

Motorcycle Safety Strategies for Avoiding Panic Braking or Swerving

By the time you recognize the danger, you have two seconds or less until impact. A motorcyclist, no matter how skilled, is more likely to stay upright if he learns how to avoid instead of how to react to dangers on the road. One of the authors of the famous Hurt Report—and a guy who has seen every sort of motorcycle crash concocted by man—offers 11 ways to avoid getting into trouble. From the August 2005 issue of *Motorcycle Cruiser* magazine.

By **Jim Ouellet**.

When motorcyclists talk about safety and how to stay alive on the road, it's usually some variation on how to brake or—even worse—how to lay 'er down. The problem is that relying on emergency braking to get you out of trouble on your motorcycle is usually a really lousy strategy. Don't get me wrong—learning how to use your front and rear brakes effectively is a critical skill every rider should develop and practice. And when all else fails, there's no substitute for having a good DOT-qualified helmet on your head.

But relying on emergency braking or swerving to save your bacon is, I think, a dumb way to stay out of a crash. If a rider allows a situation to deteriorate to the point that he has to take emergency evasive action, he's probably toast.

Here's why: After detailed investigations of 900 motorcycle accidents in Los Angeles, the Hurt study (formally titled "Motorcycle Accident Cause Factors and Identification of Countermeasures") reported that the average time from the event that starts the collision sequence (such as a car beginning a turn across a motorcycle's path) to the actual impact was 1.9 seconds. A nearly identical research project just finished in Thailand reported the time at 2.0 seconds. In both studies, three-fourths of riders had less than 3.0 seconds between the start of the accident sequence and the crash. And keep in mind that riders don't always detect a problem the instant it begins. It may take anywhere from a quarter-second to a couple of seconds before something attracts the rider's attention.

Once the rider's attention is caught, reaction time begins. Most human-factors experts put average reaction time to traffic hazards at about 1.0 to 2.0 seconds, averaging around 1.5 seconds. If you swerve, add another half-second for the time delay due to countersteering and developing the correct lean angle before your motorcycle begins to head in the desired direction. Those delays leave little or no time for evasive action to succeed. About 30 percent of riders in the Hurt study took no evasive action at all, often because there was too little time. Even highly skilled braking usually won't do that much to delay your arrival at the crunch point.

Here's an example: Let's say you're going down the boulevard at the 35-mph speed limit when Joe Numbnuts turns left across your path. With reaction time and all, you've got one second left, so you do a highly skilled stoppie, bringing your speed down to 15 mph in that second. Your average speed during that one second was 25 mph, and you braked for 37 feet. If you hadn't braked at all, you would have covered that 37 feet in 0.72 seconds. So your highly skilled stoppie and nerves of steel delayed your arrival at the crunch point by about a quarter of a second compared to doing nothing at all. Is that enough time for Joe to clear his big SUV out of your way? Usually not. And few riders have as much as 37 feet in which to brake. Even worse, when faced with death or a world of pain seconds away, most riders do a miserable job of braking and swerving.

The Hurt Report found that riders with formal training (mostly California Highway Patrol and LAPD motorcycle officers, who had very demanding training and tons of time in the saddle) were no more likely to use the front brake than Melvin who learned to ride from his Uncle Clem. Or taught himself. Nor were trained riders less likely to slide out or highside when trying to avoid a crash. The point: No matter how good you think you are, don't count on overcoming the Pucker Factor when you're caught by surprise and think you're about to meet your Maker.

Instead of thinking you're going to save yourself with your lightning-fast reflexes and well-honed skills, you'll probably avoid a lot more trouble by working to prevent the situations where you have to rely on those skills.

1) Do all you can to make it easy for car drivers to see you. Probably 90 to 95 percent of car drivers who screw up say they never saw the motorcycle. Car drivers don't want to hit you. Honest. But some of them need extra help to know you're there. Do all you can to make it easier for them to see you. Use your high beam during the day. High beam is more conspicuous than low beam. Trading that cool-looking black leather jacket for something bright wouldn't hurt, either. (The only intentional crashes we ever saw in the Hurt study were marital disputes on wheels, with one spouse on the motorcycle and one in the car. You figure the rest.)

2) Freeways are good; surface streets are bad. Areas around shopping districts are the worst. Limited-access roadways such as freeways are good because car drivers can't turn across your right-of-way, so use freeways as much as you can.

