

Ten Things They Don't Teach You In Basic MSF Class

By Richard Bennett

The military has Basic Training, and Police Agencies have Police Academies. If you have been in either venue, you know you learned a lot from on-the-job experience that came afterward.

In police work, we call advanced instruction "Field Training", and we have mentors called "Field Training Officers" to facilitate the process. After completing FTO training, new Officers are sent out to complete their probationary time as self-sufficient beat cops. Still, some don't perform to minimum expectations, and are terminated from police employment.

Such is not the case with new motorcycle riders.

Before there was "civilian" motorcycle training, the only instruction that was available was military field training, police motorcycle officer training or a well-meaning friend in a local parking lot. The average new motorcycle rider had no structured training before adventuring into local traffic.

Today the Motorcycle Safety Foundation provides an excellent platform for new riders to learn the skills needed to operate a motorcycle. For a fee, they provide motorcycles, helmets and experienced instructors. A classroom and an off-street practice area provide a safe environment for new riders to learn and practice the basics of motorcycle operation. Upon "graduation", the MSF often has an employee of the local DMV watch students navigate the standard skills test and then issue a motorcycle endorsement for their operator's license. Ironically, students get license endorsements without ever riding on a public street.

My riding experience and my review of traffic collisions over the years caused me to see similarities in the training of new police officers and new motorcycle riders. As new police officers, we are processed through a series of ever-increasing training until we are released upon the public as "fully trained". By contrast, basic motorcycle training qualifies a new rider to ride upon the streets and highways of America. Advanced training is available, but the rider must seek it out. Not many do.

How we learn new skills

Throughout our lives we have learned new skills, and we will continue to do that the rest of our lives. There is a mental process that we all go through to feel confident that we have mastered our new skills. Visualize this process as a "learning wheel", beginning with "Concept", and ending with "Confidence". The most effective application of the process comes with a structured learning environment and competent instruction. Trial and Error is the most risky and least efficient way to learn.

Think of a skill you learned and when you finally felt confident about your ability to do it. Are you a golfer? Are you comfortable with using computer programs? If so, you probably went through the “learning wheel” process, or you struggled for a long time without a structured learning experience to get to that level.

The skills process begins with **concept**. The concept of the skill is explored and explained, usually in a class room setting. In police work we spent many hours in the classroom learning about laws, tactics, ethics, and many more conceptual aspects of the job.

Then came **application**. We were paired with mentors who showed us how to apply the concepts we learned.

And we **practiced**. We applied the concepts over and over until we became proficient enough to work without constant supervision. Even as “solo” officers we continued to practice.

Eventually we **mastered** the skill. We knew the concept; we practiced the application and we were fully competent.

When we were fully competent, we were **confident**, which is the last cog in the learning wheel.

To be sure, there are motorcycle riders among us who have never taken structured training. There are also those who are riding without a “motorcycle” endorsement on their driver license. Their survival rate is predictably less than fully trained, properly licensed riders.

The Motorcycle Safety Foundation does a good job with the “training wheel” concept in their classes. But the training wheel stops after basic training, ergo the name “MSF Basic”. Once the basic training ends, riders need to start the training wheel over again, learning new or advanced skills.

Here are ten things I found MSF doesn’t give as hands-on training to new riders, which I think are important for survival. The training wheel rolls on...

1. Traffic Strategy

During basic MSF training riders are not taken into heavy traffic and shown how to negotiate safely. New riders are more likely to focus on looking at hands, feet and instruments than on picking a safe route through surrounding traffic.

We have all been new riders, and we remember how awkward we felt until we were able to operate our motorcycles without looking at these things. Once the physical operation is mastered, we learn to look for, and hopefully avoid, danger from other vehicles.

Traffic strategy is an important component of motorcycle safety. **Seeing potential danger and perceiving the threat** is a key to survival. The best mechanical skills mean nothing if the danger is not recognized in time to react properly.

In addition to recognizing danger, new riders need to *anticipate* possible danger and formulate plans for maneuvering in a herd of semi-conscious car drivers. At the police academy we taught new officers to visualize the worst possible scenario and be ready to deal with it. Most of the time the plan was not necessary, but the officers were more confident when they were prepared.

Much like a game of chess, a savvy rider needs to plan and time moves. Visualizing traffic movement, vehicle hazards and identifying the “next move” is needed in heavy traffic. Vehicle passes, lane changes, and speed adjustment need to be thought out well in advance. Riders also need to create a “safe zone” around them, and be able to react defensively if someone encroaches on that zone.

These skills can be learned by having a civilian version of “Field Training Officer” as a riding partner. Mentors can be found in Motorcycle Clubs or friends who are competent riders. The other, more risky option is trial and error.

2. Riding in the Rain

Riding a motorcycle in the rain is one of the skills that is not taught in the basic Motorcycle Safety Foundation course. In fact, it wasn't taught in the Police Motorcycle Officer training or the Advanced MSF training either. It is one of those things that become a learn-as-you-go experience.

Basic MSF classes are conducted in safe parking lots, and usually during dry weather. If light rain were to occur, the practice sessions could still happen, but speeds would be slow, and there would be no other traffic other than students. Just getting wet is not training for riding in the rain.

