

# THE NEW DEFENSIVE DRIVING



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## **DEFENSIVE DRIVING**

### **INTRODUCTION**

Welcome to "not just another defensive driving program". We won't tell you not to drink and drive; you already know that. We're not going to tell you not to exceed the speed limit; because you'll continue to do what you've been doing while police are not watching you. We're not going to review many of the things you already know. If you want statistics on highway deaths, you won't find any here, although the National highway Traffic Safety Administration Director stated "up to two-thirds of the deaths involved road rage or aggressive driving".

This program is a bit unique because we want to concentrate on today's hostile driving environment and lack of sensitive drivers. We say hostile, but you could also call it confrontational, aggressive, dangerous, or just plain stupid.

Our objective is to provide logical, factual information to help you make better driving decisions. We know that a training program won't change attitudes, but we believe, if you learn and use this information you'll be a better safer driver after all what could be more exciting than information that will help save your life or the lives of others? We'll do our best to make this program as informative as it is exciting.

One thing we do know is the vast majority of commuters are stressed on their daily drive to and from work. We also know that feeling stress behind the wheel may be a familiar sensation, but medical experts state it could be a health hazard. Studies have shown that the longer distances you commute in your vehicle, the higher the driver's blood pressure. This also leads to an increase in job frustration and illness. Let's face it; driving in traffic is a tough job, even in the best of conditions. When you combine stress and frustration with so many poor drivers out there on the road, it just drives us good drivers crazy.

## **CHAPTER 1**

### **DEFENSIVE DRIVING**

#### **Good Driver Skills**

What do we mean by good driver skills? There are so many drivers on the road today whose skills and driving expertise allow them simply to “aim the vehicle in the right direction”. They have absolutely no knowledge on what to do in case of a tire failure at 65 miles per hour or how to respond to other similar emergencies. They can aim the vehicle in between the lanes, but that’s about it. It’s like people zooming through a traffic area at 70 miles per hour, when the speed limit is 45. Drivers such as this have no idea what to do if another vehicle pulls into their lane. They must assume no one will pull in front of them because they’re driving too fast to stop. Just think about the lack of driving knowledge of so many drivers. It’s terrifying.

During the development of this program, we drove hundreds of miles with over 12 drivers, each having more than 20 years driving experience. WOW! Four of them scared us to death! Experience doesn’t always equate to good driving skills. How much high-speed emergency training do most drivers have? What happens to a vehicle when it starts to skid? Does your vehicle use ABS or regular brakes? Does it make a difference? There are even people driving in bad weather that won’t slow down due to the conditions. That’s why we see all these traffic pile-ups during snow, fog and dust storms. Drivers operating at unsafe speed in traffic, tailgating, cutting in, not paying attention to the road, and it adds up to accidents and deaths on the road. It’s crazy, but unfortunately, it is part of today’s driving experience.

#### **The Professionals**

Professional truck drivers generally have more training than the average driver, as they go through a much more rigorous licensing and testing program. That’s what they do for a living, so the vast majority of truckers have the edge in training and experience. Now we’re not saying this makes them 100 percent safe drivers as a group. It’s just that this group has a safety advantage over other drivers due to their training, higher licensing standards, more stringent regulations and driving experience. You can’t compare a professional driver who operates a vehicle over 100,000 miles a year, with the experience of someone who “aims the vehicle” about 6,000 miles a year. What we’re saying is there are a number of drivers out there, who have different levels of driving experience.

That takes us back to the question, what are good driving skills? Let's just state that good driving skill is not necessarily knowing how to aim the vehicle, or how to use the horn, transmission, brakes or accelerator. It's knowing the rules of the road and obeying them. Good driving skill means knowing how your engine and brakes function, in case something goes wrong. It's learning how to drive safely at night or in the rain and cold weather. It's being able to react to an emergency, before it becomes an accident. Good driving is a major responsibility, but too many people take it lightly.

### **Vehicle Capabilities and Limitations**

Do you know how to safely jump-start your vehicle? 65 percent of vehicle owners do not know how to properly and safely jump-start dead batteries. When this question is asked in a training session someone will pop up and say, "All I have to do is use my cellphone and call a tow service". True, but that's not the point. Vehicle owners should know how to perform emergency services because it's part of understanding how your vehicle functions. Again, the point we want to make is all drivers should know how their vehicle functions, so proper reactions to emergencies can be taken. Do you know how to control your vehicle if you have a tire blowout while traveling at a high rate of speed? Not many people do. Can car tires explode when you're inflating them? If you're the person who only knows "how to aim the vehicle between the lines," then you're an accident waiting to happen. There are even some people who are really too stupid or lack the intelligence to drive vehicles, but they're out there and you know who they are when you see them. Know your vehicle, the safe driving rules, and then use your training and education, intelligence and experience to operate the vehicle in a professional manner. Don't be a vehicle aimer, be a professional.

### **Driver's License**

Just how easy is it to qualify for a driver's license? The written exam is quite easy to pass, even if you don't study the book. The driving exam is even easier. If you can demonstrate you know how to start and operate your vehicle, along with some minor maneuvers, you pass. The sheer number of people taking driver license exams will tell you the examiners can't spend a lot of time finding out if you know how to drive. Driver license exams simply qualify you as an "aimer". A person, who has proven he or she can aim the vehicle in the right direction most of the time, can generally qualify for a driver's license. The point of this statement is you can take a look at all the drivers on the highways today and wonder how experienced and professional they are

when operating a motor vehicle. This lack of experience and consideration for others contributes significantly to road rage and accidents. When people don't fully understand how to drive, how to react in case of emergencies and don't understand the laws, it hurts everyone else on the road. Just because a person has qualified for a state driver's license does not mean they are qualified drivers.

The license means they are simply allowed to legally operate their vehicle. To compound the problem of drivers on the road who are not properly trained, let's add in those drivers who are driving on suspended licenses or who have not bothered to obtain a driver's license. How about all the drivers who have learned to drive in different countries, and then they apply that experience to driving in this country. The difference could be worlds apart. This merely illustrates that we have a large segment of drivers who are on the road with poor driving skills, poor attitudes, not sure of what action to take in case of a vehicle or road emergencies and who may not be fit to drive. Others just don't understand the rules. It's a wonder there aren't more accidents, injuries and certainly higher incidences of road rage. It makes a law-abiding citizen feel frustrated.

### **Women Drivers**

Before we start getting complaints, let's explain our logic when discussing different driver groups. When we discuss a group, such as men drivers, women drivers, teen drivers and other groupings, we're just using information relating to that certain group. If you're a woman driver, don't get upset when we talk about women drivers. Don't think we're talking about you individually. We're talking about the information gathered about your group, not individuals in that group. What about the women driver group? We'd love to say they are the best group, with little or no road rage, but experience tells us otherwise.

A great number of women operate their vehicles over the speed limit, regardless of the traffic conditions on the road. They are more likely to pull in front of other cars without thinking of the consequences of irritating other drivers. The women driver group has tendencies to be more impatient than other groups. They use cell phones while driving; they comb their hair and apply make up while driving. They are late for work and drive fast. They don't always stop at stoplights or stop signs, especially in residential areas. Women drivers taking their children to school, have a tendency to speed in school zones. They are more likely to be talking to others



in the vehicle and not paying attention to their driving. When they operate large vehicles or Sports Utility Vehicles, they have no fear, which is demonstrated in their driving behavior.

This group is more likely to cause road rage in other drivers, than to be irritated by the actions of other drivers. As a group, women seem not to get as upset at other drivers, as do other driver groups. We're not picking on women drivers; it's just that this group has a tendency to be guilty of these and other driving actions.

### **Male Drivers**

Men drivers are more likely to react with road rage than the women group. In other words, when another driver cuts off a male driver or tailgates or creates hostility, the male driver is more likely to have a more violent, or temperamental, reaction to the incident than women driver's reactions. The cause of this behavior could be anything from a "macho" attitude to just being more capable of violence or having a bad temper. Yes, men drivers also speed, tailgate, comb their hair, shave, cut in and do all the bad things we've just talked about.

OK, we've successfully angered women, men and young drivers; so let's take a look at what you can do to reduce road rage.

### **Truckers**

Eighteen-wheel trucks are the lifelines of our economy. If you bought something, a truck probably delivered it. Most car drivers blame professional truck drivers for all the smog, accidents, congestion and a million other things on the road. Car drivers really get upset at all the big truck tailgating. Big trucks are slow to climb hills and pass other vehicles. Truckers drive too fast and cause accidents. 18-wheelers are just too big and should be taken off the highways. All of these statements are a matter of opinion.

