
Proficient Motorcycling

by Ken Condon



Looking for Trouble

Scan aggressively to spot potential hazards *before* they become a problem.

BEING SEEN AND being able to see hazards are both critical for safety. Each of our five senses has a role in gathering information, but vision is our most important and reliable tool. We use our eyes to scan the riding environment and make a “visual map,” and our brain tells us whether anything in the “picture” suggests a threat. Visual information informs you whether you are riding too fast for an approaching corner or whether a car is about to cross your path. Not only does this process have obvious implications for safety, it also makes it possible to have a more relaxed and enjoyable ride.

Many riders don’t realize the extent to which eyesight affects motorcycle control and riding confidence. In this installment, I will discuss ways to help you improve your safety and enjoyment simply by becoming more visually aware.

Look Aggressively

It's not enough to simply look ahead. You must actively search for hazards by keeping your eyes moving. Quickly scan left, right and down at the road surface to spot problems. Avoid fixating on any one object for more than a second. Also, scan your mirrors and check over your shoulder when changing lanes to identify hazards that might be hidden in your blind spots.

It's important to scan well ahead. Riders who only scan as far as the near distance often lack confidence, because they are surprised by obstacles or road characteristics that appear "out of nowhere." Conversely, riders who have trained themselves to keep their eyes up and their vision high and wide are able to see hazards much earlier—allowing ample time and space to respond. This alone will improve your chances of a more relaxed and enjoyable ride, because you are prepared for circumstances that may change suddenly.

Busy traffic environments and/or higher speeds require even more aggressive visual scanning. A leisurely rural cruise at the posted speed limit may permit relatively relaxed visual scanning. But, as your speed increases, the time you have to process information becomes condensed. Identifying hazards early requires you to look farther ahead as information approaches more rapidly.

Keeping your vision "high" not only helps you spot hazards early; it also positively affects your perception of speed. When your eyes scan the distance, the landscape appears to pass more slowly compared to looking down at the road rushing beneath your tires. A slower perceived rate of speed offers a sense of more time and space to react and minimizes speed-induced anxiety.

Looking and Seeing

We "look" whenever our eyes are open, but that doesn't mean we "see." There have been many instances when a driver appears to look directly at a rider just before pulling into his path. Perhaps the driver was daydreaming, had poor eyesight, or was only looking out for cars. Whatever the reason, the driver "looked" but did not "see."

To understand how the brain processes visual information, it's helpful to understand the difference between "looking," "seeing" and "perceiving." You *look* in the direction where danger appears, you *see* that potential hazards are present and you *perceive* whether the hazard poses enough danger to warrant evasive action. Looking is mostly a mechanical activity and seeing is what happens when an object gets your attention. But, visual perception is what causes your brain to react to keep you safe.

Lane Position

Poor lane position and insufficient following distance are two ways to increase hazardous situations. Ample following distance allows you time and space to respond if the car you are following stops quickly or if dangerous road debris appears between its tires. It also provides a wider angle of view to see past the vehicle ahead. Riding too close behind large vehicles blocks your field of view, which prevents you from spotting hazardous situations as they unfold, and also hides you from view, tempting car drivers to think there is sufficient space behind the big vehicle to enable them to quickly cross the road, for instance.

One easy way to determine an appropriate following distance is to use the "two second" method. As soon as the vehicle ahead passes a fixed roadside object, begin counting "one-thousand-one, one-thousand-two." You should complete your count before your front tire reaches the same object. It's important to note that two seconds is considered a minimum following distance. More space is required when it's slippery or in high-risk environments.

The other aspect of lane positioning is your "lateral" location in the lane. As motorcyclists, we have the option of riding in the left, center or right portion of our lane. This gives you the ability to place your bike where you can see farther ahead and where other drivers can see you from a greater distance. Exactly what is the best lane position? On two-lane roads, riding in the left/center of your lane makes the most

sense. This position allows you to see past the vehicle ahead and gives you a good angle of view of the oncoming lane.

Certain situations will require you to alter this position, such as an oncoming vehicle threatening to cross the centerline. In this case, you want to move away from the hazard to the center or even to the right-center portion of your lane. Another is a car on your right, waiting to cross the road, who will not see you soon enough if you stay in the center or left lane position. In this case, it makes sense to move to the right side of your lane until you are confident that the driver sees you, and then move toward the center of your lane to increase space between you and the car and to continue monitoring the oncoming lane.

Read the Road

Seeing is only the first step in avoiding a crash. Once we see a possible hazard, we must then accurately perceive whether a change in speed or lane position is called for.

As riders, we understand that gravel or oil is a significant surface hazard that can easily cause a fall. We also know that drivers often have a hard time seeing us amongst other road users and that intersections are the most likely location for collisions to occur. With this data pre-loaded in our brain, we are better able to identify situations that can cause us harm and keep a keen eye out for them. We learn about many of these hazards through experience.

