

Course: TX Defensive Driving

CLASS OBJECTIVES

The primary goals of this course are as follows:

- I. To help participants become responsible drivers by providing them with accurate and current information.
- II. To help participants realize that proper attitudes will make them safer drivers.
- III. To remind participants of Texas Law as it pertains to the operation of a motor vehicle.
- IV. To help participants develop respect for obedience of traffic laws as a result of their knowledge of Texas Law.
- V. To help participants realize that to be good drivers, they must practice courtesy, discipline and patience in their driving behaviors.

Table of Contents

Chapter 1 - Introduction (1 minute 30 seconds)

Chapter 2 - The Traffic Safety Problem

Chapter 3 - Licensing & Control Measures

Chapter 4 - Signs, Signals & Road Markings

Chapter 5 - Speeding

Chapter 6 - Sharing the Road

Chapter 7 - Crash Prevention

Chapter 8 - Environmental Hazards and Vehicle Emergencies

Chapter 9 - Safety Equipment and Vehicle Maintenance

Chapter 10 - Driving While Intoxicated and driving under the influence (DWI & DUI)

Chapter 11 - Other Impairments

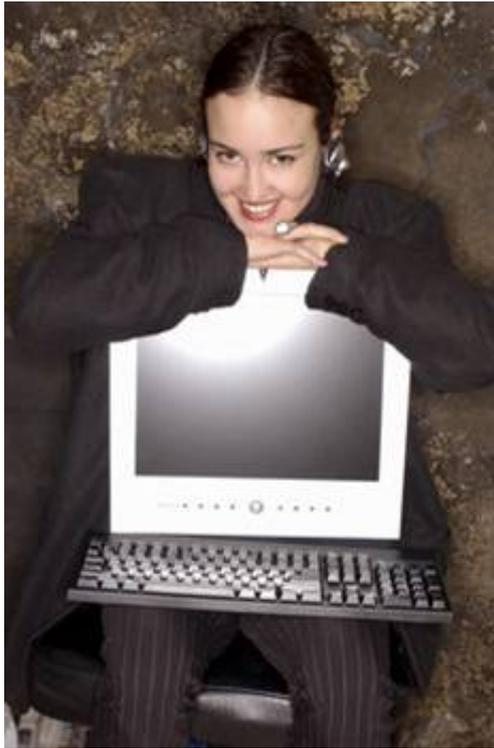
1. Introduction and Appropriate Attitude

- Purpose and Benefits of the Course
- Course Orientation Navigating the Course
- Requirements for Receiving Course Credit
- Student Course Evaluation Procedures
- A MESSAGE FOR TEXAS DRIVERS
- Course Overview
- Appropriate Attitude

Introduction to American Institute for Public Safety's The Texas Aware Driver™ Defensive Driving Course



1. 1. Purpose and Benefits of the Course



Our primary objective with our educational process is to change the motorists' attitudes toward driving. Through education, we wish to show motorists that their opinions of the police, the court system and of other drivers, as well as their knowledge of traffic laws and regulations, are clearly reflected in their driving.

1. 2. Course Orientation Navigating the Course

Navigating the Course

On the left side of the screen, you will see a "Save position and logout button". You may click the button to exit the course.

Upon reentering the course, you will be able to pick up where you left off. You MAY NOT click this button during a video question pop up or personal validation question pop up.

At the bottom of the screen, you will see a "Take Quiz" button. Once you have read the chapter material, watched the chapter videos, and answered the video questions, you may select this button to take the end of chapter quiz.

Upon successful completion of the chapter, you will see a "Next Chapter" button at the bottom of the screen. You may click this button to advance to the next chapter.

Navigating the Video Player: Pausing, Playing, Rewinding and Advancing

To pause the video at any time, click on the button displaying two vertical bars.

To rewind the course to the previous frame, click on the button displaying the pair of left-pointing triangles.

You will find a course navigation bar located on the left side of every screen, accessible via the button labeled "MENU". Using this navigation bar, you may:

- Access all of the sections previously completed.
- View sub-sections.
- View the entire course outline.

1. 3. Requirements for Receiving Course Credit

- You must complete 300 minutes of instruction.
- You must pass all quizzes for videos.
- You must pass all quizzes at the end of chapters.
- You must also pass the personal validation presented throughout the course.