Once you master the techniques of riding in the rain, you will be able to travel most anywhere with confidence. Since this is not part of a structured training session, here are my suggestions for safely riding in the rain...

Dress for rain

Always have rain gear with you, especially during the rainy months.

Learn to read the weather signs. Dark clouds ahead usually mean you should be wearing your rain gear. After it starts raining, and your clothes are wet, stopping to put on rain gear is an exercise in futility. Be prepared, and suit up early.

Once you have rain protection, you will be much more comfortable. A comfortable rider will be able to concentrate on the task at hand rather than ruminate about how cold and wet the day is. That is especially true for your lady passenger; she will endure the adventure better if she, too, is dressed for the wet weather. You will appreciate the difference at the end of the ride.

Here is a short list of what you need for you and your passenger:

- High quality rain suit. You get what you pay for, and when you need it, you will be glad you invested the money.
- Waterproof boots that are tall enough so that water doesn't seep in from above.
- Waterproof gloves, or at the least, covers that slip over your gloves.

At the risk of offending the minimal helmet crowd, I also recommend a full-face helmet, or a helmet with a full-face shield. Rain drops that hit your face at highway speed feel like bullet strikes. Get a full-face helmet and protect yourself from stings. Besides, your friends will never know it is you inside there.

After you have proper rain gear, it becomes a matter of using common sense and being aware of the hazards around you.

15 Minutes of Danger

The first rain of the season is hazardous, and the first 15 minutes the *most* hazardous.

There are places in the U.S. that get a lot of rain much of the year. Those locations don't need much time to stabilize the wet road surface. But, if you are in a location that enjoys dry seasons, that is when cars and trucks deposit a lot of crud on the same roadway you will ride upon, you need to allow some time for the crud to wash away.

No worries, Mate. At the first sign of rain drops, you will probably want to stop and don the rain gear you paid top bucks for. Use the first 15 minutes to find a safe place to stop, preferably a service station, or something with an overhang. Walk inside, grab a cup of something and take your time drinking it. Then pull out your rain gear, and impress the by-standers with how nice and dry you look.

By now the mud, oil and transmission fluid should be draining down the culverts on the way to pollute lakes, streams and the ocean. Your road will be washed clean and ready for you to continue on your way. It has been estimated by veteran riders that clean wet pavement has 80% of the traction of dry pavement. I can vouch for that; I rode the Alps in rain and never had an incident with slippery curves. With some normal attention to the road surface, you should be good to go.

Surface Hazards

While clean, wet roads give you good traction, there are still slippery spots to avoid.

- Painted lines. Crosswalks, words painted in the lane, directional arrows, etc.
- Surface textures. Transitioning from roadway to private drives; watch for slick concrete.
- Steel. Manhole covers, plates covering construction and rail road tracks.

- Oil slicks. Watch for rainbow colored water.
- Water puddles. Pot holes fill with water, and can be deeper than expected.

Now that you are alert to these additional hazards, you can navigate them with a little common sense.

Smoothness

The best motorcycle riders in the world have perfected smoothness.

Practice smooth riding techniques before you get caught in the rain. Smooth transition between motorcycle controls lessens the risk of unexpected motorcycle dynamics.

When you ride, work on your use of controls. A smooth start and “seamless” run through the gears should be your first drill. When I have a passenger, I try to go through the gears with only the engine sound betraying the shifting. The closer you get to a turbine feel, the smoother your gear usage. The same should be done for down-shifting. Practice, practice, practice!

Next is the transition from power to brakes and back to power. Ever wonder how the “Pros” get through those turns so quickly and effortlessly? It is smoothness. Your motorcycle has many dynamics, which change when you accelerate, brake, lean and stop. You may not feel it, but the chassis is shifting and the tire contact patches are transitioning. You want these transitions to be as smooth as possible, especially in the rain.

Pick Your Spot

OK, we are now dressed in proper rain gear, we know surface hazards and we ride smoothly. Now some words about lane positioning.

Motorcycle riders have the advantage of being able to use the entire 12-foot width of the lane, six inches at a time. That is about how much your tire footprint is on the pavement.

In the Motorcycle Officer training, we learned to position ourselves in the left wheel track of the vehicle ahead. This gives the car driver a clear view of you in two mirrors, and you have the rest of the lane for cushion. This works especially well in rainy weather.

During heavy rain, the tires on the vehicle ahead of you will cut through the surface water and leave a brief “path” for your motorcycle tires. This small change will create additional traction, and therefore more control for you. Don’t get too close, because in an emergency, you may have to stop before imprinting the cars’ trunk lid.

When there is no traffic ahead of you, remember the slickest part of the lane is usually the center. On highways where thousands of vehicles an hour travel in your lane, there is bound to be some residual oil or transmission fluid still percolating from the pavement. Ride in one wheel

track or the other; there will be water, but it will be cleaner and more cohesive than in the center.