Unfortunately, newer riders will often see an imminent hazard but fail to act simply because they do not recognize the hazard's significance. One common example is a new rider who loses traction on sand and crashes. He saw the change in road surface color and texture caused by the sand, but made no attempt to avoid it. Being a car driver all his life, it did not occur to him that even a light coating of sand is enough to cause a motorcycle to fall.

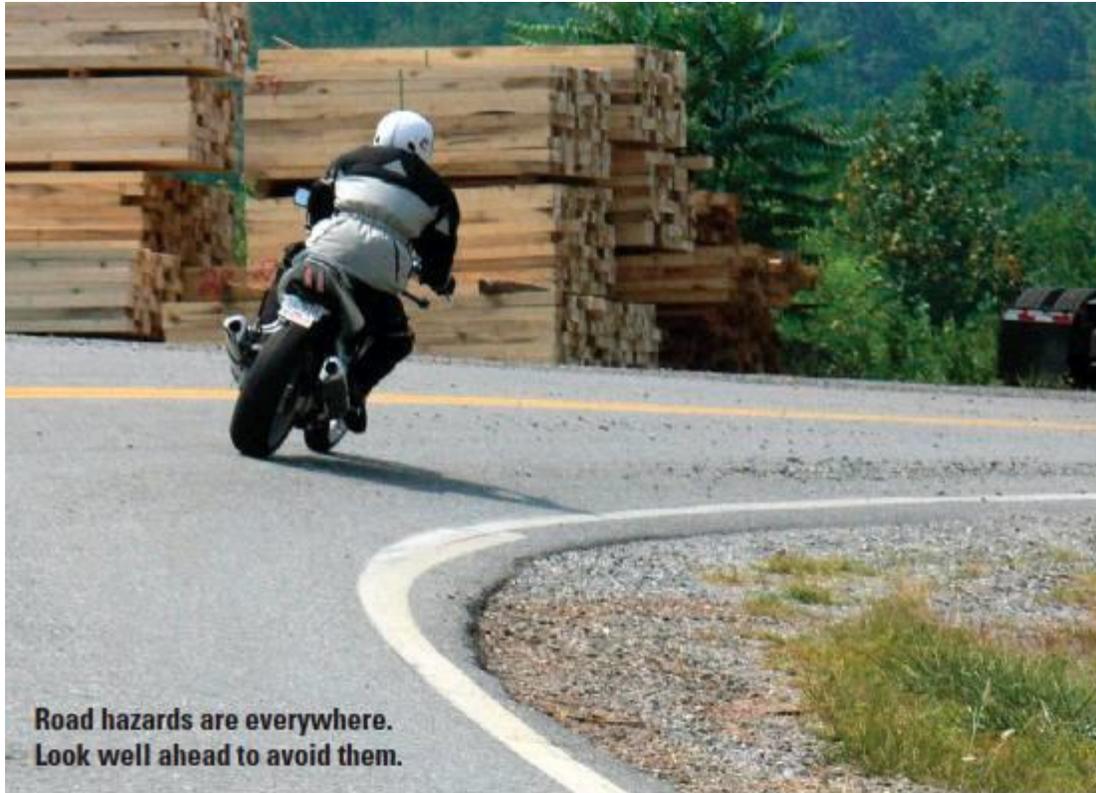
Traffic Vision

Riding in traffic requires a heightened visual attention. Aggressively scan for anomalies in typical traffic flow patterns and cover your brakes to reduce reaction time. The majority of hazards come from ahead, but it's important to check to the sides and behind for errant drivers. Also, be sure to monitor your mirrors when stopped in traffic and remain in first gear until the traffic behind is stopped, in case a quick getaway is necessary. And be sure you avoid riding in drivers' blind spots!

Cornering Vision

Seeing hazards and being seen are important for staying safe, but your eyes also play a significant role in motorcycle control and confidence. You've undoubtedly heard the phrase, "you go where you look." This phenomenon is sometimes referred to as "visual direction control," Point your eyes to a corner's exit to help direct your motorcycle on the desired path. Riders who discover the power of "looking where they want to go" make great leaps in motorcycle control.

You may be saying, "I already look ahead." However, there is a difference between looking ahead in the mid-distance and really looking ahead toward the corner's exit. On your next ride, try lengthening your vision to a point in the distance that is about four seconds ahead. You will find that looking deeper into corners will help you to enjoy the full benefits of visual direction control.



Road hazards are everywhere. Look well ahead to avoid them.

Part of the reason why visual direction control can increase confidence is because it puts your eyes and mind “ahead” of the situation and prepares you for what is about to happen. Less effective, near-distance scanning often leads to anxiety, because the rider does not have time to process what is about to happen. When cornering, this leaves you less prepared for corner hazards and less able to select the proper entry point, lean angle and speed to complete the turn skillfully.

Even though you need to look well ahead, you also need to get a closer look at possible road surface hazards as they approach. This means using quick downward glances. Once you’ve seen the possible problem, return your eyes to the corner exit.