The point we want to make here is all drivers should understand trucks, how they perform and some of the driving problems encountered by truckers. If you ask truckers, they'll tell you that 50 to 75 percent of drivers haven't got a clue how to drive. They will tell you that cars pop out in front of them and create many of the hazards associated with big rig accidents. They will also acknowledge there are some truckers who should be taken off the road. However, as a group, the professional truck drivers have a good driving record and it's getting better. They are dedicated to their profession and do a great job, considering all the hazards they encounter on a

daily basis. By understanding the problems of truckers, and that includes bob-tails or the trucks that deliver goods within a city, other drivers can make their job a lot easier, which will ease tensions considerably among all drivers. Big trucks can't maneuver as fast as cars, so give them room and don't hog the road. Don't cut in front of trucks. Allow them room to pass. When they pass you and they have enough room to pull back into the right lane, you can signal them there's room to return by turning your headlights on and off. This little courtesy makes the trucker feel you understand the difficulty of operating a big rig and it may help the trucker feel better toward you. These professionals appreciate these small courtesies.

OK, you truckers have to stop bullying drivers by tailgating. That's the number one complaint: big rigs trying to intimidate drivers by tailgating. Sure, the slow moving driver should pull over and allow you to pass, but there's no reason to tailgate. When you try to intimidate people in this manner, the other drivers have a tendency to think all truck drivers act the same way. Cut down on your tailgating intimidation and you'll find other drivers becoming more courteous drivers also. Another irritant to small vehicle drivers is big rigs don't slow down during a rainstorm or icy conditions. What's the deal? Well, let's assume that if the big rig drivers slow down in the rain, other truckers will call them wimps. Let's suppose that's the reason, we can't think anything else. Safety is safety, so just because you're driving a heavy big rig, don't think the rules don't apply to you. Slow down in traffic and slow down in rainy or other poor weather conditions.

## CHAPTER 2

### ROAD RAGE

Have you ever had another driver make you mad while driving? There's new terminology that's become part of our daily driving lives today and it's called ROAD RAGE. What is it? You've probably seen it or been exposed to it, but exactly what does road rage mean? It means a person, while driving, doesn't control his or her emotions. Everyone has the potential for road rage. It's an attitude more than anything. It's hostility behind the wheel; it's a human trait that exists in all of us.

We're all out there on the road fighting for space and when others get in the way, it becomes war. Generally, all human beings think of themselves as being good or better than other person, and they just don't like the thought of losing to, or being bested by, another person. These thoughts are magnified behind the wheel of a motorized vehicle. Mother Nature kicks in and your ego gets in the way of civility. That's why, when you see a car approaching you to overtake or pass you, you have a tendency to speed up just a little bit. You don't like people passing you because you're competitive and don't like to lose. When you see a vehicle that's tailgating, you're upset because that vehicle is threatening your safety. It's natural to feel this way. Rationalization is when you cut in front of someone and think that's ok because you just had to get into the other lane. When someone cuts in front of you, you're upset: really upset!

#### Road Rage is Learned

Road rage is a something's that's learned in childhood. At early ages, once youngsters entered the vehicle, they learned from the parents how to behave behind the wheel. By the time these children grow up and are allowed to operate vehicles, they have a good grasp on aggressive driving techniques and bad mental attitudes. What's the result? When you combine youth, impatience and all these learned experiences; you have a very aggressive group of young drivers. Young people have a tendency to think that nothing could ever happen to them anyway. They believe themselves invincible. They believe they can operate their vehicles better than professional racecar drivers. You need to steer clear of this youthful group's way or you're in trouble. Even those paying for driving lessons find out quickly during their driving sessions that speeding, tailgating and cutting in front of others, are the way people drive. Someday their aggressive behavior and attitude may mature into good drivers, but often it never does.

## Road Rage Prevention

As we stated earlier, road rage is an attitude. Right now, when you get into your vehicle, you're prepared for the worst. You expect bad things to happen. You know there's going to be traffic jams, construction projects, heat, cold, bad weather and of course, poor drivers who drive too slow, too fast or just don't know what they're doing behind the wheel. You have the old people to worry about; the teenagers; big trucks; idiots; men drivers; women drivers; pedestrians; and all the things that make driving dangerous; and it's WAR. You know what to expect so you're prepared with the adjusted attitude of a Road Warrior! Here's one Road Warrior you don't want to irritate. The highway is no place for weapons. We do not support guns or other weapons on the highway.

We've mentioned attitude and ask the question, can it be changed? The answer is yes, but you have to prove to yourself that it can be changed. Take the challenge for just one driving session. The very next time you operate a vehicle, just say to yourself that nothing is going to upset you. Absolutely nothing. If people want to pull in front of me, I'll let them in and I'll smile while they're doing it. Sure, deep down inside you'd like to strangle them, but for this test, you're not going to get upset at anything. Adjust your attitude, just this one time. Nothing is going to upset you for this test. Let them do their worst, but you're not going to holler, scream, honk your horn or try to run them off the road. Nothing is going to bother you during this test period. Try this attitude for one driving period, as a test.

If you have the attitude that nothing will upset you, you'll find that road rage is non-existent on your part. Exactly how long you can make this adjustment is another story, but it serves to point out that attitudes can be changed. If you really try this for one driving session, you'll see that you'll feel better, less frustrated and you'll arrive at your destination at about the same time. If you take this test seriously, you'll find that your health will also improve. Perhaps you could adjust your attitude at least one day a week that nothing will bother you. Then, as you feel better, try two, three, four days and you may find yourself cured.

Now, what happens when YOUR ACTIONS create road rage in the other driver? You cut in front of another vehicle and the other driver becomes livid and starts honking his horn and yelling at you. Well, try not to do those things that create road rage in the other driver. There has been much research on the subject and the National Highway Traffic Safety Administration has found certain behaviors seem unusually likely to enrage other drivers. Let's look at some

realistic prevention techniques in reducing road rage and poor driving attitudes, based upon this research. We believe this list will touch a nerve in many of you drivers out there:

1. Cutting Off: When you merge, make sure you have plenty of room. Use your turn signal to show your intentions before making the move. You should be able to see the other vehicle's bumper in your rearview mirror before you cut in front of someone. If you make a mistake and accidentally cut someone off, try to apologize with a friendly gesture. If someone cuts you off, slow down and give them enough room to merge into your lane. Be nice.
2. Driving Slowly in the Left Lane: If you are in the left lane and someone wants to pass, move over and let him or her by. Use the far-left lane for passing only. It's just simple courtesy to move over and let other drivers by, even though they want to break the law by speeding in the passing lane.
3. Tailgating: Drivers get angry when they are followed too closely. Allow at least a two to four second spaces between your car and the car ahead. If you don't understand this two-to-four-second rule, you should learn it quickly. Basically, you pick out a stationary object ahead of you and count one thousand one, one thousand two and if you've counted two seconds before you reach this stationary object, then that is the proper distance between vehicles. Large vehicles, such as 18-wheelers and trash trucks should use the four-second rule. In poor weather, you need greater space between vehicles.
4. Lane Changes: Before cutting in front of a vehicle, you should be able to see the front bumper or headlights of the car behind you in your rear-view mirror. If you believe another car is driving too slowly, and you're unable to pass, pull back and allow more space, not less. That way, if the car does something unexpected, you'll have time to get out of the way. If you feel you are being followed too closely, signal and pull over to let the other driver go by. You'll find the two to four second rule does work.
5. Gestures: Almost nothing makes other drivers angrier than an obscene gesture. Avoid making any gestures that might anger another driver, even "harmless" expressions of irritation such as shaking your head. Don't honk your horn at the offending driver. Never flash your headlights at a driver that has made you mad.

6. Courtesy: Signal every time you merge or change lanes and whenever you make a turn. Use your horn rarely, if ever. If you and another driver see a parking place at the same time, let that person have it. When you respond this way, after a while, “be my guest” becomes your automatic response and you won’t be as offended by other driver’s rudeness. Again, this is nothing more than attitude. Attitude plays a major role in road rage.
7. Don’t Engage: One angry driver can’t start a fight unless another driver is willing to join in. You can protect yourself against aggressive drivers by refusing to become angry with them. A person who is angry can do things they may later regret. Keep cool at all times.
8. Avoid Eye Contact: If another driver is acting angry with you. Don’t make eye contact with them. Looking or staring at another driver can turn an impersonal encounter between two vehicles into a personal duel. When it gets personal, it can get out of hand quickly.
9. Get Help: If you believe the other driver is following you, or is attempting to start a fight, get help. Use your cellphone to call police, or drive to a place where there are people around. Use your horn to get someone’s attention. This will usually discourage an aggressor. Do not get out of your car and do not go home. You don’t want a potentially dangerous person knowing where you live.
10. Attitude Adjustment: The most important actions you can take to avoid aggressive driving take place inside your head. By changing your approach to driving, you can make every trip more pleasant. Don’t get upset at the things others do; keep control.
11. Little Things Upset Drivers: Watch how you drive. Much of the time people think they are obeying all the driving laws; they’re being courteous and are being a good citizen. In reality, they do things that absolutely enrage other drivers and they often have no idea this is happening. When slowing down to turn, think about the person behind you. They are in hurry and when you slow down, their temperament rises, but they understand that you want to turn, so it’s not a major problem. However, when you have no consideration for the person behind you by being too slow to turn, there’s trouble.