Speaking of traction, you did replace those worn tires, didn't you? I know that pound for pound motorcycle tires are far more expensive than those you have on your minivan. Keep in mind that those two six-inch contact patches are your connection with mother earth. If the tread is worn, the rain-wicking properties of your tires are diminished. When the water is not efficiently displaced, the traction is reduced. While hydroplaning on a motorcycle is uncommon, worn tires will get you into the unwanted minority. Don't take chances; spend the money and keep your tires in top condition.

Visibility

"See and be seen" is a motto that veteran riders follow.

Riding in the rain increases the importance of visibility, both for you and those around you. Your visibility will be seriously diminished in the rain, so adjust your riding to compensate.

The most challenging time I ever had with visibility in the rain happened in southern Louisiana. My wife and I were returning to our hotel from a day ride when darkness fell. Soon after, a hard rain began. Rain covered my windshield and my helmet face shield. My breath fogged my face shield, and on-coming headlights made everything white and blurry. It was a nervous time.

Since that time, I have learned some tricks that help in extreme circumstances. Having gloves with a squeegee or a chamois insert will help wipe away the surface water from the face shield. Anti-fogging compounds are on the market, and I use Rain X on both sides of the face shield. This helps keep the water flowing off instead of sticking in front of my eyes. The same stuff can be used on your windshield too. Buy some, and keep it handy. You can thank me later.

Now for the more obvious "visibility" topic: be seen by other drivers.

I know I am a little "paranoid" about being "invisible" on my motorcycle. During my Motorcycle Officer days, it was never a concern; people looked for me and avoided me when they could. Now I ride a maroon motorcycle with a gray riding suit. Here are some tips to be more visible at any time, and especially in the rain.

- Add running lights to your motorcycle both front and rear. If you can afford it, high intensity or LED headlights really get attention.
- Add reflective tape to the back and sides of your motorcycle. I even put some on the underside of my saddle bags in the event it ends up on its side in the dark.
- Wear a bright, reflective vest.

Now, even with a maroon motorcycle, I am very visible to other traffic. You can be too.

If you have never ridden in the rain, I hope this will give you the confidence to try it. Once you experience riding in the rain, you will be a better rider on sunny days, too. And you can swap stories with other riders as you don your rain gear and sip coffee under the service station overhang.

3. Packing and Attaching Luggage

In police work we learned to carry what we needed for duty with us. Officers usually tried several boxes, bags or brief cases until they finally found something that would fit into their locker and have everything at arm's reach on the passenger seat of their patrol car. Keeping the carry bag equipment to a minimum meant fewer things to fly around loose in the event of a pursuit or crash. Larger equipment, such as special needs for SWAT or traffic investigations were kept in the trunk for reasons of space and security.

Equal thought should be given to what we use to contain gear on our motorcycles, the type of luggage we use, and where we secure it to our motorcycles. MSF doesn't teach that, either.

There are many after-market purveyors of motorcycle luggage. You can find bags for mounting on sissy bars, passenger seats, luggage racks, racks on top of "top boxes", saddle bags and front forks.

This is another learn as you go skill. I offer some suggestions based upon research and experience.

Balance

Riding a two wheeled vehicle means additional luggage or load *will* affect balance and handling. Your goal should be to minimize the effect, and maintain the best stability possible. If you use saddle bags (panniers to our European friends), distribute the load equally on both sides. I use the "feels OK" method by holding one bag in each hand and trying to gauge equal weight. If in doubt, I use bathroom scales. In either case, a balanced load makes handling and stability better.

Center of Gravity (COG)

The Center of Gravity is often referred to by engineers, so we know it is important. The problem is the elusive COG is invisible, and we can only guess where it is on our motorcycles. I am no engineer, but my years of traffic collision investigation and my role as the Southwestern regional Blue Knights Safety Officer have caused me to review motorcycle dynamics.

Heavy Sissy bar mounted bags create a hazard by raising the COG. A fully loaded bag mounted above and behind the rear tire invites oscillation. Loaded motorcycles already have most of their weight on the back wheel, which lightens the front end. A light front wheel and a top-heavy load over the rear wheel will destabilize the motorcycle. Keep your loads reasonable, and as low as possible. (More on this in the "Wind" section.)

And finally, be sure everything is securely tied on. I used to use “bungee” cords, but now I use non-elastic straps with heavy latches. I can cinch down my gear tighter than the saddle on a rented horse, and know it won’t come loose. My rule of thumb is to have all my luggage stay in place if my motorcycle were to take an unexpected spill.

Also, spend the money and buy water-proof bags. I used to use trash bags, but found out that highway speed winds shredded them and let water in.

4. Dynamics of a Fully Loaded Motorcycle

Now that I have introduced the topic of how to load a motorcycle, it is only logical that I talk about another thing that is not taught in basic motorcycle-riding school: a fully loaded motorcycle handles much differently than the one you trained on.

Since police motorcycles never get loaded down for long trips, this is another area we were never taught in “Motor School.” The only way to master the loaded motorcycle is to cautiously learn as you go. Here are some things to consider along the way.

If you want to see just how much extra poundage that could ever conceivably be strapped to a motorcycle, take a look at BMW riders. Not just any BMW rider, but the ones who ride the R12GS models.

