

The High and Low Side of Braking

YOU PICK YOURSELF UP FROM LYING ON THE ground. Feeling your muscles quivering uncontrollably, you struggle to take your helmet off. There are people coming up to you asking if you're okay, saying how they saw everything, and

repeating, "He just pulled out right in front of you!" Now you realize what just happened and you quickly become angry. At the same time, you notice that your beloved ride is lying on the ground and is pretty beaten up. However, it's lying 40' away from the car that pulled out into your path of travel. Seems like that additional distance could have been used for stopping your bike and keeping it upright instead of where it is now.

This scenario happens more than we realize. Accident investigators' evidence shows that a good percentage of accidents may have had better outcomes if riders used proper braking skills. All too often, riders high or low side their motorcycles because they don't know the correct way to brake in an emergency. Those fortunate enough to survive these accidents will usually explain their survival technique of laying down the bike as their only choice. "There was nothing else I could do," they frequently tell investigators. Now, consider that in up to 90 percent of the motorcycle accidents investigated, riders never had any formal riding skills education. It's not hard to see why they will respond with such answers. They don't know any better!

Let's take a moment and look at the high and low sides of braking and the steps to help prevent these types of accidents. Since one outcome is no better than the other (or more common), we'll start with the low-side crash first. This type of crash is caused by grabbing a handful of front brake with too much pressure applied to the lever. This will cause the front tire to skid and pull the front end of the bike to the ground at an amazingly fast speed. With all your force and weight moving forward while the front tire skids, you will immediately lose steering and balance control, resulting in the low-side crash. Although some folks feel that this crash is the lesser of the two braking evils (as far as severity goes), it's still a crash that may be preventable. If you're in a situation where your front tire starts to skid, immediately release the front brake and reapply properly with smooth, steady pressure. This will help you regain control. Then, continue steady pressure to the front brake, using the rear brake as well, to come to a full stop.

Now, if you lock up the rear tire and begin to skid, the approach is far different. Because you're stopping, your force and weight will once again transfer from the



rear wheel to the forward position of the bike. This will reduce traction to the rear wheel, causing the tire to skid. The greatest hazard of the rear tire skid is releasing the brake pressure when the rear wheel is out of alignment with the front wheel. Remember that the best way to stop a motorcycle, especially in a quick stop, is when it is upright and straight. If your rear tire resumes rolling when it is out of alignment with the direction of travel, you could instantly lose control of the motorcycle as it straightens itself out. The combination of the tire regaining motion from skidding and the reaction of the bike snapping back into alignment is enough force to physically throw you from the motorcycle. Ouch! This unpleasant act of flying through the air is the basis for the term *high-side crash*.

To help prevent this scenario from becoming a reality, if your rear tire locks up, hold it! Keep the pressure on the brake pedal and keep the bike as straight as possible while riding it out. This does not mean that you abandon using your front brake. Keep steady, even pressure on your front lever to help complete your stop. There are times when you could release the rear brake and not sail through the skies, such as when you're on areas with less traction, like dirt roads or if your tires are in line, but the safer bet may be just to hold the brake until you're stopped.

Research has shown that riders who practice their braking skills on a regular basis have a better chance of preventing these common mistakes of high and low siding. They even increase their chances of avoiding collisions, which is not a bad thing. There are other key items to consider when emergency braking is required. Target fixation plays a role in this as well. If you're going to head where you're looking, should you really be staring at the car that pulled out and stopped in your path of travel? Look for a way out, find that escape path, and head for it.

Ask any riding instructor and he will tell you that one of the best methods for avoiding conflicts with those infamous roadblocks is to take a riding course, learn how to stop properly, and practice developing those physical skills. Sure, there are always unexpected factors that may cause a less than happy outcome, but wouldn't you rather be prepared for the ones you can prevent? It's your butt out there; go out and learn how to save it! **AIM**