

# Student Study Guide

Here is brief summary for you to review and to help you remember what you have learned during your course. You may print and review this information.

**An average of 6 children were killed in traffic accidents each day in 2000.** In half of these cases, the children were passengers in vehicles with drivers who had been drinking.

It is also reported that more Texans lose their lives in traffic accidents than the citizens of any other state.

As an example, in 2000, 3,769 people were killed on Texas roads, compared to 3,753 in California and 2,999 in Florida. Interestingly, California had fewer traffic deaths but 13 million more people. This is an illustration as to the serious traffic problem Texas faces.

## Facts Regarding Deaths, Injuries and The Economic Losses Resulting From Traffic Collisions

Unfortunately, statistics by the National Safety Council shows that 42% of all fatalities in traffic accidents are caused by 2 car collisions. Almost all of those collisions are caused by driver error. This is why it is so important for us to take a look at all the possible ways drivers can avoid collisions, thus trying to reduce these sobering statistics.

## Many Fatalities Can Be Avoided

Ejection from a vehicle accounted for 28 percent of all passenger vehicle occupant fatalities. **Nearly two-thirds ( 2/3) of the passenger vehicle occupants killed in traffic crashes in 2003 were unrestrained!**

Despite the laws governing seatbelts, still too many people are killed each year because of being ejected from the vehicle due to lack of seat belt restraints. It is the driver's responsibility to be sure their passengers are restrained.

Based on the collision reports in 2001 in the State of Texas;

- 1 person was killed every 2 hours and 34 minutes,
- 1 person was injured every 1 minute and 54 seconds
- 1 reportable collision occurred every 97 seconds.

Most drivers travel in excess of the speed limits. This also can occur even if driving within posted the speed limits. Posted speed limits are designed for perfect conditions, and can not take into account weather, traffic

patterns, individual and extenuating circumstances. It stands to reason why drivers have to make the decision to allow enough room between cars to allow for the unexpected.

**Adjust your speed according to the flow of traffic**, but also the conditions of the road and weather. **REMEMBER THE BASIC SPEED LAW – NEVER DRIVE FASTER THEN CONDITIONS PERMIT.** You can get a traffic violation if you are driving faster then the conditions warrant even if you are within the speed limit.

**Adjusting your speed should depend on things like;**

- 1) The number & speed of other cars on the road
- 2) Road conditions
- 3) The weather

**Think before acting out against another driver.**

An average of at least 1,500 men, women and children are injured or killed each year in the United States as a result of “aggressive driving!”

If someone wrongs you on the roadway, just let it pass and remember you too most likely have made that same mistake at some time while driving.

While acting out against another driver may feel good for a moment, it will not ultimately teach the driver to drive better and it could, in fact, land you in some serious trouble.

**Drinking and Driving – A Deadly Combination**

According to data from the National Highway Traffic Safety Administration (NHTSA), in 2000 America experienced the largest percentage increase in alcohol-related traffic deaths on record. 17,380 people were killed in alcohol-related crashes – an average of one every half-hour. In 2001 that number rose to 17,400. This equals approximately 41% of all the traffic fatalities.

According to NHTSA in a 2002 report, drivers aged 21 to 24 had the highest percentage of intoxication rates in fatal accidents. A staggering 33% of drivers 21 to 24 years old involved in fatal crashes were intoxicated followed by ages 25 to 34 which constituted 28% of all fatal accidents.

The sad part is the innocent victims. Of the children 0 – 14 years old who were killed in alcohol-related crashes during 2001, more then half were passengers in vehicles with drivers who had been drinking.

**Over-The-Counter-Drugs**

The drunk-driving laws apply equally to driving under the influence of a drug as well as alcohol. Any drug – whether legal or illegal – can have a

negative affect on your driving skills. Both over-the-counter and prescribed medications can have a serious impact on your ability to drive safely.

### **Stress and sensory effects that affect your driving ability.**

Be sure to take the time to realize that excessive stress and fatigue will greatly affect your ability to properly drive.

Stress can cause your physical condition to change such as increased heart rate, increased breathing, headaches, muscle tension and more.

Physically conditions that affect your driving do not just happen when you drink alcohol or take drugs.

Excessive stress, fatigue and anger can affect your ability to concentrate and reduces your preparedness to successfully react in case of an emergency.

### **Receiving a Driver's License Is A Privilege Not A Right**

When you get your driver's license, you are given the privilege to exercise the freedom to go where you want when ever you wish. Along with that privilege to drive, comes a responsibility to yourself, those you love and those you are sharing the road with.