When turning, do it safely, but don’t waste a lot of time. Driving slowly in the passing lane is another irritant to drivers. You should be commended for driving the speed limit, but

stay to the right side of the road and let others pass. Be alert at stoplights. This means don't run the yellow light and stop at red lights. Next on the irritant list is for drivers waiting for the light to change to green and seem to be in a daze or not paying attention. You should always check for cross traffic, which may be speeding through the caution light, but when the light turns green and it's safe to do so, your vehicle should start to move. There may be 5 or 10 vehicles that want to get through the green light before the yellow caution light appears. When all the "little things" build up inside drivers, they take it out on others while driving.

Why is driving at night so difficult? Well, for one thing it's dark and you can't see as well. This is the time to slow down and keep your headlights on dim for cars approaching you from the opposite lane. If you keep your headlights on bright, then you're blinding other drivers. Learn how to drive safely at night. When driving at night or the early morning in an area where wild animals roam, slow down and be cautious. Deer and other animals can create serious accidents.

Just be aware of what you do while driving and think about the other driver. Try to understand their position as well and you'll be a long way in making your driving experience much more pleasant and safer. Be the one with the good attitude and you'll end up the winner.

## **Review**

We've covered a lot of ground in this short program, but the objective has been to make you aware of potential hazards on the road. Often, good drivers make mistakes and create tension among other drivers. With so many people operating vehicles, it's difficult to tell the good drivers from the bad drivers, but they're easy to recognize on the road.

What can you do to protect yourselves? Think about other drivers, so as not to cause them grief by driving too slow in the passing lane or improperly turning. Don't tailgate or cut in front of other cars. Never give obscene gestures or try and scold other drivers for their rudeness or poor driving. Learn to control your emotions and make it a habit to maintain the attitude that "nothing is going to upset me today while I'm driving". A good attitude is perhaps the most important part of safe driving.

Your job is to drive safely and be courteous to other drivers, even though they are rude, insensitive or poor drivers. Avoid the challenges or confrontations of an aggressive driver and of course, support law enforcement's efforts to rid the streets and highways of this menace.



## **CHAPTER 3**

### **WINTER DRIVING SAFETY**

Driving in any weather depends greatly on the type of vehicle you operate, how you react to a situation, reflexes and many other variables. Always follow your company's policies and procedures and use your own experience and good judgement when operating any type of vehicle in bad weather.

#### **Vehicle Maintenance**

Have a professional check all systems of your vehicle and perform winterization of all fluids. Making sure you have appropriate fluids in the radiator, windshield wiping system, winter weight motor oil and other fluids appropriate for your potential weather and temperatures. It's particularly important that all the tires have adequate tread and you maintain recommended air pressure. Contrary to popular belief, reducing air pressure in your tires does not afford greater traction. All-weather radials are usually adequate for most winter conditions, except in particularly harsh winter zones. Some jurisdictions may require your vehicle to be equipped with snow tires with studs or chains.

Keep a windshield scraper and small broom for ice and snow removal. A small shovel is recommended, in case you get stranded or stuck. Maintain at least a half tank of gas during the winter season. A vehicle first aid kit, flashlight and other materials should be kept in the vehicle. Consider carrying a sleeping bag and blankets because stranded motorists have frozen to death in cold weather. Headlights, heater and defrosters should be checked before bad weather arrives. During bad weather, headlights should be cleaned more often, as dirty headlights can reduce visibility in bad weather by 50 percent. Check all hoses and belts and the engine should be well tuned. The battery and alternator should be checked because cold weather puts added power strain on your electrical and battery systems. Make sure you have appropriate tire changing tools.

Often the reason people get into trouble on the road in winter is failure of the vehicle itself. Think of what occurs when you're stranded in winter time... it's usually a traumatic and dangerous event. If you're making long trips or trips on isolated roads... what would you do if you had to spend the night in your car? Did you bring a sleeping bag, blanket, water or other

survival materials? Tow ropes or chains, flares? The time to plan is before bad weather arrives.

## **Winter Weather**

Let's talk about the weather because we can't do much about it. First of all, we'll briefly look at several possible weather conditions. Tornadoes have occurred in every state in the United States... even Alaska. You already know the dangers of a tornado, but are you aware of what to do in case you're involved with one? Your vehicle is not safe in a tornado. Get shelter, but not in your vehicle. We don't want to tell you what shelter are the best because in case of an emergency, you'll have to make the decision, but some people in tornadoes have successfully sought shelter under bridges, overpasses, inside drain pipes and other secure structures. Hurricanes create high winds, flooding and great property damage. Again, your car is not safe in a hurricane.

Flooding is particularly dangerous because vehicles can be swept away by the force of the water. Water is nature's most powerful force. If the roads are flooded or even slightly flooded, the possibility of losing control of your vehicle is greatly increased due to many factors. There's the chance of roadway damage due to water and floods. Of course, obey warning when it's raining because these warning signs are based upon experience in this particular area. Hydroplaning, created by water reducing the friction between the road and the vehicle tires, can cause a loss of control of your vehicle. Slow down and watch out for other drivers. Of course, rain, mud, snow, sleet and ice make driving extremely hazardous. Poor visibility, slippery road surfaces... combined with many other hazards make driving in these conditions an accident waiting to happen. You may hear the word "WHITE OUT".

The National Weather Bureau provides the definition of white out as a condition caused by falling or blowing snow that reduces visibility to nothing or zero miles..., typically only a few feet. Whiteouts can occur rapidly, blinding motorists and creating chain-reaction crashes involving multiple vehicles. Whiteouts are most frequent during blizzards. When a white out occurs... stop driving. We'll just mention HAIL as a weather condition because it usually doesn't last very long. HAIL is nothing more than ice balls dropping from the sky. In most cases, the size of the hail will be small and will quickly melt. However, in parts of the United States and other countries, hail the size of baseballs can fall and severely injure anyone caught outside in the storm. Mothball size hail can injure as well. Property damage is generally the major casualty

of hailstorms, but they can make driving dangerous. The best advice is don't drive in these conditions, but if you must... SLOW DOWN. Listen or watch for weather forecasts and pay attention to the warnings; these warnings can range from winter storm watches, and warnings, to severe blizzard warnings. Take the time to understand the warning systems in your area and follow the safety directions provided.

Snow, rain and ice are perhaps the most common hazards because they impair visibility and make the roads slippery. Again, slow down in bad weather. It's really difficult to understand how some drivers, often called idiots... drive fast in bad weather. Where is the mentality in that? They couldn't possibly be in that big of a hurry. In bad weather, your stopping distance is greater, your visibility is limited and a hundred other things can go wrong... so why not slow down and drive responsibly? A word of caution is in order. If you're caught in severe weather, use your headlights, warning flashers and pull to the side of the road. In many instances, it has been recorded that motorists caught in severe weather will simply stop in the roadway. They mistakenly believe that if they can't see where they're going... no one else can. Major crashes have been caused by people stopping on the road to wait out the storm. Pull off the road because there is always someone who thinks they can make it no matter what and will plow into vehicles that are stalled on the road. The same thing applies to heavy fog. Pull off the road... you've all seen television reports of pileups and injuries relating to fog. People can't see... they slow down or stop and faster drivers or tailgaters crash into the vehicle in front of them. It only takes a second to lose visibility. It's just senseless, and it doesn't have to happen.

What's the procedure in case you're stuck in snow or ice? A good rule of thumb is to never allow the vehicle's drive tires to spin. By spinning your wheels, you're only creating a larger hole. Remove as much snow and ice around the tires as possible. Then use wood, tree branches, or anything that will provide friction, so when you're ready to get out of the hole you're in, this will create traction between the tire and this material. Again, don't spin your wheels. Slow, steady traction is your best bet. You may not be in an area where animals are feeding or near the roadway. However, if you are... this is particularly dangerous in the early morning or late at night where animals may be near the roadway feeding. If you don't heed the warning signs, it could be harmful to you and to the animal. Even small animals can cause accidents because a natural human tendency is to swerve to avoid hitting any living animal. Heed the warning signs and slow down, particularly at night or early morning in these areas.

## **Personal Safety in Cold Weather**

Experts say if you're caught in a storm, it is best to be prepared to spend three days in the vehicle. Sound bizarre? Tell that to many people who have been stranded for days. The first rule is to stay in your car. Your chances of survival are much better. If you have a cell phone, of course you can call for assistance. If possible, position the vehicle so it faces into the wind. The vehicle was designed to be warmest when headed into the wind. Make sure that the exhaust is free of snow and check it periodically if you use the engine for heat. Run the engine for 10 minutes every hour and run the heater when the vehicle is running. It's recommended; turn on the dome light when the vehicle is running also. Keep in mind that a combustion engine creates carbon monoxide. If you breathe carbon monoxide fumes long enough, it can kill you. If your exhaust system leaks fumes into your vehicle, it may be hazardous to run your engine and heater. Make sure your vehicle is ventilated when running the engine. If possible, tie a colorful banner on the car antenna to alert others that you need help. If you must leave the vehicle in a severe storm with greatly reduced visibility, make sure you can get back. Move emergency supplies from the trunk to the interior of the vehicle as soon as you know you'll be stranded for a while. Put on warm clothing immediately, before you get cold. It's much easier to keep warm than to try and regain lost warmth. Loosen tight clothing so body heat can circulate. Remove metal jewelry. The metal will chill you and in extremely cold weather, the metal will freeze on your skin. If you have a snack of a high calorie food just before sleeping, this will stimulate your metabolism for higher heat production.