For more information, please see the [Interactive Contract](#)

1. 4. Student Course Evaluation Procedures



Each student will be given the opportunity to evaluate both the instructor and the course materials at the end of the course.

1. 5. A MESSAGE FOR TEXAS DRIVERS

An Introduction by The Texas Education Agency

Traffic collisions in Texas annually take the lives of thousands of people and cause billions of dollars in economic losses. Death, injuries, and property damage have to be reduced, and drivers must improve their attitudes and skills. It is particularly important that Texas citizens identify and implement all reasonable means to reduce human suffering and property loss that result from vehicle collisions.

To those ends, this driving safety course is intended to improve your knowledge, perceptions, and attitudes about driving. By law, all driving safety classes must cost at least \$25 and must be six hours in length in order to dismiss a traffic violation. You'll be signing a statement on your Certificate of Course Completion that you have completed the entire six-hour driving safety course.

If you sign this statement falsely, you could be charged with tampering with a government document, and the penalty for tampering with a government document is two to ten years in prison and a fine of up to \$10,000. During this course, you will be asked to complete a Student Information Form. It is very important that this information be accurate and readable because it will be used to print and mail your course completion certificate to you.

Your certificate of course completion must be mailed to you, not to the court. The address that you provide needs to be your current mailing address, and it may not necessarily be the one that is on your driver's license. Do not fill in the court's address as the mailing address for the certificate. On another part of the Student Information Form, you will need to identify the court that has jurisdiction of your case. Please be specific. Writing in "JP" or "Municipal Court" is not sufficient.

The court information that you provide will be printed on your course completion certificate. It must be accurate, so write in the name of the judge, justice of the peace, county, precinct, or city municipal court exactly as it appears on your traffic citation. If you try to guess and get it wrong, the court may not accept the certificate, and you may be required to take the course again at your cost, so make sure your information is correct.

Pay close attention to the date that the judge gave to you for submission of your completion certificate to the court. You must abide by the court date so you don't end up with a warrant for your arrest. Your certificate of course completion will be mailed to you within 5-7 business days from the date you complete the course unless you purchase expedited delivery. It will contain a court copy, insurance copy, and student copy.

When you receive the certificate envelope, open it carefully and make sure you keep all parts of the document to ensure that you have both your court and insurance copies. If you have not received your course completion certificate after 15 days, call (877) 299-4511. Remember, the court needs the course completion certificate that you receive in the mail - not your receipt.

If you report information about the selling of certificates or early dismissal of a driving safety class to the Texas Education Agency, you could receive a reward of up to \$500. In order to be eligible for the reward, a person must supply enough information for TEA to conduct an investigation that leads to revocation of an instructor's or school's license or a criminal conviction in a court of law.

Finally, if you leave here believing that this course did not provide you with accurate information that will improve your knowledge, procedures, and attitude about driving, please inform the Texas Education Agency. By working together to change our way of thinking, attitudes, and skills, we can make Texas roads and highways a safer place to drive.

This introduction was produced by the Driver Training Division of Texas Education Agency
5701 Springdale Rd, Austin, TX 78723

Telephone: [512-505-0500](tel:512-505-0500)

Web: www5.esc13.net/drivers

1. 6. Course Overview



This course is broken down into 12 segments. Each covers a specific area of the Texas driver safety laws and will assist you in becoming a more Aware Driver.

Each chapter of the course is broken down as follows:

Chapter 1: Introduction and Appropriate Attitude

This chapter covers the instructions on how to take the course and how a driver's attitude affects their driving abilities.

Chapter 2: The Traffic Safety Problem

This chapter identifies the overall traffic problem in the United States, Texas, and the locale where the course is being taught.

Chapter 3: Licensing Controls and Actions

This chapter looks at your driver's license and the privilege of driving.

Chapter 4: Signs, Signals, and Road Markings

This chapter reviews the signs, signals and road markings you will encounter while driving.

Chapter 5: Speeding

This chapter covers the Texas speed limit laws and the effects of speeding on your vehicle and stopping.

Chapter 6: Sharing the Road

This chapter looks at how drivers interact with other users of the road.

Chapter 7: Crash Prevention

This chapter covers defensive driving techniques and collision prevention.

Chapter 8: Environmental Hazards and Vehicle Emergencies

This chapter covers driving conditions (rain, fog and snow) and how to cope with the emergencies you may encounter.