### **Littering In The State Of Texas**

There is the choice to keep the areas we drive clean and free from litter. We all want a beautiful environment, but many of our streets and highways have litter which the tax payer is then asked to foot the bill to clean up.

In Texas, if a driver is cited for littering it is a Class C misdemeanor which carries a fine of \$500. If you are a repeat offender, your offense is increased to a Class B misdemeanor and a \$2000 fine and possible jail time is attached.

### **When Passing Is Prohibited**

Passing is prohibited if there are signs indicating a driver may not pass.

Passing is also prohibited when a driver can not clearly see ahead of them. They must see clearly ahead in order to know they can execute passing in a safe manner. This would include hills and curves that inhibit a clear vision as to on-coming traffic.

It is also illegal to pass when approaching within 100 feet of an intersection or while passing through an intersection.

### **Signaling And Turning**

One of the most common mistakes especially young drivers make is assuming that the approaching car which may have its turn signal on – is actually going to turn. Drivers pull out in front of the on-coming traffic because they saw a turn signal. Wait until you see the car slow down and begin to make their turn before turning out into traffic.

Using your turn signals to indicate that you intend to turn, should be done 100 feet before you are planning to turn right or left. If your turn signals are not working, then use your hand signals in place of your car's turn signals.

### Illegal U-Turns

It is illegal to make a U-turn when:

- 1) You cannot clearly see 200 feet in each direction because of a curve, hill, rain, fog, or other reason.
- 2) A no U-Turn sign is posted.
- 3) In front of a fire station.
- 4) You are in danger of other vehicles hitting you.
- 5) You are on a one-way street.
- 6) In a business district, except at intersections or through openings in a concrete divider.

### Traffic Signal Blackout

There are times when traffic signals may not be working due to electrical failure. Drivers are to treat the blacked-out-traffic light as you would a 4-way stop sign.

If a speed limit changes, that speed limit takes effect only after your vehicle has passed the posted sign?

### Safety Facts on Crossing Tracks

TEXAS has 11,236 public highway-rail grade crossings, the highest number in the nation. There are also approximately 5,951 private grade crossings in Texas. This is a major reason why Texas had more crashes in 2003 than any other state. **A MOTORIST IS 40 TIMES MORE LIKELY TO DIE** in a vehicle-train collision than any other type of highway crash.

### Protected and Unprotected Intersections

**A protected or controlled turn** is a turn made from a left turn lane that is **controlled with signals or arrows.**

**An unprotected or uncontrolled turn** is a turn that may or may not be made from a left turn lane, but **is not controlled by a signal or arrow**. You must wait for oncoming traffic and yield to that traffic.

### **Do The Following When You See Or Hear An Emergency Vehicle**

When you hear an emergency vehicle sounding its' sirens or see it flashing its' lights, pull over to the right side of the road and come to a complete stop. Do not block intersections.

Do not attempt to follow emergency vehicles. In Texas it is against the law to follow within 500 feet of any emergency vehicle answering a call or any ambulance when it is flashing its red lights.

### **Adjust Your Speed For Certain Road Conditions**

#### **Rain**

Roads are most slippery when it first begins to rain because oil and dust have not had a chance to wash away. Hitting several inches of water at high speeds can cause a driver to lose control of the car. A car needs two-to-three times more stopping distance on wet pavement than dry.

#### **Flash Flood**

Texas's hot climate creates an ideal situation for flash flooding to occur, particularly during the summer months. Drivers need to use extra caution when driving during a summer storm, spring thaw or prolonged rains.

Nearly half of all flash flood fatalities are auto-related and less than an inch of water can cause a driver to lose control of their car. Additionally, a vehicle can float in just two feet of water and only six inches of water traveling at a high rate of speed can weep a car off the road.

#### **Snow**

In areas where there is snow, you must be extra careful on the roads. Streets can become icy causing your vehicle to slide.

In a heavy snowstorm or rainstorm for that matter, it's possible that you will not be able to see more than 100 feet ahead of your vehicle. When this is the case, it is not safe to drive faster than 30 mph.

#### **On Curves;**

Sometimes slower speed limits are not posted before curves, so you must judge for yourself how sharp a curve is and adjust your speed accordingly. Because of the centrifugal force, if you enter a curve with a high rate of speed, the momentum of the vehicle will cause the car to continue moving forward at which time many drivers loose control.