The “GS” models are the most popular of the BMW line-up. They are versatile, powerful and tough. Although they look like an elephant on stilts, the GS model was used in the “Long Way Round” and “Long Way Down” films. They can be loaded with hundreds of pounds of rider, luggage and spare parts and still have plenty of power to conquer highways and deserts. Just when I think I have seen the most over-loaded motorcycle possible, another one will come into a BMW rally with even more gear.

Now you should have a mental picture of what I mean by “fully loaded motorcycle”. With that in mind, I offer these suggestions for navigating your own U-Haul bike.

Load your motorcycle as I have described above. Pay particular attention to putting heavier objects lower and closer to the frame. You will understand the importance of this later.

If you carry a passenger along with the extra gear, have a pre-packing talk with him/her. Travel by motorcycle means leaving some luxuries behind. (Sorry ladies...) I often give my wife one saddle bag and half of the top bag for her gear, and I get the rest. To maintain harmony, I will let her encroach into my space if it means bringing a “must have” item she wants.

If you don’t have a passenger, the passenger seat becomes available for camping gear, extra clothes, etc. Once again, put the heavy stuff in saddle bags and the lighter items in the gear bag.

And now the Field Training Officer revelation: your motorcycle will steer slower, lean slower, be more top-heavy and fall over quicker with a heavy load. Get your head around that, and don't be surprised by the different feel or lack of quick response. It is a little like changing from driving a sport car to driving a truck, so develop the skills to manage the new dynamics. Take it **slow and easy** until you develop confidence.

5. Riding in the Wind

This is another area which was never demonstrated in Basic, Intermediate MSF or Police motorcycle training. Perhaps it is not considered a dangerous condition, or something that would be encountered very often. Whatever the reason, riding in the wind requires specific skills.

No matter what you ride, motorcycles of all types are difficult to ride through high winds. Of all the weather conditions I have endured on a motorcycle, with the exception of fog, strong wind presents the most challenge. Riding in strong wind means the motorcyclist can never relax; there are constant adjustments to steering, throttle and speed required to stay in your own lane. I can dress for cold, and I can navigate rain, but wind is so unpredictable that it presents a special danger.

The dangers of wind are obvious; gusts of strong cross-winds can push you off line and into serious hazards around you. Think of wind as an invisible river, whose current is swirling around you. Evidence of wind current can be seen in trees, grassy fields and dust. With these clues, a rider can have some warning of what lies ahead.

Because there are many factors that affect us when we ride in the wind, my research led me to what I consider the most reliable source: a publication by David Hough. Mr. Hough is a long-time motorcyclist and journalist who has written a book, "Proficient Motorcycling", published by Bowtie press. Much of what follows is from Mr. Hough's publication.

Since we can't see the air, it helps to understand what wind does around other vehicles and structures. On-coming large trucks can push a powerful "bow wave" towards you, or the wind may swirl around behind the trailer. Be wary of large trucks approaching from up wind, and move as far away as possible to avoid the additional wind blasts. Also, entering and exiting tunnels create on-again, off-again wind blasts that require you to be prepared to react quickly.

There are some things that exacerbate the affects of wind. The type of motorcycle you ride makes a difference. Mr. Hough uses the term "sails" to describe the motorcycle profile that is struck by the wind. It is here that we begin to understand the dynamics of wind and two-wheeled vehicles.

Think of the type of motorcycle you ride. It has an unseen center of gravity, or center of mass, which has a definite impact on how your motorcycle handles. Your "CoG" is different than other motorcycles, and may change depending upon how you configure your load. Savvy riders keep heavy items loaded low and close to the frame to keep the CoG low. Low CoG is a good

thing. (I was once asked by a Judge to point to the center of gravity on a diagram of a “chopper” motorcycle ridden by a Biker whom I had cited; an impossible task which led to the dismissal of the charge.) Having no clear location of CoG, I recommend this theory: Draw an imaginary horizontal “belt line” at the half-way part of your bike. Do the same thing vertically at the mid-point. Where the imaginary lines cross will be very close to the actual CoG.

The design, addition or deletion of luggage and a passenger all contribute to the total “sail areas” on motorcycles. The shape and location of sail areas is just as important as size. A bike with lots of sail area is more susceptible to cross winds. The sail areas, combined with the center of gravity, determine how well you and your motorcycle will navigate in the wind.

You would logically expect frame mounted fairings to cause motorcycles to be pushed downwind (to the leeward side). What is not well understood is that, in addition to being pushed downwind, handle bar mounted fairings and windshields also cause the wind to affect steering. For example, a large handle bar mounted windshield leaning back behind the steering axis might be more stable in calm air, but will lead the motorcycle into a downwind lean during a side gust of wind.

Obviously, how you load your bike will affect both CoG and sail areas. A top box, passenger, or gear tied high on the bike will all cause the rider to lean harder into a cross wind to maintain tracking.

The way you sit on your motorcycle and reach for the controls also has a major effect on how well you can control your machine in the wind. Ideally, the best position for control in difficult conditions is to be seated on the saddle with the torso leaning slightly forward. Arms should be slightly bent, with hands grasping the hand grips at a comfortable angle. Footrests located beneath your center of gravity make it easier for you to brace against the tank and shift your body weight from one side to the other.