We mentioned wind chill. What do we mean by wind chill? Wind chill is based on the rate of heat loss from exposed skin caused by the combined effects of wind and cold. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature. At wind speed of four miles per hour or less, the wind chill temperature is approximately the same as the actual air temperature. The more wind you have, the greater the wind chill factor.

Ok, a few more tips and it's over... Winter safety wouldn't be complete without a mention of frostbite. Superficial frostbite can occur anytime where the skin is exposed to cold temperatures. Basically, frostbite affects the dermis or skin and is recognized by white or gray colored patches. The affected skin feels firm, but not hard. The skin usually turns red and once frostbitten, is not painful. Tissue loss won't occur if properly treated. Large blisters on the frostbitten area indicate that deep frostbite has occurred and has partially thawed. Treatment

for deep frostbite should be done in a medical facility. Skin tissue that has thawed and then refrozen always dies. For this reason, it is not recommended that you thaw frostbitten skin until you reach a medical facility.

Here are some things you should not do, with frostbitten skin. Never rub the frozen part. Don't ingest alcohol or tobacco and never apply ice or snow to the frostbitten area. Don't attempt to thaw the frostbitten part in cold water or try to thaw the frostbitten area near stoves, fires or other heat. Of course, never break blisters that may have formed on the skin. The best prevention is keeping warm, because it's very easy to get frostbite. Most people assume that cotton or wool is the best fiber to wear in cold weather. However, these materials soak and retain moisture. Moisture against your skin in cold weather is dangerous. Cotton and wool won't keep heat in. The best clothing to wear in the winter is apparel made from synthetic fibers, such as acrylic. Acrylic dries in about one fifth the time of cotton. Your hands, face and feet are quite susceptible to frostbite, so take good care of them, so take special precautions when deciding what type of clothing to wear in cold temperatures. Always cover your head with a hat or hood. You can lose 20 to 50 percent of body heat through your head, so keep it covered.

When you're using a snow blower or shovel to remove snow, watch for signs of fatigue. There are many people who remove snow, only to find they're not in the best of shape and ultimately end up with a heart attack. Use caution and don't overexert yourself when working in the snow. It's more difficult to walk in snow and there are many biological affects upon your body in cold temperatures.

One last reminder: The snow removal crews also ask you not to shovel or blow snow into the roadway. Place it somewhere, but not in the roadway. We've left many driving rules, regulations and safe winter driving tips out of this program, as you can't cover this subject in a short period of time. Be aware and take action to avoid the hazards of driving in bad weather. As we've discussed, watch out for the other guy, slow down and use your good judgement and driving experience to stay safe, if you must drive in bad weather. Since bad weather increases the vehicle accident rate... make sure you have all the necessary information with you to make an accident report. Driver's license, insurance, what to do and who to notify in case of an accident and it's even a good idea to keep a camera in your car. Photos of the accident scene, vehicles involved and conditions will help investigators determine the facts of the accident. Take a look at other drivers... speeding, making fast turns, speeding, tailgating, speeding... and other bad

habits then don't follow their example. Plan your trips, allow extra time to get where you're going, and, of course, drive safely everyday; all the time. You're too important to take chances. A safe driving program wouldn't be complete until we mentioned to buckle up and don't drink and drive.

## CHAPTER 4

### TRACTOR/TRAILERS

Despite the fact that tractor-trailers have a low percentage of highway accidents, this small number includes an overwhelming rate of catastrophic accidents leading to serious injuries and fatalities. This can be attributed to the simple fact that a tractor-trailer normally outweighs a passenger vehicle 30 to 1, so the chances of survival in a collision with one of these "immovable objects" are slim at best. Unfortunately, even the people who are lucky enough to survive these accidents are most often left with severe permanent injuries or career-ending disabilities.

#### Attitude and Awareness

Courtesy and consideration toward others are the most important driving attitudes you can develop, they are the keys to driving safely. Concentration and alertness are important elements. You must develop the habit of keeping your mind on driving. The driver seat is no place for daydreaming, window-shopping, building egos, or worrying. Driving when you are suffering from extreme fatigue or emotional distress can be just as dangerous as driving drunk.

#### Foresight

In driving terms, foresight means being able to size up traffic situations as quickly as possible and being prepared to take corrective action. Safe driving requires exercising good judgment and recognizing the proper choices to make in any given traffic situation.

Suppose you are driving down a steep hill; you apply your brake, but your vehicle does not decrease in speed. Should you pump the brake? Shift to a lower gear? Apply the emergency brake? Run into something? Perhaps you see a driver traveling in the wrong direction on a one-way street. Should you honk the horn? Stop? Flash your lights? Move to another lane? Maybe you are driving on a freeway and suddenly you come upon a five-car pileup. Do you leave the scene and call for help? Try to give medical attention to those with injuries? Set up flares at the accident scene? Any of these choices could be the right thing to do. It all depends on how you evaluate your driving situation and the existing conditions. You will be constantly making decisions every mile you drive. There is a right way to make these decisions. It is known as defensive driving.

## **Scanning**

Most of what you do as a defensive driver is in response to what you see while driving. Avoid a fixed stare. Keep your eyes moving and learn to "read" the road. Be aware that "Highway Hypnosis" (a trance-like state during a long period of highway driving) can affect the best of drivers. To avoid the need for last minute decision-making, look ahead for a distance of about one city block. Whenever you reach a place in the road where other cars, people or animals may cross your path, look to both sides to be sure the way is clear. These trouble spots include intersections, crosswalks, shopping centers, construction areas and playgrounds. When entering an intersection, be sure to check both left and right before proceeding. By frequently checking the traffic beyond you, you will know when someone is "tail-gating" or moving up too quickly. Check your review mirror often for the position of traffic behind you. When changing lanes, use your side mirrors and turn your head, to be sure that it is safe to proceed with the lane change. By knowing the speed and position of traffic on all four sides of your vehicle, you will be better able to make decisions quickly and safely.

## **Blind Spots**

Blind spots are areas on the left and right sides of your vehicle that are not visible in your mind. If your vehicle does not have a right side view mirror, the right blind spot will be larger than the one on the left. Other blind spots can occur when vehicles are parked too close to an intersection or when bushes, trees and buildings block your view. In situations like these, slowly move your vehicle forward until you have a clear view. Then proceed when the way is clear. Avoid driving in someone else's blind spot. This can be just as dangerous as not checking your own. Speed up, or drop back; but never stay for an extended time in a blind spot area. Make sure your vehicle is visible to other drivers. Don't rely on your mirrors alone to see other vehicles. Turn your head quickly to see if the way is clear.

## **Communicating**

Communicating means clearly showing other drivers and pedestrians what you plan to do early enough to avoid a collision. Any time you plan to change directions, use your turn signals- whether you are changing lanes, turning at an intersection, entering a freeway, pulling away from a curb or pulling off to the side of the road. Develop the habit of using your turn signals



even when you do not see other vehicles on the road. The vehicle you do not see is the most dangerous one. Here are some rules to follow:

- Signal at least four seconds before you turn so other drivers will have time to react.
- If you plan to turn beyond an intersection, do not signal until you are in the intersection.
- Drivers in the intersection may pull out in front of you.
- After you complete your move, be sure your turn signal is off.

### **Compromise**

Another important defensive driving skill is compromise. When you cannot separate risks, and you must deal with two or more at the same time, compromise by giving the most room to either the greatest or most likely danger. For example, suppose you are driving on a two-lane street with oncoming cars to your left and a child riding a bike to your right. The child is the most likely to move suddenly, so you need a larger lane is the correct compromise.

### **Driver Condition**

Your physical, mental and emotional conditions outweigh any other potential problems you will face on the road. Even a simple headache or cold could affect your ability to drive safely. Be as objective as possible about your fitness to drive. Postpone your trip or have someone else drive if you are ill.

Drugs can affect your ability to drive safely. Many contain chemicals that can affect your alertness and coordination, and they may also cause drowsiness and dizziness. Read the label before taking any drug or medicine. Call your physician for possible side effects of the medication and the impact it might have on your driving.

### **Fatigue**

If you find yourself feeling sleepy while driving, it is already past the time to get off the road. Fatigue dulls the mind and reduces your ability to act quickly and correctly. Rest is the only safe remedy. To avoid fatigue, follow these guidelines:

- Get plenty of rest before you start a trip. Don't drive late at night.
- Take frequent rest stops. Get out of the vehicle and exercise. Breathe deeply and move around.
- Do not stare straight ahead. Keep your eyes moving and check your mirrors and dash gauges.
- Roll down the windows to get fresh air. Sing along with the radio, or chew gum.
- If possible, change drivers frequently.