## **FOG**

Fog is the cause of many collisions. If you find yourself caught in unexpected fog, the first thing you must do is slow down and turn on your low beam headlights (High beams reflect and cause glare) never drive with only your parking or fog lights.

## **On Mountains and at High Altitudes**

At high altitudes, vehicles can experience a couple of problems that could lead to collisions:

Overheating usually occurs because your vehicle is forced to work harder to climb mountains. That is why, it is imperative to have your vehicle looked over by a professional automotive specialist before embarking on any trip through the mountains. Make sure there are plenty of fluids and that your brakes are in working order.

Vapor lock occurs when a pocket of vaporized gasoline blocks the normal flow of fuel through the engine.

**Perception Distance** is the distance your vehicle has traveled from the time you visually see a potential hazard with your eyes, for the brain to comprehend what it saw and to cause your body to react to that hazard. Even in the split second, your body has the ability to do all that – you have traveled closer to that hazard and a decision needs to be made.

**Stopping Distance** is the total distance it takes to stop a vehicle from the moment a driver identifies the problem, to the time the vehicle comes to a complete stop.

**Reaction Distance** is the distance the vehicle has traveled in the 3/4 of a second that it takes a driver to realize a problem and react to it.

**Braking Distance** is the distance traveled from the time the brakes are applied to the time the vehicle comes to a complete stop.

**Perception Distance + Reaction Distance + Braking Distance =  
STOPPING DISTANCE**

## **The Force of Impact Is More Powerful Than People Think.**

Many people have a misconception as to how powerful the force of an impact really is when traveling at speeds much less than one might imagine. For example, if you were to have an impact traveling at 60 mph., it is not twice as forceful as traveling at 30mph it is ACTUALLY 4 TIMES AS POWERFUL.

**Inertia and energy impacts can cause serious injury and even death** in accidents due to the car's sudden deceleration, but the passengers inertia causes them to continue forward. Even with today's safety equipment, seatbelts and airbags save thousands. However, when a person's body continues to move forward once the vehicle has come to an abrupt stop, the sheer force on the body causes internal injuries.

### **What to do if your vehicle starts to hydroplane**

Gradually slow down, but do not use your brakes (this can cause you to skid.) Take your foot off the gas pedal and the car will slow down on its own.

As your car passes the water area, it will move into pavement which your tires will be able to grip. You will once again be able to gain control over your vehicle. Roads are most slippery at the first sign of rain on the road because oil and dust have not had a chance to wash away.

### **Young Drivers and Speeding**

Of drivers involved in fatal crashes, unfortunately, young males are the most likely to have been speeding.

### **The Prima Facie Speed Law**

By definition, the words "prima facie" mean "at first sight." In Texas, the Prima Facie Speed Law says that all places have a speed limit, even if a speed limit is not posted.

### **Hearing and Safe Driving**

Hearing and seeing increases your response time, as well as, gives your brain more information in order to make the proper decision.

There are times when you hear a loud noise but can see it immediately in your sight. You then know to turn your head and look for the problem.

### **Carbon Monoxide**

Carbon monoxide is a dangerous killer that is emitted from a car's exhaust system. Small leaks in a car's hoses can cause carbon monoxide to leak into the cab of the vehicle.

Carbon monoxide can not be seen. Symptoms of carbon monoxide poisoning are sleepiness, headaches, dizziness and nausea. These are much like the symptoms of driving while under the influence.

### **Simple and Complex Reactions**

A simple physical reaction is something that a driver does with little to no thinking about it. This might include using the gas and break pedal or turn signals.

A simple mental reaction generally precedes the simple physical reaction. It is something you do not need to consciously think about. You have done these actions in a repetitive manner and your mind and body take over. You automatically make the decisions and movements.

Remember, we spoke earlier about how a car traveling at a speed of only 40 mph will travel over 150 feet within 1.5 seconds. Now, think of how much travel occurs from the time you perceive a problem to the time you react to that problem. Then additional time passes in order for you to physically stop your vehicle.

### **Driving is a Skill**

We all need to possess basic things to make the roads safe for all. These things include;

- 1) knowledge
- 2) skill
- 3) experience

### **Adequate Space Equaled To Following Speeds**

The need for adjustments in following time occurs when speed or road conditions change.

A 2 second interval provides the driver time to steer out of problem areas at all listed speeds on a dry surface and braking out of problems at speeds less than 35mph.

A 3 second interval provides the driver time to steer out of problem areas at all listed speeds on dry surfaces and braking out of problems at speeds of 45mph.