Consider your style of motorcycle ergonomics to anticipate the level of difficulty needed to control your bike in cross winds. What is not so obvious is that when you push on the hand grips, you use your legs to brace yourself. Cruiser-style bikes with forward-mounted foot pegs and high handlebars are far from ideal for steering a motorcycle. Sport bikes have more accurate steering control, but the forward-leaning position can quickly strain shoulder and neck muscles. Ergonomics are always a compromise between control and comfort.

Surprisingly, your clothing can cause increased wind-wander. On a trip through Kansas, I had my jacket unzipped because of the hot temperatures. The wind caught my open jacket, pulling me sideways, and transferred my body weight to negative handle bar input. That made it more difficult to hold my line. After a gas stop, I zipped the jacket so that it was a tighter fit, and that lessened the impact of the wind. The less loose clothing you have flapping in the wind, the less you will have to fight cross-winds.

Even with a perfectly balanced CoG and minimal sail area, rider skill is essential for accurate control. Riders who consciously counter-steer have better control and less frustration in windy

conditions. Counter-steering is a technique that is easier to experience than explain. It is momentarily steering the front wheel opposite the direction you want the bike to lean. To lean the motorcycle right, you would steer the front wheel to the left. To lean right, press the right grip; to lean left, press on the left grip (get it?). Just give it a try and practice often. You may not understand it, but you will appreciate the predictable control you have and with less effort.

When riding through strong winds, you must lean your motorcycle into the wind and that may require forceful pushing on the grip. In a strong but steady crosswind from your left, pushing on the left grip will lean the bike left (upwind). Pushing harder on the grip will increase your lean into the wind, and help maintain proper tracking. When the wind suddenly changes, you will need to quickly correct by counter steering to the proper angle.

Your motorcycle may give you some strange feedback from your front wheel when riding through cross winds. The tire's contact patch will be on the side, and not the center since you are leaned over and traveling straight ahead. Riders should concentrate on counter steering and let the front wheel swerve around under the bike as long as you are going in the direction you want.

The most difficult situation is with strong, gusting side-winds. To counteract wind gusts, you must get the bike leaned quickly into the wind. The best way to lean your bike quickly is to counter steer forcefully. If the wind gust increases, push a little harder. Just be ready to push hard on the other grip to straighten up again after the gust passes.

Riding gear is an important component of navigating high winds. When the wind kicks up dust across the road, a good helmet with eye protection is important. Dust and dirt can hit you like a sand blaster, creating discomfort, difficult vision and detracting from your concentration. I recommend close-fitting riding attire that covers your entire body, much like dressing for rain.

Riding in the wind can be merely annoying if you know how it will affect you, and you have the confidence and skills to deal with it. In some cases, the wind may be too severe to continue your ride. Clint Eastwood once said "A man's gotta know his limitations". It is OK to find sanctuary in a local motel, and continue in the morning when the winds have subsided. Your family will be relieved when you call them to say you pulled off a dangerous road, and you will get home safely a few hours later.

6. Encountering Bee Swarms

Every year during my Motor Officer assignment I could count on getting stung by a bee at least once, and sometimes twice. It usually happened while I was riding my police motorcycle, wearing my short-sleeved uniform shirt and my open-faced helmet. With attire like that, it was inevitable that a bee would find its way into my clothes or helmet.

Although I am no expert on bee behavior, I have learned some things about bees that every motorcyclist should know. Some things were learned the "hard way", but most of my info came from curiosity and research. I share these words of "wisdom" with you now.

Almost all of my bee encounters were the result of riding through a swarm of bees that were impossible to miss. When I suddenly got pelted with some kind of flying bugs, the epiphany that it was bees usually occurred at the same time one got into my clothes, or helmet.

If you sit around with your buddies and talk of motorcycle rides, sooner or later someone usually mentions an encounter with bees. They often tell of getting bees inside their jackets, or sleeves. The sensation of bees inside clothing, and the stings at highway speed are never forgotten. Bring it up at your next palaver session and see what I mean.

Each story starts the same way; the windshield usually gets coated with bee strikes, and the expectation of an imminent bee sting at freeway speeds crowds most logical thinking from their minds. The typical reaction is to try and get rid of the bee before it stings, no matter what.

Riders who panic will dive for the curb, brake aggressively and try to strip off clothing or helmet. In the rush to get stopped, traffic hazards are often forgotten, making the situation worse. Most bee-encounter stories end the same way, whether the rider gets safely stopped or takes a spill; one or more bee stings happen before the bee is evicted.

Here are some things to know about bees that may help you reduce your sting quotient. Swarming is a natural process for bees. They do it to expand to additional hives, and rarely to aggressively attack. There is a swarming season, usually from mid-April through mid-June, which corresponds with spring and the blooming flowers. This season may be expanded in warmer, moister climates in the southern states, so keep that in mind if you are planning a ride to that area.

You are more likely to encounter bees on rural roads, where apiaries (commercial bee hives) are located. Keep an eye out for the wooden boxes that are usually stacked in a field near the roadway. This is their home, and bees will be commuting to and from the hive with pollen. These are not "swarms", just working gals--most are females, don't you know? You may encounter a stray bee, but nothing like riding through a swarm.