## **Distractions**

Minor distractions can take your attention away from driving. There is a potential collision in every minor distraction. It is your responsibility to pay full attention to your driving. Avoid minor distractions such as:

- Searching for an item dropped on the seat
- Reaching across the dash into the glove compartment
- Trying to get out of a sweater or jacket, or fasten a safety belt while driving
- Controlling children
- Reading a road map
- Using a phone

## **Cell Phones**

It is best to pull off the road safely and stop if you are going to use a cellular telephone. Trying to dial, answer or talk on a phone while driving can divert your attention from your driving and can be dangerous.

## **Drinking and Driving**

Alcohol and driving do not mix. The driver who drinks causes accidents, injuries, and death. Driving is a serious business, which requires the ultimate in skill and judgment - both of which are diminished through consumption of alcohol. Alcohol seriously reduces your reflexes, physical control over the vehicle, and ability to recognize dangerous situations. These combined physical effects make the drinking driver a dangerous driver. Even when you may not appear or

feel drunk, alcohol produces a false sense of confidence in your driving ability. **Do Not Drink and Drive.**

### **New Hire Checklist**

1. Current valid driver license? Yes / No
2. Appropriate personal business automobile insurance if using personal car on official business? Yes / No
  - a) If driving is regular, but incidental (at least 29% of the major duties involve vehicle use), the following has been done:
    - DMV driving record check on finalists.
    - Enrollment in a defensive driver training class within the first six months.
    - Familiar with the Vehicle Use Rules for Company Drivers.
    - Familiar with company policy.
  - b) If driving is frequent or essential (30% to 100% of the major duties require driving)
    - DMV driving record check on finalists.
    - Enrollment in defensive driver training course within the first three months.
    - Familiar with the Vehicle Use Rules for Company Drivers.
    - Familiar with company policy.

### **Current Employees**

Driving performance must be monitored periodically. Qualifications should match the position needs. They do not decrease once hired.

- What does their three-year driving history look like? Do they still have a valid driver license? If they will be using their own car on official business, do they have current automobile insurance that will cover a business trip?
- Review the driving record of any current employee tentatively selected for promotion or transfer from a non-driving to a driving required job.
- Have they generated any accidents or complaints over the past three years? Has their driving performance met company expectations?
- Is the employee familiar with the Vehicle Rules for Company Drivers and Company Policy? Do they know the definition of "personal use" and "official company business"?
- Company expectations. All employees are required to maintain a good driving record.

What Performance Issues and Training Triggers Apply?

## **Performance Issues**

Driving is a performance issue. The number of traffic citations, citizen complaints, accidents, and incidents over a three-year period may result in loss of driving privileges.

## **High Risk Driving Criteria**

The following criteria identify high-risk drivers. A driver is high-risk, if the accident/incident history in the past year includes one or more of the following moving violations or convictions:

- A major traffic offense in the last 24 months. This includes reckless driving, driving under the influence of intoxicants, failing to perform the duties of a driver, criminal driving while suspended or revoked, fleeing or attempting to elude a police officer, and other.
- Felony revocation of driving privileges or felony or misdemeanor driver license suspension within the last 24 months.
- More than three moving traffic violations in the last 12 months.
- A careless driving conviction in the last 12 months, or
- A Class A moving traffic infraction in the last 12 months.

## **Accident/Incident Analysis**

The following can help the supervisor analyze each accident/incident, and determine the appropriate training trigger. Incidents are police citations, citizen complaints, or other unplanned events that disrupt work but may not result in loss or injury.

- Date of accident or incident
- Description of accident or incident
- Does it fit the HIGH RISK DRIVING CRITERIA?
- What was the cause of the accident or incident?
- What were the weather conditions? (Snow, ice, bright sun, wet.) Did the conditions contribute to the accident? Did the employee drive in keeping with the weather conditions?

- Were there any uncontrolled hazards? (Animal ran out in front of automobile, materials fell off vehicle onto company car.)
- What is the driving performance of the unit? Are other employees having similar accidents? (This may give you insight into contributing factors. Does workload or scheduling result in speeding or careless driving?)

### **Trainer Triggers**

Use this section if, after your analysis, you conclude the driver failed to use safe driving techniques:

#### **1 – 2 Incidents:**

- Enroll in a defensive driver-training course within the next six months.
- Review driving record every year.

However, if driver has recently taken the course, do not enroll again. You may wish to discuss your concerns with the driver and how continued problems may result in loss of driving privilege. Review your company policy with the driver.

#### **3 – 4 Incidents:**

Enroll in defensive driver training as soon as possible. Review your company's citizen complaints, liability and restoration claim records. Does the employee's name appear on these reports? If so, review their driving record every six months. However, if driver has recently taken the course, do not enroll again.

Recommend driver counseling for anyone with 3 – 4 incidents. You may wish to consult with your company personnel officer for guidance before counseling driver.

Other counseling tips/talking points: What can your company do to assist driver in reducing accidents and citizen complaints? Discuss driving errors with driver based on information from accident reports and citizen complaints. Review driver's workload. Have they scheduled too many appointments in one day? Are there any distractions?

### 5 or more Incidents:

Driver has a serious problem. May need to limit if not eliminate driving as part of duties. You may wish to consult with your company personnel officer for guidance before counseling driver. You may wish to place driver on trial status for a three-year period. If problems continue, driving privilege should be suspended. If it is determined that the problem is due to lack of training, company may opt for behind the wheel training designed to deal with both common and emergency maneuvers. Review driving record before reinstating driving privileges.

What Are Your Driver's Obligations?

### **Driver Obligation Checklist**

You may wish to have each driver review these expectations. Sign and keep a copy of the checklist on file.

The driver agrees that he/she will:

- Have a valid driver license.
- Use university or company vehicles only for official company business.
- Not permit any unauthorized person to drive the vehicle.
- Use seat belts or other available restraints and require all occupants to do likewise in accordance with company laws.
- Operate the company or university vehicle in accordance with university, or risk management regulations and policies, know and observe all applicable traffic laws, ordinances, regulations, and use safe driving practices at all times.
- Take regular breaks when traveling distances of 100 miles or more than three hours at a stretch.
- Assume all responsibilities for any and all fines or traffic violations associated with his/her use of company or university vehicle or privately owned vehicle on official company business.
- Not drive under the influence of drugs or alcohol.
- Turn off the ignition, remove the keys, engage parking brake, and lock the vehicle when out of sight of the vehicle, even briefly.

- Drive the vehicle at speeds appropriate for road conditions.
- Immediately report all accidents and incidents to their supervisor or your company designee and to local prescribed authority.
- Read the Vehicle Rules for Company Drivers and company policy.

### **How to Handle Driver License Suspensions**

#### **Driver License Suspension**

When an employee informs you of a suspended driver license, revoke their company driving privileges immediately. If driving is a major part of their job and you are unable to re-assign them to another position, consult with your personnel officer before taking any further action.

The employee may ask you to write a letter to DMV in support of their hardship permit application. A hardship permit gives the employee restricted driving privileges. The permit allows the employee to drive within a specified area (to and from work) and can give him or her the ability to drive on the job as well.

Before agreeing to send a letter to DMV in the employee's behalf, review the employee's employment history, driving record, and citizen complaints over the past three years. If you decide to take the risk of allowing the employee to drive on company business or use a company car, you must obtain Risk Management approval before returning the hardship request to DMV. Risk Management will require you submit a written loss control agreement with the employee before we will issue a certificate of insurance to allow him or her to drive on company business.

If you decide not to allow the employee to drive on the job, you can write a letter to DMV confirming employment. Please specify in the letter that your signature does not approve the hardship permit for on the job driving. This letter will allow the employee to travel to and from work in his or her own personal automobile. They may not however, drive on company business, even in their own vehicle.

Once license is restored, place employee on a three-year probationary period. Review DMV record every six months. If employee obtains another major infraction, you may want to reassign them to a non-driving position.

## **Drive Defensively**

More than 43,000 people lose their lives in motor vehicle crashes each year and two million more suffer disabling injuries, according to the National Safety Council. The triple threat of high speeds, impaired or careless driving and not using occupant restraints threatens every driver -- regardless of how careful or how skilled.

Driving defensively means not only taking responsibility for yourself and your actions but also keeping an eye on "the other guy." The National Safety Council suggests the following guidelines to help reduce your risks on the road:

- Don't leave the driveway without securing each passenger in the car, including children and pets. Safety belts save thousands of lives each year!
- Remember that driving too fast or too slow can increase the likelihood of collisions.
- Don't kid yourself. If you plan to drink, designate a driver who won't drink. Alcohol is a factor almost half of all fatal motor vehicle accidents.
- Be alert! If you notice that a car is straddling the center line, weaving, making wide turns, stopping abruptly or responding slowly to traffic signals, the driver may be impaired.
- Avoid an impaired driver by slowing down, letting the driver pass, pulling onto the shoulder or turning right at the nearest corner. If it appears that an oncoming car is crossing into your lane, pull over to the roadside, sound the horn and flash your lights.
- Notify the police immediately after seeing a motorist who is driving suspiciously.
- Follow the rules of the road. Don't contest the "right of way" or try to race another car during a merge. Be respectful of other motorists.
- While driving, be cautious, aware and responsible.