A 4 second interval provides the driver time to steer out of problems at all listed speeds on dry surfaces and braking out of problems at speeds up to 70mph.

### **Facts Regarding Using Your Mirrors**

If you do not have your mirrors properly adjusted, this could be a potential contributing factor in having an accident. It is also important to adjust your mirrors before you put your vehicle in drive.

### **Side Mirrors**

If you are looking in the side mirrors, you should not be looking at more than a tiny part of your own vehicle. If you can clearly see the side of your vehicle, then the mirrors are adjusted to close to your vehicle and need to be moved out towards the lane next to you.

### **Rear-view Mirrors**

It is recommended while you are driving that you check your rear-view mirrors for a few seconds in order to adjust to the position of other vehicles near you.

### **What You Can Do If You Encounter A Collision**

Most of the time, it is best to limit your help, by assessing the immediate situation and calling for emergency help. Many times, moving victims can cause them more damage. Unless they are in immediate danger of fire etc. it is best to comfort the victim until help arrives.

### **Being seen by Larger Trucks**

If you are following a truck, allow more space between your vehicle and the truck. Trucks have a much larger blind spot than smaller vehicles. If you are following too close, you cannot see what is in front of the truck. If it should suddenly brake, you will not have the time needed to react.

In addition to the standard blind spots on the side of a cab, a large truck can have a blind spot directly behind the vehicle which can extend over 200 feet!

### **Backing Up**

Always physically look at the area behind your vehicle before getting in. Once you are in your driver's seat, it may be hard to spot small children or pets which may be in your path.

Do not use your rear-view mirrors for backing up. The view is unreliable. Simply turn and look over your right shoulder to be sure all is clear and then begin backing up your vehicle.

### **Head Lights**

A vehicle must have a high beam and low beam capacity. Most standard low beam headlights allow a driver to see large objects from approximately 150 feet away.

High beams should only be used if you are traveling on a poorly lit road. They are not suitable for city driving. If a driver sees the taillights of the vehicle in front of him/her you need to lower your high beam lights to the low beams. It is also necessary to lower your high beams if you see on coming traffic a minimum of 500 feet in front of you.

### **Doing A Visual Search**

Fixed stares can be very dangerous. You can go into a daze and lose sight of the world around you. NHTSA suggests that driver inattention is one of the primary reasons that up to 50% of all collisions occur in the first place.

### **An Area Of Safety Space**

The best way to allow yourself enough time to react to the mistakes on the road is by keeping an area (a cushion so to speak) of space around your vehicle.

You should allow a cushion of space:

- 1) In front of your vehicle
- 2) Beside your vehicle
- 3) Behind your vehicle

At 35 to 65 mph it takes approximately 2-3 seconds to bring your vehicle to a complete stop. By giving yourself a four second safety space, you allow yourself enough time to react to potential hazards.

### **What if a collision cannot be avoided?**

If you are aware that another vehicle is about to strike you from the rear, you can avoid being pushed into the vehicle in front of you by braking. Placing your foot on the brake may help avoid involving the vehicle in front of you in the collision. It may also keep you from spinning out of control as well.

### **Alternative Paths and Escape Routes**

If you see a collision may occur, quickly decide if there is an alternative pathway or escape route that you can use.

### **What to do if your brakes fail**

- 1) First downshift to low gear – even if your car has an automatic transmission.
- 2) Secondly, pump the brakes fast and hard to build up brake fluid pressure. (You will know within three to four pumps whether or not the brakes work) But remember, it is important not to pump Anti-lock Brakes.

**REMEMBER, NOT TO TURN OFF YOUR IGNITION.**

### **A stuck accelerator**

Simply shift your care to neutral and begin applying the breaks. Look for somewhere to get out of the pathway of other vehicles or pedestrians. Honk your horn and flash your lights to let others know there is a serious problem. Again, **DO NOT TURN OFF YOUR IGNITION OR YOU WILL LOCK YOUR STEERING WHEEL.**

### **Acceleration Skids**

Acceleration skids involve your drive wheels and happen when the tires lose traction on the road surface. If you find yourself in an acceleration

skid, take your foot off the gas pedal and straighten the front wheels until you regain control of your vehicle.

### **Tire Blow**

Grab your steering wheel tightly and try to keep your car traveling on a straight path. Immediately take your foot off the accelerator, letting the car slow down gradually. Do not slam on the brakes.

### **What to do if you lose electrical or headlights**

If you are using low beams, try using your high beams.