Honey bees that are swarming are usually looking for a new hive location. These bees are not aggressive because their mission is to find a new neighborhood, not attack innocent motorcycle riders. They will be as surprised as you when the two of you collide. Depending upon what you are wearing (or not wearing), one or more bees may get inside your clothing. The key here is to remain calm. Swatting bees will only piss them off, and bees with an attitude will sting more quickly.

Tell yourself you will probably get stung, so the priority will be to get safely off the road and remove your helmet or clothing. It is far better to be merely stung than to be stung *and* crash.

Bees are sensitive to odors. Even though I can't point to a bee nose in a close-up photo, I know this because of bee behavior. Entomologists (bee experts) tell us bees use pheromones to find

food sources and keep colonies together, among other things. They also like bright colors. Odors and bright colors are keys to bees finding flowers, which are essential to their survival.

As a motorcycle officer, I kept my equipment clean and shiny. Every day I would wipe and shine the motorcycle, getting it ready for the next day. I discovered Lemon Pledge, a furniture polish that worked well on the motorcycle and my boots. It was quick and easy. But in the spring time, I discovered bees would fly around me and my motorcycle at every traffic stop, making it hard to maintain my professional demeanor.

So here are some suggestions for minimizing unpleasant bee encounters. Be aware of “bee season”, when bees are most likely to swarm to new locations. Watch for apiaries in fields near roads and highways. Awareness helps.

Wear protective clothing. I know, we should do this all the time, but consider protection beyond contact with the pavement. Wearing a full-faced helmet and zipped-up jacket can keep those stingers on the outside where they belong.

If you hit a swarm, hunker down behind your windshield. Get close to your gas tank and pull your elbows in. Be a smaller target. The bees will soon be in your rear-view mirrors.

And finally, if you ever get a bee on the inside of your gear, don't panic. Tell yourself you will probably get stung, so man-up and accept it. Then safely and quickly stop off the road and evict the bee. Maybe you (and the bee) will get lucky and part company without a sting.

7. Lightning Storms

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

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

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.

In an issue of BMW Owners News, fellow rider Gerry Schulte wrote an article and told of a personal friend who was killed by lightning while riding his motorcycle in 2005. That caused me to gather 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 and 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 thunderstorm forms in air that has three components: moisture, instability and something, such as a cold front, to cause the air to rise. Temperatures higher in the atmosphere are colder. Ice forms in the higher parts of the cloud. Ice in a cloud seems to be a key element in the development of lightning. Lighter, positively charged ice crystals rise to the top of the thunderstorm, and larger, negatively charged ice particles and hailstones drop to the middle and lower parts of the storm. Enormous charge differences develop.

Lightning can occur in several ways. It can occur between the positive upper and negative lower parts of the cloud. It can also occur between the negative lower part of the cloud and the positive ground beneath the storm. The most powerful and dangerous type of lightning occurs when the positive charge at the top of the cloud becomes so powerful it overcomes the insulating properties of the air over a large distance. In these cases, lightning strikes the ground beyond the storm. These bolts can strike with tremendous power as far as ten miles from the storm.

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...

8. Riding across the Desert

Dressing for arid conditions was never on the agenda of any motorcycle training I ever took. Like the other things on this list, I learned this after the fact. Here is some info for your first desert crossing:

Thomas Edward Lawrence knew what to wear in the desert, even in 1917. Known as Lawrence of Arabia, Colonel T.E. Lawrence was a liaison between British troops and Arab leaders in the second decade of the 1900's. He spent a lot of time in the desert, mostly on horseback, and occasionally on a motorcycle. He never wore tee shirts or sunscreen.

I don't remember the first time I crossed the desert on a motorcycle, but I am sure it was on a Harley. I say that because I rode Harleys for 25 years, and I remember wearing a tee shirt and sun screen to look cool and be cool. It wasn't until some years later that I learned the best way to dress for riding a motorcycle across the desert. I will share with you some things I have learned; you can thank me later.

Pick your own route. Do this selfishly; by that I mean look for a route that *you* are comfortable with, not just the ride leader. Once you are committed to a route, it is difficult to change your mind. I once charted a route home from a motorcycle event that avoided Phoenix because I heard the temperatures there would be 115 degrees during the time I would be passing through. At the last minute I changed my mind and followed a group leader because some of my friends were going in that group. We went through Phoenix at the hottest time of the day. The heat took its' toll, and one passenger had to be helped from a motorcycle because of heat stroke. It took immersion in cold water and plenty of hydration to get her back to normal by the next morning. Do what is best for you, and plan to avoid the hottest areas if you can.

Stay Covered. Whether you ride solo or with a group, you should dress to minimize sun exposure. Look at how the Arabs have dealt with the desert for hundreds of years; they stay covered with loose-fitting clothes. Since we ride motorcycles, our clothing can't be too loose, but we can open air passages to let the wind flow through. All skin should be covered with clothing, which means wearing sweaty gloves, long pants, long sleeve shirt, or better yet, a riding jacket. A full-face helmet will protect your head and face, but I recommend sunscreen on your face anyway. You will notice the cooler feel to your face immediately after applying sunscreen. Use other cooling tricks: A wet bandana, wet head scarf or commercially available "cool vest". (These things dry quickly; see "Stop often" below.)