One helpful way to imagine how to look through a turn is to “ratchet” your eyes as you round the corner, looking for visual clues about road surface condition, camber, turn radius, etc. If your eyes register the information early, you’ll know if you need to adjust your speed or direction to manage a potential hazard.

Don’t be surprised if looking far ahead is disorienting at first, with practice it will become a natural part of your riding skill set. If you find yourself reverting back to scanning in the near-distance, you may experience anxiety, probably because you are riding too fast for your visual field. In this case, slow down to re-establish your longer, wider vision and restore confidence.

Target Fixation

Visual direction control is a powerful tool for helping direct your motorcycle, but it can be hazardous if your eyes fix on a hazard that you need to avoid. In threatening situations, we instinctively look at the perceived hazard. Target Fixation is the term used to describe this response.

Looking directly at a hazard will tend to direct us toward the danger, so it's important to consciously choose desirable visual targets. This means looking away from the hazard and focusing on a safe escape route. Focus on the solution, not the problem.



Many drivers fail to see motorcyclists in traffic. Position yourself to help them see you.

Entering a corner faster than is comfortable is a common source of panic that leads to target fixation. Riders who are anxious about not making a curve will fix their attention on where they fear to go—typically the edge of the road. The solution is to look toward the corner exit and lean the motorcycle as much as necessary to stay in your lane.

Target fixation also occurs in traffic. When another vehicle makes a threatening maneuver, it is common for a rider to visually target the hazard. This results in the rider driving into the car even though he or she may have been able to steer around it.

Traffic traveling in the same direction can also present an opportunity for target fixation. Drivers and riders who “lock” their vision and attention on the vehicle ahead are at risk for being lead in a direction they don’t want to go. This can also occur when riding in groups. Riding too close to other motorcyclists is a recipe for disaster if a rider ahead blows a corner or crashes. Look past riders you are following to maintain your desired path and to prevent being drawn into the mistakes of others.

Vision Blockers

There are also factors that hinder vision, including solar glare, incorrect eye protection, nighttime riding and impairment caused by aging, alcohol, drugs, or emotional distraction. Morning and late afternoon rides are often accompanied by solar glare caused by the low angle of the sun. Sunglasses and tinted shields work to minimize the affects of solar glare, but do not completely solve the problem. Open-faced

and dual-sport hybrid helmets often include a visor, which can be a real help to combat solar glare. Full-face helmets lack the option of a visor for blocking the sun, but I've had some success by simply putting a strip of electrical tape across the top of my shield.

To ensure good visibility at night, be sure that you have clear eye protection available. Also, at night, you will not be able to see hazards as clearly or as early as in the daytime. This means that you must ride at reduced speeds.

There are other times when your ability to identify hazards is significantly compromised, such as when riding in rain or fog or when riding impaired. Alcohol or drugs will affect your visual acuity and depth perception as will impairment from emotional distraction, which will cause you to fixate on what's bothering you and not on what's right in front of you. And be alert to distractions from electronic devices that can take your mind and eyes off the road.

Aging Eyes

Let's face it, our eyesight is not as sharp as it was when we were younger. The fact is that all of us are suffering from some age-related vision degradation. With age comes a loss of elasticity of the crystalline lens, which makes focusing on close objects difficult and creates problems when transitioning from distant to near objects. Low-light situations and glare from oncoming headlights can become more of a problem as well.

The American Academy of Ophthalmology suggests eye exams every 2 to 4 years if you are age 40–54 and every 1 to 3 years if you are between 55–64 and every year if you are 65 or older. People with high blood pressure, diabetes, or a family history of eye problems are at higher risk and should be extra diligent.

No matter what your age, it is imperative that you protect your eyes from injury and damage. Always wear shatterproof eye protection when riding and UV-filtering lenses when appropriate.

Being Seen

Being able to see is a key component to riding skillfully and safely, but safety also involves other road users' ability to see us. Not everyone on the road has the same level of visual awareness. People are as attentive as they feel they need to be, which is why car drivers, in their protective metal compartments often miss important visual clues that can prevent accidents. Motorcycles are relatively small and are perceived as a minor threat to drivers. This makes motorcycles less likely to be noticed and is a large reason why car drivers commonly invade a motorcyclist's right of way.



Looking to the corner exit helps guide your bike where you want it to go. Look past riders in front of you.



Fog is one example of conditions that can hinder vision.

Many drivers who are involved in collisions with motorcyclists will claim that they never saw the motorcycle before turning across its path. Yes, the driver is at fault for not seeing the rider, but perhaps the rider was not using the best lane-positioning strategies to help the driver to see him or was not paying attention to how the driver may have been blinded by solar glare. Choosing to wear inconspicuous riding gear without any reflective material can also contribute to not being easily seen. There is a lot that can be done to be more noticeable.

Visual acuity is much more complex than most riders realize. Strive to improve your information gathering skills, and understand and utilize all of the traffic strategies available so other drivers can more easily see you. You will be amazed at how much more secure and in control you will feel.

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