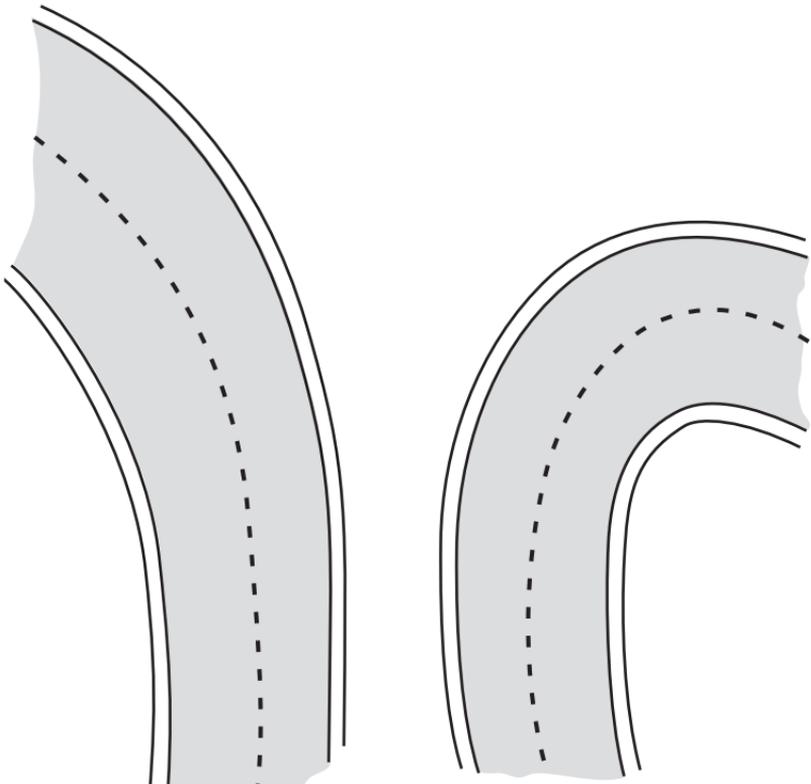


Car/Motorcycle Crashes

Key Points:

1. Most car/motorcycle crashes occur at intersections. Research has shown that over 75 percent of the risk is in front of the motorcyclist.
2. Most of the factors leading to a crash are in front of the motorcyclist. It is a motorcyclist's responsibility to keep risk factors to a minimum even if they are caused by someone else.
3. Over three-fourths of the factors in a motorcycle crash occur between 11 o'clock and 1 o'clock (on a clock face). Two primary areas for concern are an approaching car that may turn left in front of the motorcyclist, and a car entering traffic from a side road.
4. Although a small percentage (3.2%) of crashes occur from factors directly behind, it's worth a rider's attention. This is part of seeing the big picture and it is especially important when slowing down and stopping at an intersection. Flashing a brake light can be a good strategy to use.
5. Perception time/distance is critical when approaching an intersection. The greater the time and space margin motorcyclists have at intersections, the less likely an emergency response will be necessary.
6. Riders must leave an out when approaching an intersection, and be prepared to brake or swerve as appropriate if a driver "springs a trap." When a rider is within four seconds of an intersection, a strategy for escape should be already determined.
7. Older riders must take extra efforts when checking blind spots and gaps in traffic at intersections. Aging can cause muscles to weaken and joints to stiffen. This requires older riders to use more effort when checking over their shoulder or looking left, right, left at an intersection.