If these actions fail to work, turn on your emergency flashers, turn signals, and parking lights. It's important that you try to use what ever you can to help other vehicles see your car on the side of the road.

### **Child Safety Seats**

If a child is younger than 8 years of age or less than 4 feet 9 inches tall, he/she must be restrained in a child passenger safety seat according to the manufacturer's guidelines. Failure to follow this law can result in a misdemeanor punishable by a fine of \$25 to \$250 for a second offense.

### **Air bags can kill or injure a child in a child seat.**

**Babies up to 20 lbs. and about age one must ride in a child safety seat facing the back of the rear seat.**

### **Texas Law Regarding Children Left In Vehicles**

In Texas, knowingly leaving a child under the age of 7, without any person supervising older than 14, in a locked car for more than five minutes is a misdemeanor. If the child is injured, it becomes a felony punishable by up to two years in jail and up to a \$10,000 fine.

### **The Social Tragedy of Leaving Children In Vehicles**

According to published reports, the number two cause of death for children under the age of 14 is being left in a hot car.

### **Time Is Of the Essence**

It only takes about 10 minutes for temperatures to rise 19 degrees. Even if it is 70 degrees outside, it can be 120 degrees inside an enclosed car. Heat stroke can occur when the body reaches 104 degrees. Kids can be in danger even if the temperature outside the car is as low as 60 degrees.

### **Protective Devices**

Head rests are often over looked when considering devices in your vehicle that helps prevent injury.

Whiplash and neck injuries account for 30-40% of auto insurance claims according to the Insurance Institute for Highway Safety.

### **Airbags can kill or injure a child in a child seat.**

Babies up to 20 pounds and about one year of age must ride in child safety seats facing the back of the rear seat.

A baby should not be placed forward or backward in the front passenger seat if the vehicle has a passenger-side airbag.

### **Airbags Are Not A Replacement For Seatbelts**

75% of collisions that cause death happen within 25 miles of home. More than 80% of all collisions happen at speeds less than 40 mph, your chances of surviving a collision are 5 times better if you are properly wearing your seatbelt.

### **Helmets and Other Protective Devices**

In Texas, it is the law that all operators and passengers of motorcycles wear helmets. They can be exempt from the helmet law if the person is at least 21 years of age and has successfully completed an approved motorcycle operator-training course or is covered by a health insurance plan of \$10,000 or more.

**Up to 85% fewer fatalities occur when victims have both safety shoulder harnesses and seatbelts fastened.**

### **Blood alcohol concentration - (bac)**

Blood Alcohol Concentration or BAC is the amount of alcohol present in a 100-milliter volume of blood. A person's level of impairment is measured by your BAC. Obviously, the more alcohol a person consumes the higher their BAC increases and the more their ability to function decreases.

### **Sobering Up**

There are 4 factors that affect how long it takes someone to sober up.

- 1) Time
- 2) Body weight
- 3) How much you have eaten
- 4) The number of drinks you have had to drink.

This means that you must give at least about 1 hour sobering time for each drink you consume within an hour's time period. 1 drink, however, is only 1 ounce. If you have a 6 oz. drink, it would be a total of 6 hours for that drink to leave your system. This is based on an average 120 lb. person

### **Minors and Drinking**

It is unlawful for anyone under 21 years of age to drive with a BAC of .00% or higher. If caught driving with a .00% BAC or higher, the driving privilege is lost for one year.

### **Intoxication In Texas**

In Texas, you are considered intoxicated with a **BAC of 0.08%**. It is illegal for you to drive or operate any vehicle with a BAC of 0.08% or more.

### **Sobering Up?**

Coffee will not accelerate the sobering process nor does showers. However, drinking alcohol mixed with carbonation accelerates the speed with which alcohol is absorbed into your bloodstream, thus speeding up the effects.

The physical effects of alcohol on the body that jeopardize driving ability are:

- Impaired Vision
- Loss of Depth Perception
- Decreased Coordination and Reflex Motor Skills
- Loss of Logical Reasoning

### **What does the Implied Consent Law states?**

According to the Texas implied consent statute, every person driving a vehicle in Texas is under impliedly consented to submit the breath or blood sample if charged with a Texas DWI. However, there are a few applicable consequences provided to refuse the tests.

If you fail a field sobriety test, and a peace officer books you on suspicion of driving under the influence, you will be brought to a police station where you will have your choice of one of 2 tests to determine your BAC (urine test can only be chosen by the arresting officer):

- 1) BREATHALYZER
- 2) BLOOD