## **Driver Fatigue**

It's one of the most unnerving experiences in driving: You've been on the road a while; the highway seems endless: long, smooth, monotonous; the car interior is warm; you're tired. The radio isn't holding your attention, and neither is the driving. You stare straight ahead, at miles and miles of road, as you start to feel your shoulders sag, and your eyes slowly ... start to ... close.



Abruptly, you open your eyes, jerk up in your seat. You've started to drift out of your lane, or maybe even off the road. You steer your car back into the lane, take a few deep breaths, and realize, fearfully, what just happened. You were asleep.

Fatigue on the road can be a killer. Fatigue happens frequently, on long journeys, especially long night drives. You may have recognized some warning signs of fatigue in the foregoing scenario. Other signs of fatigue include back tension, burning eyes, shallow breathing, inattentiveness, and any kind of erratic driving, such as drifting, abnormal speed, tailgating, or failure to obey traffic signs.

The single greatest cause of fatigue is alcohol consumption. Alcohol is a depressant, and a driver doesn't have to be drunk to fall asleep at the wheel. Even one drink can be enough to induce fatigue.

Another culprit is the nature of modern highway driving. Most car interiors have comfortable, cushioned seats in quiet, carpeted, temperature-regulated environments. Many vehicles have "cruise control." Most major roads have been engineered to eliminate sharp curves, hills and bumps. Ironically, these designs for comfort contribute to falling asleep at the wheel. Additionally, dull landscapes, the droning of tires and engines, and the repetitive patterns of oncoming headlights, trees, poles and white lines can lead to a dangerous, trance-like company known as "highway hypnosis," which deadens drivers' senses and slows their reaction time.

Fatigue behind the wheel is a very real danger, even if you've never experienced it firsthand. The National Safety Council offers these tips for staying awake while you're driving:

- An obvious cause of fatigue is lack of sleep. If you haven't received seven or eight hours of sleep the night before a trip, you're courting fatigue. Get enough rest. And don't start a trip late in the day. Long-distance driving is hard work, and you need to be fresh and alert.
- If possible, don't drive alone. Passengers can take turns driving and also serve as conversation partners to keep you awake.
- Avoid long drives at night. The glare of lights, both on your dashboard and outside your car, increases the danger of highway hypnosis.
- Adjust your car's environment so that it helps keep you awake and alert. Keep the temperature cool, with open windows or air conditioning in the summer and frugal

amounts of heat in the winter. Turn the radio volume up, and switch stations frequently, but avoid soft, sleep-inducing music. Do not use cruise control; keep your body involved with the driving.

- Watch your posture. Drive with your head up and your shoulders back. Tuck your buttocks against the seat back. Legs should not be fully extended, but flexed at about a 45 degree angle.
- Take frequent breaks. At least every two hours, stop at a gas station, restaurant or rest stop. Get out of the car, walk around, even jog or do calisthenics. Exercise fights fatigue.
- In addition to exercise breaks, stop for light meals and snacks. Avoid alcohol entirely.
- Don't allow your eyes to become fatigued or hypnotized. Wear sunglasses to fight glare (but never wear sunglasses at night).
- Break the monotony. Turn the radio on for a while, then off. Vary speed levels. Chew gum. Stretch your legs, slap your thighs. Talk to yourself. Sing. Keep your eyes moving.
- If anti-fatigue measures fail, and you start noticing the danger signs of fatigue, then there is only one solution. Sleep. If no motels or rest areas are in sight, pull off a safe distance from the road and take a nap. Even 20 minutes of sleep might refresh you enough to keep going for a bit. Be careful in pulling off the road, though. Parking your car on a shoulder makes it vulnerable to being hit by other fatigued or impaired drivers. If you pull off the road, pull far off the road, preferably at a wayside. Keep your doors locked.

Safe driving demands your full attention. If you feel your eyelids getting heavy, then your next actions may not simply determine whether you'll stay awake. They might determine whether you'll stay alive.

## CHAPTER 5

### WHAT TO DO WHEN YOU ARE INVOLVED IN A CAR ACCIDENT

#### At the Scene

One in every eight drivers will be involved in a motor vehicle crash this year, according to the National Safety Council. That may mean you! Are you prepared? Would you know what to do and what questions to ask? Since most people are reasonably upset after a crash, the National Safety Council offers this list of 11 easy steps to remember.

- Stop your vehicle if it is clear, safe and legal.
- Move the vehicle out of the traveled roadway, if it is clear, safe and legal.  
(In some companies it is against the law to move the vehicle from the place where the crash occurred. Check the ordinance in your area or company policies/procedures.)
- Turn off the ignitions of the cars involved.
- Make a first aid check of all persons involved in the crash.
- Call the police and, if necessary, emergency medical services.
- Mark the scene of the crash with flares or retro-reflective triangles.
- Gather the names of all persons in the motor vehicles and people who witnessed the crash.
- Make a diagram quickly of where the vehicle occupants were seated and indicate the vehicles' direction of travel and lane. Also note the date, time and weather conditions.
- Ask to see the other driver's license and write down the number.
- Exchange insurance company information. Do not discuss "fault" or make comments about the crash to anyone but the police.
- Get a copy of the police report of the crash from the local precinct.

#### Driving At Night

Traffic death rates are three times greater at night than during the day, according to the National Safety Council. Yet many of us are unaware of night-driving special hazards or don't know effective ways to deal with them.

Driving at night is more of a challenge than many people think. It's also more dangerous. Why is night driving so dangerous? One obvious answer is darkness. Ninety percent of a driver's reaction depends on vision, and vision is severely limited at night. Depth perception, color recognition, peripheral vision are compromised after sundown.

Older drivers have even greater difficulties seeing at night. A 50-year-old driver may need twice as much light to see as well as a 30-year old.

Another factor adding danger to night driving is fatigue. Drowsiness makes driving more difficult by dulling concentration and slowing reaction time.

Alcohol is the single most significant factor in fatal traffic crashes, playing a part in more than half of all motor vehicle-related deaths. That makes weekend nights more dangerous. More fatal crashes take place on Friday and Saturday nights than at any other time in the week. Fortunately, you can take several effective measures to minimize these after-dark dangers by preparing your car and following special guidelines while you drive.

The National Safety Council recommends these steps:

- Prepare your car for night driving. Clean headlights, taillights, signal lights and windows once a week, more often if necessary.
- Aim your headlights properly. Mis-aimed headlights blind other drivers and reduce your ability to see the road.
- Don't drink and drive. Not only does alcohol severely impair your driving ability, but it also acts as a depressant. Just one drink can induce fatigue. Also, avoid smoking when you drive. Smoke's nicotine and carbon monoxide hamper night vision.
- If there is any doubt, turn your headlights on. Lights will not help you see better in early twilight, but they'll make it easier for other drivers to see you. Being seen is as important as seeing.
- Reduce your speed and increase your following distances. It is more difficult to judge other vehicle's speeds and distances at night.
- Don't overdrive your headlights. You should be able to stop inside the illuminated area. If you're not, you are creating a blind crash area in front of your vehicle.
- When following another vehicle, keep your headlights on low beams so you don't blind the driver ahead of you.

- If an oncoming vehicle doesn't lower beams from high to low, avoid glare by watching the right edge of the road and using it as a steering guide.
- Make frequent stops for light snacks and exercise. If you're too tired to drive, then stop and get rest.
- If you have car trouble, pull off the road as far as possible. Warn approaching traffic at once by setting up flares or reflecting triangles near your vehicle and 300 feet behind it. Turn on flashers and the dome light. Stay off the roadway and get passengers away from the area.
- Observe night driving safety as soon as the sun goes down. Twilight is one of the most difficult times to drive, because your eyes are constantly changing to adapt to the growing darkness.

## CHAPTER 6

### **AVOIDING MOTORCYCLE ACCIDENTS**

As a rider you can't be sure that other operators will see you or yield the right-of-way. To lessen the chances of an accident occurring:

- Be visible - wear proper clothing, use your headlight, and ride in the best lane position.
- Communicate your intentions - use the proper signals, brake light, and lane position.
- Maintain an adequate space cushion - following, being followed, lane sharing, passing and being passed.
- Scan your path of travel 10 to 15 seconds ahead.
- Identify and separate multiple hazards.
- Be prepared to act - remain alert and know how to carry out proper accident-avoidance skills.
- Blame does not matter when someone is injured in a crash. There is rarely a single cause of an accident. The ability to ride alertly, make critical decisions, and carry them out separates responsible riders from all the rest. Remember, it is up to you to keep from being the cause of, or an unprepared participant in, any accident.