Motorcycle-Only Crashes — Card 8

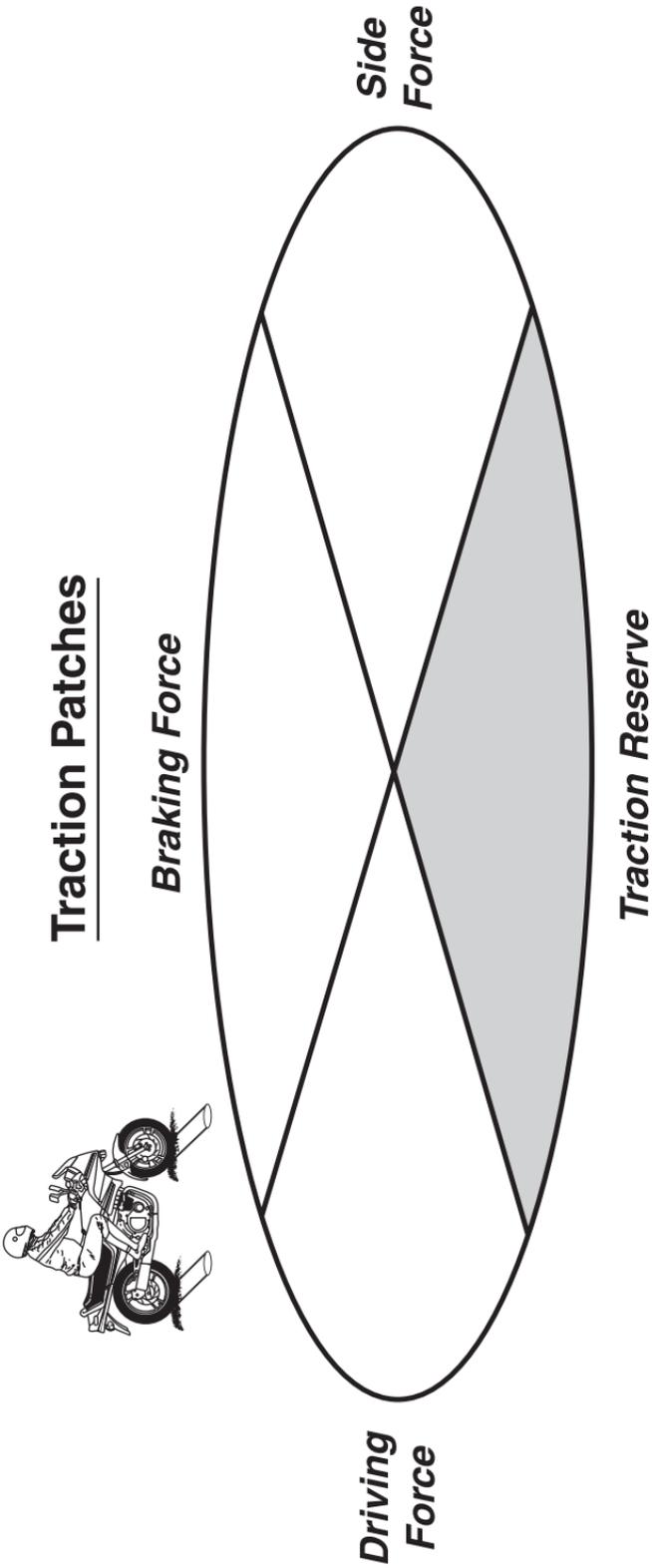


Slow
Look
Press
Roll

Motorcycle-Only Crashes

Key Points:

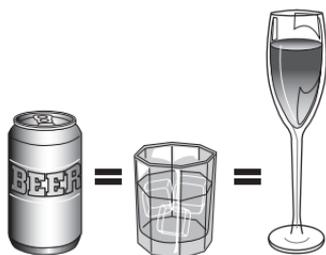
1. Many motorcycle-only crashes that are fatal happen in curves. It is usually running wide in a curve into oncoming traffic or onto the shoulder of a road. Using an appropriate entry speed can help with the proper technique and provide time and space to adjust if necessary.
2. Riders should choose a speed that allows them to stop in the distance seen in a curve. Riders should always be able to stop within the distance they can see ahead.
3. The recommended method to negotiate a curve is to slow, look, press, and roll. This is a good strategic procedure to use as long as decisions are made within the capabilities of the rider and the motorcycle.
4. An appropriate entry speed is critical for safe cornering; it is a speed that allows slight throttle roll-on through a curve. Rolling on the throttle has a stabilizing effect on the suspension that can improve traction. The roll-on is not abrupt but gradual, and results in a smooth line through a curve.
5. An appropriate entry speed provides time and space (safety margin) to effectively stop quickly if there is an emergency. Stopping can be either by straightening first then braking hard when straight or by increasing brake pressure while straightening.
6. Riders who carry a passenger must consider the effects when cornering and use a slower entry speed, especially in downhill curves. The added weight of a passenger increases stopping distance and changes the dynamics of cornering.