Chapter 9: Safety Equipment and Vehicle Maintenance

This chapter looks into the safety features of your motor vehicle, the laws associated with these safety features and the maintenance of your vehicle.

Chapter 10: Driving Under the Influence

This chapter looks in depth at driving your motor vehicle while under the influence of alcohol or other drugs, the laws and the consequences.

Chapter 11: Other Impairments

This chapter looks at other impairments that may affect your driving abilities such as anger, fatigue and stress.

Chapter 12: Conclusion

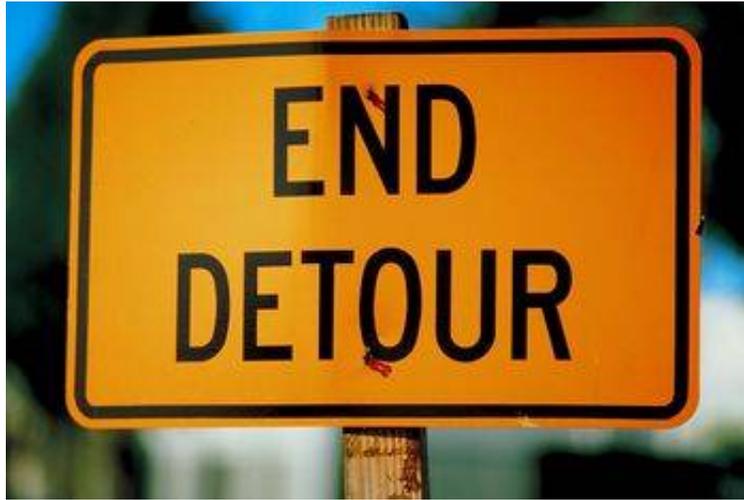
1. 7. Appropriate Attitude



This course will cover traffic safety and defensive driving topics in an effort to make you a safe and aware driver.



If you have read the instructions carefully and completely, and understand the completion process and your responsibilities, let's begin the course.



This concludes Section 1 of the course.

2. The Traffic Safety Problem

- Crash Statistics and Causes
- Appropriate Attitude
- Stop and Think
- Two Types of Drivers
- Rehabilitating Your Driving Abilities



In this chapter, we will identify the overall traffic problem in the United States and Texas.

2. 1. Crash Statistics and Causes



Automobile fatalities:

- Are the leading cause of death among persons age 5 to 34.⁽¹⁾
- Are the number one cause of on-the-job deaths.⁽²⁾
- Cost the average employer nearly \$500,000 per employee death.⁽³⁾

In terms of death, injury, and property damage, automobile collisions cost tax payers an average of 230.6 billion dollars every year. That's over 631 million dollars per day.⁽⁴⁾



In Texas, there were (per Texas Motor Vehicle Traffic Crash Highlights Calendar Year 2011, TX Dept of Transportation):

1. 3,399 Fatalities (an increase of 10.82% over the previous year)⁽⁵⁾
2. 2 30,506 Injuries (an increase of 9.24% over the previous year) ⁽⁵⁾
3. And the economic loss was approximately \$26 billion.⁽⁶⁾



The Texas Department of Transportation (TxDOT) has identified the top five contributing factors in motor vehicle crashes as:⁽⁷⁾

- Failure to control speed.
- Driver inattention.
- Failure to drive in a single lane.
- Failure to yield right-of-way turning left.
- Changed lane when unsafe.

Failure to Control Speed

People who drive at unsafe speeds are a major hazard, particularly on freeways and expressways. Speeding accounts for numerous injuries and deaths every year on Texas highways. Speed reduces the amount of available time needed to avoid a crash, increases the likelihood of crashing and increases the severity of a crash once it occurs.

Driver Inattention

Driver inattention is the second leading cause of traffic collisions in Texas. Loss of attention while driving increases your chances of getting into a collision. Whether it's a cell phone, children, or simply changing a radio station, distractions of this sort increase your reaction time.

Failure to Drive in a Single Lane

This occurs when your tires cross a lane divider or the edge line or when you turn and do not complete the turn in the proper lane. You must maintain your lane while driving at all times.

Failure to Yield Right-of-Way Turning Left

Right-of-way violations are another leading cause of traffic collisions. The term right-of-way can best be described as a privilege. When we yield the right-of-way, we give the other car the privilege of using the roadway. When we fail to yield the right-of-way when turning left, a collision can easily occur. The rules of common courtesy come into play when deciding right-of-way issues.