Drivers of vehicles involved in accidents with motorcycles often say that they never saw the motorcycle. From ahead or from behind, its outline is only one-third to one-half the size of a car's. The saying "You can't hit what you can't see" just doesn't apply to motorcycles. Even if a driver does see you coming, you are not necessarily safe. Smaller vehicles appear farther away and seem to be travelling slower than they actually are. Most drivers think they have plenty of time and pull out in front of a motorcycle. Too often, they are wrong.

However, motorcycle riders can help to make the motorcycle more noticeable.

#### **Headlight**

The best thing you can do to make the motorcycle visible to oncoming drivers is to keep the headlight on at all times. Studies show that during daylight hours a motorcycle with its lights on becomes twice as noticeable to oncoming drivers. A modulated beam headlight (one that flickers) is legal on motorcycles in California, but not after dark.

## **Clothing**

Brightly colored, reflective helmets and clothing help make riders more noticeable. Remember, your body is half the visible surface area of the rider/motorcycle unit. Bright orange, yellow, and green jackets or vests are the best for being seen. Reflective tape on clothing helps others to see you. It can also be put on your helmet or on the motorcycle. Brightly colored helmets can help others see you.

If you do not want to wear brightly-colored clothing, at least carry a reflective vest to wear at night. Such a vest is more noticeable to drivers behind you than a taillight.

## **Horn**

The horn on a motorcycle is not much of an attention-getter, but it is better than nothing. Put your thumb on it and be ready to use it whenever you are passing a vehicle.

It is a good idea to give a quick toot before you pass anyone you think may move into your lane. Here are some situations:

- A car is in the lane next to you and coming up behind a vehicle ahead.
- A parked car that has a person in the driver's seat.
- Someone is walking or riding a bicycle in the street.

Don't be afraid to give a blast on the horn if you have any doubts about what others might do. In an emergency, press the horn loud and long. Be ready to stop or swerve away from danger.

## **Position**

Keep your motorcycle where other drivers can see it. Here are some ways to do it:

- Don't ride in another driver's "blind spot." Either pass the other driver or drop back. When passing a vehicle, get through the blind spot as quickly as you can. Approach cautiously, but once you are alongside, speed up and get by quickly.
- When approaching a cross street, move toward the center of the road so that you are closer to the other driver's line of sight.

- Try to ride where you can see the rearview mirror of the car ahead. This way, the other driver is more likely to see you and know you are there. Also, when your headlight is on, it will help the other driver notice you.
- When parking the motorcycle, angle it at the curb so that other drivers will see your motorcycle and won't drive into the parking place. Also, the driver of the vehicle parked ahead of you is more likely to see your motorcycle in the rearview mirror before backing up.

## **Signals**

The signals that a motorcycle rider uses are the same as those used by the driver of a vehicle. However, signals are far more important to the motorcycle rider.

### **Turn Signals**

Turn signals do two things. First, they tell others what you plan to do. Use them any time you are going to turn or change lanes. Use them even when you think no one else is around. It is the vehicle you don't see that will give you the most trouble. Secondly, signal lights make you more visible. A driver behind you is more likely to see a turn signal than a taillight. Therefore, it is a good idea to use turn signals even when you plan to do the obvious. For example, it is more likely that cars on the freeway will see you and make room for you.

CAUTION: Not turning off a signal is as bad as not turning it on.

It is dangerous to leave a turn signal blinking. A driver may think you plan to turn and pull right into your path. Check the instrument panel so that you will notice if a signal is still on.

Use your signals at every turn or lane change so drivers can react correctly. Do not make them guess what you intend to do.

### **Brake Light**

The motorcycle's brake light is not usually as noticeable as the brake lights on a car, particularly if the taillight is on (it goes on with the headlight). You can help others notice you by tapping the brake pedal to flash the brake light before slowing down. It is important to do this when you are:



- Being closely followed. The tailgater may be watching you and not see something ahead that will make you slow down.
- Making a tight turn off a high-speed highway.
- Slowing or turning in the middle of a block, at an alley, or at some place where others do not expect it.

Throughout the accident and exposure data there are special observations which relate to accident and injury causation and characteristics of the motorcycle accidents studied. These findings are summarized as follows:

1. Approximately three-fourths of these motorcycle accidents involved collision with another vehicle, which was most often a passenger automobile.
2. Approximately one-fourth of these motorcycle accidents were single vehicle accidents involving the motorcycle colliding with the roadway or some fixed object in the environment.
3. Vehicle failure accounted for less than 3% of these motorcycle accidents, and most of those were single vehicle accidents where control was lost due to a puncture flat.
4. In single vehicle accidents, motorcycle rider error was present as the accident precipitating factor in about two-thirds of the cases, with the typical error being a slide-out and fall due to over-braking or running wide on a curve due to excess speed or under-cornering.
5. Roadway defects (pavement ridges, potholes, etc.) were the accident cause in 2% of the accidents; animal involvement was 1% of the accidents.
6. In multiple vehicle accidents, the driver of the other vehicle violated the motorcycle right-of-way and caused the accident in two-thirds of those accidents.
7. The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of motorcycle accidents. The driver of the other vehicle involved in collision with the motorcycle did not see the motorcycle before the collision, or did not see the motorcycle until too late to avoid the collision.
8. Deliberate hostile action by a motorist against a motorcycle rider is a rare accident cause. The most frequent accident configuration is the motorcycle proceeding straight then the automobile makes a left turn in front of the oncoming motorcycle.
10. Intersections are the most likely place for the motorcycle accident, with the other vehicle violating the motorcycle right-of-way, and often violating traffic controls.
11. Weather is not a factor in 98% of motorcycle accidents.
12. Most motorcycle accidents involve a short trip associated with shopping, errands, friends, entertainment or recreation, and the accident is likely to happen in a very short time close to the trip origin.
13. The view of the motorcycle or the other vehicle involved in the accident is limited by glare or obstructed by other vehicles in almost half of the multiple vehicle accidents.

14. Conspicuity of the motorcycle is a critical factor in the multiple vehicle accidents, and accident involvement is significantly reduced by the use of motorcycle headlamps (on in daylight) and the wearing of high visibility yellow, orange or bright red jackets.
15. Fuel system leaks and spills were present in 62% of the motorcycle accidents in the post-crash phase. This represents an undue hazard for fire.
16. The median pre-crash speed was 29.8 mph, and the median crash speed was 21.5 mph, and the one-in-a-thousand crash speed is approximately 86 mph.
17. The typical motorcycle pre-crash lines-of-sight to the traffic hazard portray no contribution of the limits of peripheral vision; more than three-fourths of all accident hazards are within 45 degrees of either side of straight ahead.
18. Conspicuity of the motorcycle is most critical for the frontal surfaces of the motorcycle and rider.
19. Vehicle defects related to accident causation are rare and likely to be due to deficient or defective maintenance.
20. Motorcycle riders between the ages of 16 and 24 are significantly over-represented in accidents; motorcycle riders between the ages of 30 and 50 are significantly underrepresented. Although the majority of the accident-involved motorcycle riders are male (96%), the female motorcycles riders are significantly over-represented in the accident data.
22. Craftsmen, laborers, and students comprise most of the accidents involving motorcycle riders. Professionals, sales workers, and craftsmen are underrepresented and laborers, students and unemployed are over-represented in the accidents.
23. Motorcycle riders with previous recent traffic citations and accidents are over-represented in the accident data.
24. The motorcycle riders involved in accidents are essentially without training; 92% were self-taught or learned from family or friends. Motorcycle rider training experience reduces accident involvement and is related to reduce injuries in the event of accidents.
25. More than half of the accident-involved motorcycle riders had less than 5 months experience on the accident motorcycle, although the total street riding experience was almost 3 years. Motorcycle riders with dirt bike experience are significantly underrepresented in the accident data.
26. Lack of attention to the driving task is a common factor for the motorcyclist in an accident.
27. Almost half of the fatal accidents show alcohol involvement.
28. Motorcycle riders in these accidents showed significant collision avoidance problems. Most riders would over-brake and skid the rear wheel, and under-brake the front wheel greatly reducing collision avoidance deceleration. The ability to counter-steer and swerve was essentially absent.
29. The typical motorcycle accident allows the motorcyclist just less than 2 seconds to complete all collision avoidance action.