Key Points:

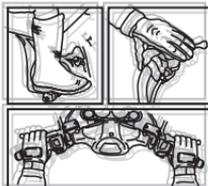
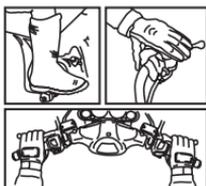
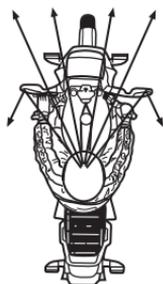
1. Riders have to manage the forces that affect both tires to maximize traction reserve. The traction reserve provides a margin of safety. The greater the reserve, the greater the safety. Driving force is produced when the engine power is applied to the rear wheel. Braking force is produced when the brakes are applied. Side force includes the steering forces required for tracking, balancing and controlling lean angle.
2. A way to maximize traction reserve is to control speed and be smooth in motorcycle operation. Good handling skills and good motorcycle dynamics can be overcome by too much speed.
3. Proper motorcycle and tire maintenance is important to minimize risk. Properly maintained tires with appropriate tire pressure and adequate tread is important.
4. Use extra caution when carrying a passenger. Carrying a passenger affects the motorcycle's suspension and increases stopping distance.

Alcohol/Drug Effects — Card 10



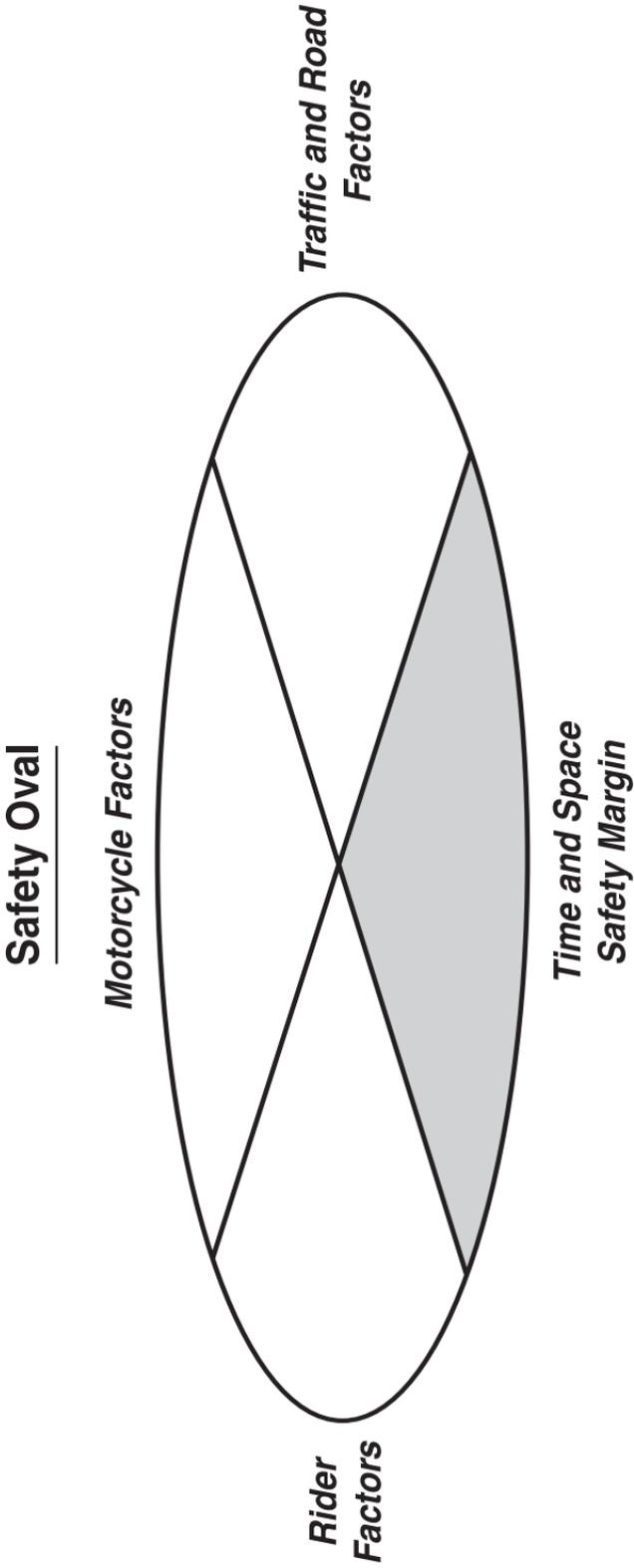
SEE

Effects



Key Points:

1. Alcohol is involved in over half of fatal and non-fatal crashes. The percent of alcohol related motorcycle fatalities is higher than the percent of alcohol related car fatalities.
2. Even one drink affects vision, judgment and coordination. Vision can become blurry, risk acceptance can increase, and precise manipulation of the controls becomes difficult.
3. Riders must separate drinking from riding. Whether or not to consume beverage alcohol is a personal decision, but when it comes to sharing the road with others, mixing alcohol and riding is unacceptable and harmful.
4. There is no safe blood alcohol concentration (BAC) level except zero. riding with any alcohol in the body increases risk.
5. Riders should intervene to keep others from drinking and riding. It is best to get the help of others to prevent someone from drinking and riding. Be cautious about disabling a rider's motorcycle. The motorcycle may still be drivable but will not perform properly.
6. Riders should consider the effects of prescription medications, particularly those that produce drowsiness or have synergistic effects with other medications. Combining alcohol with other medications can produce effects greater than just adding the effects together.



Key Points:

1. Safe and responsible riders maximize their time and space margin. They minimize risk by keeping factors at a level that is manageable. Most car/motorcycle crashes occur at intersections with the car driver failing to yield to the motorcyclist, but the rider still has a responsibility for personal safety as well as the safety of the other road users. The safe and responsible rider chooses to reduce risk by applying a strategy and by practicing emergency maneuvers such as braking and swerving sharply. Safety requires complete attention and a constant commitment to reduce risk.