Stay hydrated. You will need to drink water more often, and in greater quantities. I often freeze some bottles of water before I leave, and the water stays cold enough to help cool my core temperature after I am a couple hundred miles down the road. After that, buy and drink cold water at each of your frequent stops. There are also several products on the market that help deliver drinking water. Camelback systems are used by hikers, bicycle riders and yes, motorcyclists. The water supply is carried backpack style, or inside a special jacket pocket, with a drinking tube that is easily accessible to the wearer. You *can* drink and ride; just be sure it is water.

Stop often. I know the impulse will be to ride hard and fast to get to the other side of this hot, forsaken desert hell, but make time for a break each hour. You will get to your destination a little later than a bonsai run, but you won't need to be helped from your motorcycle when you get there. On your stops, go inside the air-conditioned buildings. Car drivers don't need to do this, so there won't be a crowd inside the Stop & Gas truck stops. Use the time to drink and visit, then move on after about 15 minutes; Ride, stop, and repeat.

If you lead a group of riders, here are some ideas to help get the flock across the desert.

Watch individual riding ability. Look for wandering or lagging back or any other unusual behavior when there is a group formation in place. Heat and dehydration often cause a lapse in concentration. Use your C.B. (as the leader, you have a C.B. don't you?) Sena and Cardo communicators can do the same thing. Ask riders by name to respond to you. Common questions should be along the lines of "How are you holding up?" or "How is your passenger?" or "Are you ready for a stop/drink/rest?"

At your (frequent) stops, encourage all riders to drink cold water, even if they are “not thirsty”. Caffeine drinks may temporarily perk up a rider, but are diuretics which speed up dehydration once you are back on the road.

9. Dangers of Group Riding

O.K., this one was taught in my police motorcycle training sessions. From my experience as a motorcycle officer and recreational rider, I offer this perspective:

There is no easy way to say this; recreational motorcycling gets more dangerous when we ride in a group. My experience has been that the larger the group, the greater the dangers for individual riders.

This is not entirely our fault. There are several motorcycle instruction sources, but very few that teach group riding, so it becomes a learn-as-you-go process, in which only the survivors become proficient. The Motorcycle Safety Foundation has a DVD and some instruction on their website, but to my knowledge they do not offer a hands-on class for group riding.

Many motorcycle riders join motorcycle clubs. Picking a club is a lot like picking a spouse; you shop around until you find one you can live with. There are brand specific clubs like the Harley Owners Group, BMW Motorcycles of America, Star Touring and Goldwing Riders. There are also special interest groups like the Blue Knights for law enforcement, Wind and Fire for firefighters, and several other social clubs. With a little research, riders can discover a motorcycle club that fits their interests.

Joining a motorcycle club gives riders access to more experienced riders. There are some who may become mentors, much like the police Field Training Officers. Clubs are a great resource, but riding with clubs brings additional risks.

Group rides by motorcycle clubs are one of the highlights of membership. It is fun to ride with friends and stop at places along the road. Group riding is a great source of bonding, building ride skills and enjoying the unique experience of motorcycle riding; and besides, we get a great sense of empowerment in a group, which is lacking with solo riding.

Assuming everyone is sober, the most common dangers come from riders who develop a “group mentality”. As individuals, we set a comfortable pace for ourselves and we obey traffic laws. But in a group, riders often struggle to stay up with more skilled riders, often riding beyond their skill level.

In addition, riders in a group feel the necessity to stay together to be a part of the group. Small groups can “tighten up” in high traffic situations, allowing them to stay together through traffic signals. Larger groups often get broken up by a red light or stop sign. Some riders get so desperate to stay with the group ahead that they run red lights or pass when unsafe. When that happens, following riders are often tempted to do the same. It’s a “group”, right?

Another peril is the mix of riding experience in a group. Novices are mixed in with veteran riders, and no one wears a sign that tells others what their skill level is. Undisciplined riders are prone to “showing off” or not knowing group protocol. They often break formation, pass others, lag behind (which creates a large gap for non-motorcycles to fill), and are discourteous to other motorists.

There are three popular types of group riding “formations” that I have experienced: **staggered** (MSF recommended), European **follow-and-post**, and **side-by-side**.

The **staggered formation** is most commonly used by groups traveling on fairly straight roads. When the roads get “twisty”, the formation goes to single file until they can safely regroup in the staggered formation. The Motorcycle Safety Foundation knows about other formations, but endorses this one for American riders.

Some groups use “front door” and “back door” riders. Using CB radios, or other communicators, the “back door” rider keeps the “front door” (leader) informed about the group. A rider count is usually done early in the ride so the leader knows how much time and distance to allow for merging, lane changing or roadside stopping. As the ride progresses, the “back door” tells the leader if everyone made it through signal lights or not. The leader also knows if one of the riders stops or leaves the group. A good leader keeps track of the group, making adjustments that minimize risk.