Changed lane when unsafe

This occurs when a driver tries to leave their lane of travel without making sure that the lane they want to move into is clear from other vehicles or hazards. Not only do you need to check your mirrors and signal before changing lanes, you need to physically turn your head to be sure that the lane you want to change into is clear. Failure to physically check that the lane is clear and safe to change into can result into a collision. For example, you may want to change out of your lane after checking your rearview and side mirrors, but you side swipe another vehicle because you did not turn your head to look to make sure the lane was clear.

- (1) Centers for Disease Control and Prevention. 04 September 2013. Centers for Disease Control and Prevention. 01 November 2013 <http://www.cdc.gov/motorvehiclesafety/costs/index.html>.
- (2) Centers for Disease Control and Prevention. 10 May 2011. Centers for Disease Control and Prevention. 01 November 2013 <http://www.cdc.gov/motorvehiclesafety/costs/index.html>.
- (3) "Economic Impact of U.S. Motor Vehicle Crashes Reaches \$230.6 billion, New NHTSA Study Shows." Economic Impact of U.S. Motor Vehicle Crashes Reaches \$230.6 billion, New NHTSA Study Shows. 01 Apr. 2002. 01 November 2013 [http://www.nhtsa.gov/About_NHTSA/Press_Releases/2002/Economic_Impact_of_U.S._Motor_Vehicle_Crashes_Reaches_\\$230.6_billion,_New_NHTSA_Study_Shows](http://www.nhtsa.gov/About_NHTSA/Press_Releases/2002/Economic_Impact_of_U.S._Motor_Vehicle_Crashes_Reaches_$230.6_billion,_New_NHTSA_Study_Shows)
- (4) Traffic Safety Facts 2008 Overview. 29 July 2009. National Highway Traffic Safety Administration. 01 November 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811162.pdf>.
- (5) Texas Motor Vehicle Traffic Crash Highlights Calendar Year 2012. 27 May 2013. Texas Department of Transportation. 01 November 2013 ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/crash_statistics/2012/01_2012.pdf.
- (6) COMPARISON OF MOTOR VEHICLE TRAFFIC DEATHS, VEHICLE MILES, DEATH RATES, AND ECONOMIC LOSS 2003 - 2012. 27 May 2013. Texas Department of Transportation. 01 November 2013 http://ftp.dot.state.tx.us/pub/txdot-info/trf/crash_statistics/2012/comparisons.pdf.
- (7) Crash Contributing Factors 2012. 27 May 2013. Texas Department of Transportation. 01 November 2013 http://ftp.dot.state.tx.us/pub/txdot-info/trf/crash_statistics/2012/20_2012.pdf

2. 2. Appropriate Attitude

[Take the video quiz](#)

2. 3. Stop and Think

As you go through this course, please keep in mind that in 2011, there were more than 5.3 million crashes with 32,367 deaths and 2.2 million people injured. In addition to the cost in human lives, the economic cost exceeds \$230 billion annually!⁽¹⁾

There is an old assumption in show biz: "If you can put on a performance and reach or move even one person, then you've done your job as a performer and the world is just a little bit better." Now let's think about driving. How much better would our world be if everyone drove just a little bit more safely? So, let's start with you.

After each chapter of the course, stop and think to yourself, is there room for me to improve? There usually is, and it all starts with a positive attitude and willingness to admit to yourself that you need to make that small change!

⁽¹⁾[Traffic Safety Facts 2011 Data Overview. 30 Apr. 2013.](http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf) National Highway Traffic Safety Administration. 04 November 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf>.

2. 4. Two Types of Drivers

There are two types of bad drivers: the "aggressive" driver, and the "unaware" driver. The American Institute for Public Safety defines the aggressive driver as a person who drives with a lack of courtesy and creates dangerous situations on the road. In other words: selfish people.

If you're driving down a country road and someone is coming in the opposite direction with their bright lights on, their lights are glaring right in your eyes. Now, that person could be unaware that you're there or unaware that their bright lights are on. Or they could be an aggressive driver, or a selfish driver saying, "I know my bright lights are on but I'm very important so I have to see the road." They don't care about you or how they're impacting your driving abilities.