2. Rider, motorcycle, and road and traffic factors combine to produce risk at any given moment. Rarely is there one cause to a traffic crash. Usually there is a combination of factors that accumulate and form a hazard that leads to a crash. Although there is usually one final factor on which a crash can be blamed, a wise motorcyclist realizes that crashes usually have multiple causes that build upon one another.
3. A rider can maximize the time and space safety reserve by effectively applying the strategy of SEE. The safe and responsible motorcyclist is a thinking motorcyclist. The mind is active and the eyes are constantly seeking out elements in a traffic environment that could cause trouble.
4. A rider minimizes risk by reducing the factors he or she contributes to the mix. Riders cannot control what other highway users do. Superior, responsible riders take positive action to reduce factors under their control. In traffic, effective management of the time and space safety margin is a rider's most effective skill. Most crashes are caused by a combination of factors and a primary riding task is to reduce the factors personally contributed into the mix. Basically it means to make a decision to actively minimize risk.
5. As motorcyclists age, they should increase the safety margin to make up for decreased visual capacity and slower response times. Time can play an unfavorable or favorable role in safety. On one hand the visual, cognitive and motor skill processes of riding is diminished; on the other hand the wisdom of experience and being able to prioritize the importance of a long and crash-free motorcycle life is gained.

Additional Information

Thank you for your participation in the Motorcycle Safety Foundation (MSF) Experienced *RiderCourse Suite*SM. For more information about motorcycle safety, please visit the MSF Web site at www.msf-usa.org. There you will find riding tips and other information to help you enhance your riding experience. While there, visit the MSF Online Store and look around for riding apparel and other safety items.

The MSF would like to invite you to let us know how your experience in the ERC Suite was beneficial, or if you have ideas to improve the learning experience for yourself and others. In addition, if you have an interest in helping others learn to ride or improve their riding skills, consider enrolling in a *RiderCoach*SM preparation course to earn MSF *RiderCoach* certification.

The MSF wishes you well on your continuing journey to enjoy motorcycling to the fullest.

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