

SHOCKING INFORMATION

by Richard Bennett
(Weather Hazards)



I remember my first close look at lightning as I rode my motorcycle. It was September, 1985 and I was crossing the California desert just before midnight. Strikes were frequent, and close. This was the start of the 10th Annual Three Flags ride, and we had miles to go before we slept.

Since those naïve days, I have learned to respect lightning, especially while riding a motorcycle.

This is the time of year we all need to know about lightning and the hazards to motorcycle riders. This is thunder storm season, and they happen all across the U.S., including here in California.

My companions and I were lucky in 1985. We were not struck by lightning. We rode through those conditions because we didn't know the dangers. But make no mistake; motorcycle riders are far more exposed to a deadly lightning strike than almost any other target.



An issue of BMW Owners News reminded me of thunderstorm dangers in an article written by fellow rider Gerry Schulte. The danger was highlighted with the report of one of his personal friends who was killed by lightning while riding his motorcycle in 2005. As a result, I gathered facts and statistics about lightning from various articles on the Web. Here are some things you need to know.

Lightning is the most dangerous and frequently encountered weather hazard that most people experience each year. It is the second most frequent killer in the United States, second to floods and flash floods. During the last 30 years, lightning has killed an average of 73 people per year.

Because lightning claims only one or two victims at a time, it generally receives less attention than more destructive storm-related killers. On average, ten percent of strike victims die; 70 percent of survivors suffer long-term debilitating injuries from the actual strike.

Almost everyone takes some protective action during the most severe part of storms, but they leave themselves vulnerable as the storms approach, depart or are nearby. Lightning can strike up to ten miles from the main area of the storm. That is about the distance you can hear thunder from the storm. This is referred to as "blue sky lightning".

Many people become casualties of lightning because they try and wait until the last minute before seeking shelter. The fact is that most people struck by lightning are not even in the rain. The National Weather Service says "When thunder roars, go indoors."

At any given moment, there are 1,800 thunderstorms in progress somewhere on earth. This amounts to 16 million storms each year. Scientists know the cloud conditions needed to produce lightning, but cannot forecast the location or time of the next strike, because there are so many variables. Lightning detection systems monitor an average of 25 million flashes of cloud-to-ground lightning in the U.S. every year. A ground strike can produce somewhere between 100 million to one billion volts of electricity.

With this level of energy, lightning can heat its path five times hotter than the surface of the sun; up to 50,000 degrees. The rapid expansion and contraction of the air surrounding a lightning bolt, due to this tremendous heat, causes a shock wave we hear as thunder.

A few simple measures can avoid the majority of lightning casualties. The first line of defense against lightning is to stay on top of weather predictions along your travel route. The safest location during lightning activity is in a large enclosed building, such as a home, school or office building. These buildings are safe because of wiring and plumbing that conduct the charge to the ground. Picnic shelters, sheds and other partially open or small structures are NOT safe.

Being on a motorcycle during a thunderstorm is worse than standing on the ground, because of the metal in the bike. The best defense while riding is to be aware of the weather around you. Seek shelter when you first hear thunder, see lightning or dark clouds developing. For every five seconds you count between the flash and the thunder, lightning is one mile away. You should already be in a safe location if that time is less than 30 seconds. Stay inside until 30 minutes after you hear the last thunder. This is known as the "30 -30 Rule."



Experts in lightning safety remind us that there is NO safe place to be outside in a thunderstorm. If you see or hear a storm coming, and you can turn around and get away, do it! If you are caught in the open for any reason, here are some last-resort tips that won't guarantee you won't be hit, but could just slightly lessen the odds.

Wait out the storm under an overpass or bridge. Try to remain on dry surfaces, and don't touch the walls of the structure.

Do not seek shelter under tall trees.

Stay twice as far away from a tree as it is tall.

In an open field, keep as low as possible, but do not lie on the wet ground. Instead, get into the lightning desperation position: Crouch down into a squat while keeping your feet together. If there is a low area or dry ditch nearby, this will get you even lower.

If high voltage wires cross the road, **you may want to seek shelter directly underneath these wires**. Stay away from the metal towers. Electric companies design these wires and towers for lightning strikes.

The vast majority of lightning victims survive their encounter, especially with timely medical treatment. Individuals struck by lightning do not carry a charge, and it is safe to touch them and provide medical treatment. Call 9-1-1 and begin CPR.

Summer months brings out the most motorcycle riders, and the most thunderstorms. Better understanding of lightning and safety measures will help you enjoy the riding season and get you home safely. As for me, I know I will never ride through the desert in a lightning storm again!



Just Before the Storm