3) In busy urban traffic, stay in the mix with the cars. Not out ahead of them; not behind. When you go through intersections where cross-traffic wants to use the pavement you own, stay right next to a car's front fender so you're not in the driver's blind spot and use the car as a shield. This is especially true at night because it's even harder for car drivers to distinguish a motorcycle from nearby traffic. Many riders who get picked off are the ones 30 yards ahead of a big clot of cars, or 20 yards behind.



4) Move away from potential hazards. If you're alone when you come up to an intersection where a car is waiting to cross your path, the more lateral distance you put between your path and the other guy's starting point the better. For example, if you're nearing an intersection where a car coming from the opposite direction can turn across your path, move to a lane closer to the curb. It'll make it easier for the car driver to see you, and give you more time to react, which is probably even more important than skilled braking.

5) Never assume the other guy has seen you. Keep your eye on a vehicle that's positioned where it could violate your right-of-way. When you've decided the other driver has seen you and you start looking farther down the road, that's the moment he'll choose to turn.

6) Take it easy when you're out carving canyons. As you approach a turn, pick out which rocks and trees look good to hit, because you don't want to hit the unfriendly ones (which, actually, are all of them). If you need a little extra time to run through this mental drill, let off the gas. And remember that if you hit a post-and-rail barrier, which is used to decorate the outside of a lot of curves, it will probably break every bone in your body.

7) No booze before riding. None. Ever. Your risk of causing your own crash skyrockets when you drink and ride. Riders with more than one beer in their systems are about 40 times as likely to crash as sober riders. And a drinker's favorite way to crash is by running off the road, which has a higher fatality rate than any motorcycle-car crash except head-ons because there are so many rigid fixed objects waiting to, uh, welcome you. Trees, fire hydrants, parked cars, culverts, the list goes on and on.

8) Split lanes on the freeway. It's safer than trusting the guy behind you not to rear-end you. In the Hurt study, more riders on the freeway got nailed from behind while staying in their lane than riders who crashed while lane-splitting. But don't go too much faster than the traffic flow and be really careful when coming up to a car with an open space in the lane next to it, especially if the lane with the space is moving faster than the one with the car.

9) Be patient with lost and distracted drivers. In residential neighborhoods, you should understand that the idiot in the car in front of you, the one who's poking along at 15 mph, is looking for an address. Cool your jets and hold back, because the second you try to pass him, he's gonna turn across your path into a driveway. The five or 10 seconds you lose waiting for this car to get out of your way is a lot less than the time you'll lose waiting for the cast to come off your leg.

10) Don't lay it down. You lose only about 8-10 mph every second you spend sliding on the ground while giving away your perfectly good skin. If you do a good job using both brakes, you can lose 15-20 mph every second you brake and save on band-aids, too. About the only time to put yourself down on the pavement is if you're on an elevated curve (like a freeway interchange) and you're about to hit the low outside wall. The wall is usually high enough to save your motorcycle but not high enough to keep you from flying off into the wild blue yonder. I've never seen a rider survive that fall. The government ought to raise those concrete retaining walls to at least chest-high.

11) A loud exhaust is not safer. By the time you're close enough for a car driver to hear you, he's already in your path. In fact, you run the risk that the driver will be so alarmed he'll stop dead in your path. On the other hand, loud exhausts sure work wonders for pissing off the people behind you and making 'em hate motorcyclists. If you're serious about staying out of an accident, make yourself seen, not heard. If you just gotta have a loud exhaust, find another excuse for it.

Lucky for me, I learned these things from seeing thousands of other people's crashes, because I think some of these strategies have helped me stay out of trouble on the road. This is fortunate, because I learned in my dirtbiking days that my own collision-avoidance skills usually suck. Seems that when things get really ugly I have this bad habit of puckering up.

Motorcyclist Jim Ouellet is one of the authors of the famous Hurt Report, "Motorcycle Accident Cause Factors and Identification of Countermeasures," and has been studying motorcycle accidents since 1975. He has examined more than 2500 crashes, testified in the U.S. Senate and various state legislatures, helped train investigators and supervised the Thailand study of 1082 motorcycle crashes. He is on the staff of [the Head Protection Research Laboratory](#). He can be reached at jim_ouellet@yahoo.com.