What about people who don't signal? You're driving on the highway or any road and somebody will just turn without signaling. The unaware driver may not realize that you're next to them or right behind them. The aggressive driver knows you're there, but they don't care. It's too much effort for them to use their signal light. Have you ever signaled to change lanes on the highway and the car in the other lane speeds up so you can't get in? You know what you should do? Put on your left signal light and when the person speeds up on the left, fake them out and go right. That would not be safe to do. Don't do that. It was just a joke.

Have you ever been behind someone on a single lane road who's going really slow? There's a line of traffic behind them and the person continues without pulling over. Why? An unaware driver doesn't realize all those people are behind them. An aggressive driver says, "I know those people are behind me, but I don't care. I have to get where I'm going, and I'm more important."



Some people are both unaware and aggressive drivers. Do you know people like that? You'll read more about these types of drivers later in the course.

Keep in mind; if you're an unaware driver or an aggressive driver, your car is like a loaded weapon. You can either choose to point it at somebody, put it back in your pocket, or not have a loaded gun at all. You must own up to that responsibility. It's a right to own a vehicle, but it's a privilege to be allowed to drive it. Always keep that in mind.

[Take the video quiz](#)

When driving, you must focus 100% of your attention on the road and driving your vehicle. In a split second, conditions on the road can change and you must be prepared to react to these changes. Having the appropriate attitude when driving will enable you to focus more clearly, be more aware of your surroundings and ensure that you arrive at your destination safely. Don't let your emotions interfere with safe driving. Use all the good judgment, common sense, courtesy and safe driving rules that you can.

People do many different things while driving. They read a map, write, talk on the cell phone, put on their makeup, insert their contact lens, eat, drink, and shave. One of our students got a ticket for reading the newspaper on the highway. Traffic was extremely heavy that day so the student was looking back and forth from the newspaper to the highway. People do not realize they are putting themselves and other drivers in a very dangerous situation.

2. 5. Rehabilitating Your Driving Abilities

The first step in rehabilitating your driving abilities is to identify your weaknesses, strengths and emotional state while driving. Be honest and truthful when evaluating your driving abilities and attitude. It just might save your life! By taking this course you're already on the road to improving your driving skills, learning driving techniques, the responsibilities as a driver and additional information to make you a more aware, courteous and a safer driver.

Now it's time for your first quiz. Click the button below to start. Thanks and good luck.



3. Licensing and Control Measures

- Licensing Controls
- Driver License with Restrictions
- Cancel, Revoke and Suspend
- Driver Responsibility Program
- Catch the Spirit
- Collision Reports and Financial Responsibility
- Financial Responsibility



3. 1. Licensing Controls

[Take the video quiz](#)

3. 2. Driver License with Restrictions

The department may place special conditions or restrictions on a license. A driving test is normally required to remove a special condition or restriction from a license. The department may suspend or revoke a license if you violate a condition or restriction.

3. 3. Cancel, Revoke and Suspend

What do the terms cancel, revoke and suspend mean?

3.3.1 Cancellation

When a driver's license is canceled, it is forfeited and must be surrendered. Any person whose license is canceled may immediately re-apply for a license. To cancel your license means just that. The license is voided and terminated and you must surrender it. Your license is no longer valid.

When would a license have to be canceled? Well, one obvious example is when someone dies. Another example is if you move to another state or country and obtain a different license.

Your driving privilege can be canceled at any time for failure to comply with the conditions for licensure.



3.3.2 Revocation

Revocation means that the person's privilege to drive a motor vehicle is terminated and a new driver's license may be obtained after the period of revocation. To have your license revoked means you did something very foolish and dangerous, and the state will take away your license for a long time.

What if a person (hopefully not you!) chose to drive after consuming alcohol and as a result injured someone? Wouldn't you want this person to be removed from driving on our streets? The Department of Highway and Safety (DPS) or the court might take away or revoke the driver's license for a period of time ranging from six months all the way up to life. A new license may be obtained after the period of revocation and upon meeting certain conditions.

Here are some reasons you could face mandatory revocation of your license:

1. Driving Under the Influence of alcohol, drugs or other controlled substances.
2. Not stopping to give help when the vehicle you are driving is involved in a crash.
3. Committing insurance fraud, such as knowingly participating in a vehicle collision in order to collect damages.
4. Reckless driving causing bodily injury.
5. An immoral act in which a motor vehicle was used (so be on your best behavior!).
6. Voluntary or involuntary vehicular manslaughter.
7. Driving a commercial vehicle without proper licensing.
8. A felony in which a motor vehicle is used (so remember - if you are planning to hit a bank, DO NOT USE YOUR CAR FOR A GETAWAY VEHICLE! That would get you 15 to 20 years in jail, and if that's not enough, you'd lose your license!).

