

## Road Hazards

Wherever we ride, there will be hazards on the road. The Motorcycle Safety Foundation (MSF) strategy of Search, Evaluate, and Execute, i.e., SEE, applies directly to dealing with road hazards. Riders should continually scan ahead for objects in the road that may constitute a threat, evaluate the potential threat, and then take action to minimize their risk. Listed below are some common road hazards and information from motorcycle safety experts on how to recognize, avoid, and negotiate them.

Vehicles leak contaminants such as oil, fuel, coolants, etc. onto the center strips of the lanes. They accumulate especially heavy where vehicles stop with their engines running such as at intersections and left turn lanes. These liquids are slippery, even on an otherwise dry road. They can be spotted sometimes by their color being darker than the rest of the road or by exhibiting a rainbow colored sheen. Avoid riding in the center of the lane and try to circumvent any wet spot that you see.

The traction on a clean paved road that is wet from the rain is about 20% less than that of a dry road. This leaves enough traction for generally safe riding if care is taken to moderate speed, allow for longer braking distances, and minimize leans in curves. However, not all sections of the road are clean. A fresh rain brings the aforementioned contaminants to the surface where they are emulsified with water and spread to other parts of the road. Motorcycle safety experts suggest that riders delay their ride until a half hour or so after a rain starts to allow the rain to wash the contaminants away. If you do ride, be especially smooth when braking, turning, or accelerating during this time to avoid losing traction. If you have to brake on a slippery surface, gently use both front and rear brakes and squeeze the clutch for better control of rear wheel braking.

Hydroplaning can occur when a layer of water forms between your tires and the road, causing the tires to slide over the road surface. This dangerous situation can happen if you ride through standing water at too high a speed or if your tire tread is too worn to expel the water. Reduce speed to maintain traction and, if possible, ride in the tire tracks of a vehicle ahead of you. Keep your tires properly inflated and replace worn tires.

Metal, plastic and other surfaces are frequently encountered on the road, including steel plates, manhole covers, gratings, railroad tracks, plastic directional arrows, etc. These surfaces are extremely slippery when wet. Reduce speed before you get to the slippery surface. Go around it if you can. If you must cross it, do so smoothly since any sudden acceleration, turning, or braking can cause a skid. If you stop, be careful about putting your foot down on a slippery surface.

Gravel, sand, mud, and leaves can also cause skids, especially in turns. Near construction sites, gravel, sand, and mud may be expected anywhere in the road. Sand may be spread across the road to counter icy roads in the winter. This debris collects on the outside edges where roads turn and in the middle of intersections where turning traffic has pushed it. Leaves on the road may appear to be dry, but there may be slippery wet leaves underneath on the road surface. Be careful riding through leaves.

Some sections of roads have minimal exposure to the direct rays of the sun because of roadside foliage. Roads may appear to be dry, but wet and slippery debris or liquids may lurk in the shaded areas. Changes in color and texture of the road surface may alert the rider to a potential hazard. If you can't see the road surface in shady areas, especially curves, then slow down.

In these areas of reduced traction, the rider should reduce speed and travel through the debris in a straight line without accelerating or braking. If the debris is encountered while in a curve, it's best to stand up the bike and reduce speed before reaching the debris and then ride through it with as little lean as possible.

At some point, you may have to ride on an unpaved road. Ride on the most tractable surface that you see. Putting weight on the footpegs places your weight lower on the bike which allows better balance. Increasing your speed helps push the front tire through loose dirt and gravel and helps in steering the bike.

A "crowned" road slopes down on each side to drain water. In left curves, ground clearance for a leaning motorcycle may be reduced. "Off camber" refers to a road that slopes downward toward the outside of a curve. This limits your lean angle and available traction. It's important to reduce speed and lean. An off camber turn can sometimes be recognized by looking at the outside edge of the curve as you approach it. If the edge remains visible, the road slope is in your favor. However, if the outside edge seems to disappear as it turns, then the road may be sloping away from you, requiring caution.

Obstacles in the road include potholes, edge traps, railroad tracks, animals, and miscellaneous physical objects. Hitting these things may cause loss of control of the bike and lead to a crash. Options for dealing with these hazards include seeing it far enough in advance to select a path around it, braking to reduce speed, swerving around the hazard, or surmounting the obstacle in a controlled manner. Don't follow so closely to the vehicle in front of you that you are surprised by an object that suddenly appears from under it. Braking is generally a good idea. It allows time and space to resolve the concern and if you do hit an object it's best to do it at a lower impact speed. Swerving or surmounting may depend on the nature of the obstacle.

Swerving should be reserved for objects that are unlikely to move as you approach them. For example, serving around a dead deer in the road is safe, but trying to serve around a live deer standing in the road is not recommended because the deer is likely to make unpredictable movements which could cause you to hit it or lose control of your bike. Drivers in cars that you may try to serve around are also unpredictable. Hard braking is probably a better response than swerving in this and similar instances. Swerving and braking should not be done at the same time since their combined traction requirements would probably exceed that which is available and lead to a crash. Brake up to the point of swerving, then release the brakes and perform the swerve. If an obstacle is encountered in a curve, straighten up your bike before applying the brakes. Don't fixate on the object you are trying to avoid; focus on your intended path around it.

If you have to ride over or through an object, how you do it depends on the nature of the object. Standard advice is to reduce speed, straighten the bike, maintain traction, and try to impact the object in a manner to allow you to maintain control of the bike. If you ride over an object on the street, consider pulling off the road to check your tires and rims for damage before riding any farther.

Edge traps and long objects such as railroad tracks and raised pavement edges should be surmounted at an angle of 45 to 90 degrees. Approaching it at a lesser angle could result in your front tire failing to surmount it and then sliding along the edge of the obstacle until you lose balance and crash. A higher object, like a curb, should be approached as close to 90 degrees as possible. Just before contact, roll on the throttle slightly to lighten the front end. Shift your weight rearward as your front wheel comes up to the obstacle. This will make it easier for the front wheel to bounce up and over. Then move your weight forward to help your rear wheel get over.

We will always have road hazards. With appropriate effort we can negotiate them safely and continue with our riding enjoyment.

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