30. Passenger-carrying motorcycles are not over-represented in the accident area.
31. The driver of the other vehicles involved in collisions with a motorcycle is not distinguished from other accident populations except that the ages of 20 to 29 and beyond 65 are over-represented. Also, these drivers are generally unfamiliar with motorcycles.
32. Large displacement motorcycles are underrepresented in accidents but they are associated with higher injury severity when involved in accidents.
33. Any effect of motorcycle color on accident involvement is not determinable from these data, but is expected to be insignificant because the frontal surfaces are most often presented to the other vehicle involved in the collision.
34. Motorcycles equipped with fairings and windshields are underrepresented in accidents, most likely because of the contribution to conspicuity and the association with more experienced and trained riders.
35. Motorcycle riders in these accidents were significantly without motorcycle license, without any license, or with license revoked.
36. Motorcycle modifications such as those associated with the semi-chopper or cafe racer are definitely over-represented in accidents.
37. The likelihood of injury is extremely high in motorcycle accidents-98% of the multiple vehicle collisions and 96% of the single vehicle accidents resulted in some kind of injury to the motorcycle rider; 45% resulted in more than a minor injury.
38. Half of the injuries to the somatic regions were to the ankle-foot, lower leg, knee, and thigh-upper leg.
39. Crash bars are not an effective injury countermeasure; the reduction of injury to the ankle-foot is balanced by increase of injury to the thigh-upper leg, knee, and lower leg.
40. The use of heavy boots, jacket, gloves, etc., is effective in preventing or reducing abrasions and lacerations, which are frequent but rarely severe injuries.
41. Groin injuries were sustained by the motorcyclist in at least 13% of the accidents, which typified by multiple vehicle collision in frontal impact at higher than average speed.
42. Injury severity increases with speed, alcohol involvement and motorcycle size.
43. Seventy-three percent of the accident-involved motorcycle riders used no eye protection, and it is likely that the wind on the unprotected eyes contributed in impairment of vision, which delayed hazard detection.
44. Approximately 50% of the motorcycle riders in traffic were using safety helmets but only 40% of the accident-involved motorcycle riders were wearing helmets at the time of the accident.
45. Voluntary safety helmet use by those accident-involved motorcycle riders was lowest for untrained, uneducated, young motorcycle riders on hot days and short trips.
46. The most deadly injuries to the accident victims were injuries to the chest and head.

47. The use of the safety helmet is the single critical factor in the prevention of reduction of head injury; the safety helmet which complies with FMVSS 218 (government standards) is a significantly effective injury countermeasure.
48. Safety helmet use caused no attenuation of critical traffic sounds, no limitation of pre-crash visual field, and no fatigue or loss of attention; no element of accident causation was related to helmet use.
49. FMVSS 218 provides a high level of protection in traffic accidents, and needs modification only to increase coverage at the back of the head and demonstrate impact protection of the front of full facial coverage helmets, and insure all adult sizes for traffic use are covered by the standard.
50. Helmeted riders and passengers showed significantly lower head and neck injury for all types of injury, at all levels of injury severity.
51. The increased coverage of the full facial coverage helmet increases protection, and significantly reduces face injuries.
52. There is no liability for neck injury by wearing a safety helmet; helmeted riders had less neck injuries than riders without helmets. Only four minor injuries were attributable to helmet use, and in each case the helmet prevented possible critical or fatal head injury.
53. Sixty percent of the motorcyclists were not wearing safety helmets at the time of the accident. Of this group, 26% said they did not wear helmets because they were uncomfortable and inconvenient, and 53% simply had no expectation of accident involvement.
54. Valid motorcycle exposure data can be obtained only from collection at the traffic site. Motor vehicle or driver license data presents information which is completely unrelated to actual use.
55. Less than 10% of the motorcycle riders involved in these accidents had insurance of any kind to provide medical care or replace property.

**CHAPTER 7 - MISCELLANEOUS**  
**EFFECTS OF AGING ON DRIVING**

1. Loss of visual acuity, physical strength, psychological changes, slower reaction times and hearing loss.
2. Gradual, not noticed, reduces reactions
3. Age 50 or more: stationary objects hard to see, diminished peripheral vision. Age 60: night vision becomes worse and hard to see objects that are not moving.
4. 16 to 24 year old group worse than all other groups. Best group is drivers ages 35-54.
5. Hearing is more important than people realize.
6. Physical ability is reduced which results in fatigue, difficult for steering, backing up, etc.
7. Number one problem for older drivers is failing to yield the right of way. Number two is improper left turns.
8. Age 55 and older, body functions at a slower pace. Includes elimination of alcohol from the body. Also reactions with medications.

**Young Drivers**

1. 16 year old group worst. Speeding, racing or not driving safely for road conditions. Unable to cope with even small emergencies.
2. If they have passengers, have a tendency to show off.
3. Driving schools can help with driving skills, but don't make them safer drivers. Reason is poor skills don't cause accident - attitudes, peer pressure and teenagers are slower to perceive danger than older drivers. 16 year olds don't have much common sense and little experience.
4. Most parents think it should be more difficult to obtain driver's license.
5. Seat belt use is remarkably lower.
6. Some states and Canada using progressive licensing.
7. Driving is more complex than teenagers realize.
8. Restrict nighttime driving. Because nighttime is more recreational, than necessary.

**Truckers**

1. Large trucks/tractor-trailers has low percentages of accidents. But higher catastrophic accidents. Normal 18 wheelers weigh about 30 to 1 to passenger vehicles.

## **Night Driving**

1. Normal passenger vehicle headlights will not illuminate objects in the darkness until they are only a few hundred feet from the object.

## **Emergencies**

1. Driving down steep hill, push on brakes, they don't slow you down. What do you do? Car driving in your lane in wrong direction? Pile up, do you call police, aid injured or set up flares? Depends upon your evaluation, existing conditions and experience/knowledge.

## **How to Drive**

1. Scanning. Don't use a fixed stare. Keep eyes moving and learn to read the road. Highway hypnosis is a trance like state while driving long distances. Intersections, crosswalks, shopping centers, construction areas, playgrounds, high traffic areas.
2. Blind spots are on the left and right side of your vehicle. Vehicles parked too close to an intersection with bushes, trees and buildings block your view. Avoid in driving in someone else's blind spot, you should be seen by the other driver. Don't rely upon mirrors; turn your head quickly to see if the way is clear.
3. Signal at least 4 seconds before you turn. If you plan to turn beyond an intersection, don't signal until you are in the intersection as other drivers will pull out in front of you. Turn signal off when turned.
4. Compromise for the most dangerous risks. Kid riding on bike on the right, you need a larger lane near the kid.
5. Health. Even cold or headache can have a reaction on ability to drive. Prescription drugs/illegal drugs. Read labels.
6. Fatigue. If you find yourself drowsy or sleepy while driving, then it past the time to pull over. Fatigue dulls the mind and reduces ability to react quickly and correctly.
7. Distractions. Cell phones, looking for something, reaching across dash into glove compartment, trying to get sweater/jacket on/off while driving, or fastening seat belt, reading road map, etc.

## **Driver Knowledge:**

Do you know how to brake a vehicle that has ABS (automatic braking system) brakes installed?

1. Most drivers were taught to pump the brakes and turn hard to the right or left in order to compensate for skidding. With anti-lock brakes, all drivers have to do is "brake and steer."

With four-wheel ABS, push the brake pedal hard while steering normally and keep your foot firmly on the brake pedal until the car comes to a complete stop. Don't take your foot off the brake pedal because it will disengage the anti-lock system. Drivers of rear-wheel ABS vehicles should step firmly with care, and if they feel the wheels begin to lock, they should withhold some pressure.

2. Expect noise and vibration in the brake pedal when your anti-lock brakes are in use. The mechanical noise or pulsating of anti-lock brakes while they are in use might catch drivers by surprise, but these sensations tell you the brakes are working.
3. Remember that you can steer while you are braking with 4-wheel anti-lock brake systems. Steering is not always an instinctive reaction in an emergency stop situation. Steer out of harm's way, while keeping your foot firmly on the brake pedal. Remember that while you have steering capability in a braking situation, your vehicle may not turn as quickly on a slippery road as it would on dry pavement.
4. Do you know how to stop your vehicle that is hydroplaning in wet weather?
5. If you need 4 new tires on your vehicle and have money for only two tires, where will you put them? On the front or on the back? (rear tires). Newer tires on the front increase the risk of losing control and spinning around.
6. Hydroplaning in wet weather is more severe than skidding on ice. The yawing force from the front wheels may be more than five times greater than on ice, while the rear wheels' stabilizing forces are almost zero at fully developed hydroplaning. Therefore rear wheel hydroplaning must be perceived early by the driver, and quick counter-steering is required to avoid unrecoverable yawing motions.
7. Is front wheel drive more hazardous? No, with front drive, spinning wheels result in understeering and extreme stability. Though steer-ability is lost, no lateral or yaw motions are induced like in a rear wheel skid.
8. Animals. Large animals usually don't see any threat from approaching cars. Your lights may further illuminate the road to the animal and they may want to cross the road. Sounding the horn could make them nervous and cause them to run.
9. Do you know how to adjust your mirrors? Sitting in the correct seating position, adjust your rear view mirror so it frames the back window of your car, without having to move your head. Now tilt your head to one side and adjust the side mirrors so that you can just see the side of your vehicle. You'll know you've got it right when you move your head back to a parallel position and cannot see the side of your vehicle. Now tilt your head to the other side and adjust the other side mirror in the same way.

There is much more to cover, but this is the beginning. Defensive Driving is an attitude and the more information a person has the better driver they should be. However, you don't know how someone drives until you actually watch and observe their driving and actions behind the wheel. People who are entrusted to operate company vehicles **must have supervisor and frequent training.**

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