The **follow-and-post** group is most commonly used in Europe, where roads tend to be more challenging. The roads are often narrow and winding, especially in the mountain areas. The follow-and-post method allows the leader to ride at his pace, even if it results in distancing from the group. When the leader turns from the main road, he “posts” at the turn, meaning he stops until the following rider sees him turn. Then the leader continues on, leaving the following rider to post the turn until the next rider sees the turn. If all goes right, individual riders can set their own pace based upon their skill level.

The **side-by-side** method is most successfully used by law enforcement and professional drill teams. It is less successfully used by motorcycle clubs and off-duty officers. Motorcycle Officers go through an intensive basic training class before being assigned a police motorcycle. About four times a year the motorcycle squad does “refresher” training, which includes group riding. These riders are highly skilled, as are their partners. They are trained to ride side-by-side safely, and they practice these skills regularly. So, if you are an active-duty motorcycle officer or drill team member, side-by-side can work for you.

Of the three methods, the most dangerous is the side-by-side. When it is used by individuals who have not trained together, it greatly increases personal peril. There are already plenty of other hazards on the road, so lane sharing only adds to the risk.

The Motorcycle Safety Foundation has a video on the topic, as well as a two-page instruction that can be found on the internet. MSF has a lot of good examples of group riding in their video, and suggests many ways to ride safely. The video is about 20 minutes long, and the emphasis is

on the most-used “staggered” formation. The text version has one page of highlights, and one page of hand signals. Go to www.msf-usa.org for details. If everyone followed the MSF example, there would be fewer incidents of group accidents.

Group riding is one of the unique experiences of motorcycle riders. It is too often an informal process that exposes all riders to increased risk. Knowing the correct way to ride in a group and putting those techniques to use will lower risk and increase enjoyment. Maybe someone will admire your formation as you ride by.

10. Picking a Riding Partner

I saved this one until the end because no one in any motorcycle training session I took ever mentioned riding with a partner. It is one of those things you can do without and still be a good rider. If you like riding with someone else to keep you company and share the adventure of the open road, I will caution you that the wrong partner can ruin a good trip.

Types of partners

For the sake of clarification, I would like to divide “partners” into two categories: **Pillion** and fellow **Riders**. Pillion partners ride on your motorcycle on the passenger seat. The rider and passenger are in close contact all the time.

Riders are on a separate motorcycle and accompany you on the road. Riders may lead or follow, but travel as a team.

Pillion Partners

If you have a spouse or “significant other”, that person would be the logical choice to be your Pillion partner. Before you decide to take him or her on a long trip, I recommend you determine if your partner will enjoy the adventure with you. I was once on a “day ride” where a spouse jumped off her husband’s motorcycle at a lunch stop and berated him in front of his friends. She didn’t like the passenger seat comfort, or the wind or group riding. It was an embarrassing way to find out she was not a good Pillion partner.

If your prospective Pillion partner has never ridden on a motorcycle before, a short introductory ride will help decide if this is “fun”. I recommend you resist the temptation to show the maximum performance of the motorcycle, and keep the ride low key. A pleasant, smooth ride will go a long way to gaining confidence.

If your partner likes local rides, suggest an over-night ride to a destination around 100 -200 miles. Pick two days that sunny, mild and calm. Figure an average of 50 miles of travel for each hour of riding time. So, a 100-mile ride would take two hours, a 200-mile ride would take four hours, etc. This is a comfortable pace that allows for breaks and meals along the way.

When you return, your Pillion partner will either be ready for longer rides, or decide that motorcycle adventures are not for him/her.

Fellow Riders

Fellow riders are another category. The right riding partner can really enhance your motorcycle trips. Conversely, they can ruin the best of trips, so choose wisely, Grasshopper.

Something to consider: you and your riding partner should share common interests. You both should be considerate of the other person's ideas and suggestions about the trip. Plan on being patient during stressful times, and expect your riding partner to do the same. Being friends goes a long way toward being riding partners.

Having said that, I will confess to being picky about who rides with me. Here are some *disqualifiers* that I look for on an initial day ride.

- He takes unnecessary risks (unsafe passing, aggressive riding)
- Poor safety habits (novelty helmet, minimal safety apparel)
- Inflexible (insists on favorite gas station, restaurant, photo stops)
- Unreliable; doesn't show for the ride, cancels at the last minute or leaves unexpectedly during the ride.
- Drug or alcohol use (uses either and still rides)

And some *qualifiers* that get an invitation to ride with me again.

- Plans ride route together (destination, stops along the way)
- Is reliable; shows up on time, ready to ride.
- Keeps motorcycle in good condition (no loud exhaust, good tire tread, etc.)
- Doesn't make me worry about riding ability (I don't have to watch him in my mirrors)
- Saves libation until after the ride is done for the day.

Once you find good riding partners, your motorcycle adventures can begin. On my rides all over America and much of Europe, my partners have helped me with mechanical problems and physical illness. I have done the same for them. Having someone trustworthy with you when you break down or get too sick to ride is invaluable. After you find the partner(s) that are a good fit, enjoy the horizons...