However, the most common action the Department of Public Safety may take is to suspend your license. If you are notified that your driving privilege has been suspended, you must surrender your license.

3.3.3 Suspension

To suspend your driver's license means the DPS temporarily takes away your driving privilege. How can your license be suspended? One of the measurements the DPS uses to track your driving performance is the amount of points you accumulate on your driving record.

3. 4. Driver Responsibility Program

3.4.1 Point System

The Driver Responsibility Law, governed by Texas Transportation Code, Chapter 708, establishes a system that assigns points to moving violations and applies surcharges to offenders, for convictions that occurred on or after September 1, 2003. A surcharge is a fee charged to a driver based on traffic convictions reported to the driving record. The surcharge will be assessed based on two criteria: Point System and Conviction Based surcharges.

For each conviction, DPS will assign points to a person's license as follows:

- Two points for a moving violation conviction in Texas or that of another state.
- Three points for a moving violation conviction in Texas or another state that resulted in a vehicle crash.

If a driver accumulates a total of six or more points, the driver will be required to pay a \$100 surcharge for the first six points and \$25 for each additional point on their record. The driving record will be reviewed every year and, if six or more points remain on the record, the driver will be required to pay the surcharge. The surcharge can be assessed for one or more years, and the amount of the surcharge assessed each year may go up or down depending on the amount of points remaining on the driver's record.

Points remain on the driver record for a period of three years. Additionally, a conviction that becomes final before September 1, 2003, will not apply to the assessment of points under the program. This program does not replace other administrative suspension, revocations or cancellation actions that result from these same convictions.

3.4.2 Driver Surcharges

DPS will assess a surcharge when the driver accumulates a total of six points or more on their record during a three-year period. The driver must pay a \$100 surcharge for the first six points and \$25 for each additional point.

3.4.3 Annual Surcharges for Certain Convictions

Drivers who receive a conviction for Driving While Intoxicated (DWI) or a DWI-related offense, failure to maintain financial responsibility or driving while a license is invalid will pay an annual surcharge for a period of three years. No points are placed on driver records for these offenses because the fine is automatic on the first offense.

A first-time DWI results in a \$1,000 surcharge, paid annually for three years. A second-time DWI results in a \$1,500 surcharge, paid annually for three years. The charges are cumulative. For example a driver could pay \$1,000 as a result of their first DWI and an additional \$1,500 for their second DWI, paying a total of \$2,500 annually.

A conviction for driving while a license is invalid or failure to maintain financial responsibility results in a surcharge of \$250, paid annually for three years. A driver who is convicted of driving without a valid license receives a \$100 per year surcharge for three years.

The surcharge assessed for this program is in addition to other reinstatement fees required for other administrative actions.

3.4.4 Driver Notification of Surcharge and License Revocation

DPS will notify the offending driver of the assessment of a surcharge on their license, via first-class mail. The notice will state the surcharge must be paid. Drivers who do not pay their surcharge within 30 days after the notice is sent will have their driving privileges revoked. The license will remain revoked until the person pays all surcharges and related costs, such as service/collection fees.

3. 5. Catch the Spirit



[Take the video quiz](#)

3. 6. Collision Reports and Financial Responsibility

Failure to stop at a scene of a collision where your vehicle caused property damage, injury or death makes you a hit-and-run driver, subject to severe penalties. Effective September 2013, leaving the scene of a collision involving injury or death carries the same penalty as intoxication manslaughter: Two to 20 years in prison and a fine of up to \$10,000.

Texas' Financial Responsibility Law requires every driver and every owner of a motor vehicle to maintain financial responsibility (liability coverage) at all times.

3. 7. Financial Responsibility

It is the law in Texas that all owners and/or operators of motor vehicles have at least the minimum amount of liability insurance to cover their vehicles. In order to comply, a driver must either purchase liability insurance or be self-insured. In Texas it's mandatory to have insurance when renewing your license, getting an inspection sticker, or renewing your license plate tags. The minimum requirements for liability insurance are:

- \$30,000 against injury or death of one person
- \$60,000 against injury or death of two persons
- and \$25,000 against property damage (Texas Department of Insurance www.tdi.texas.gov).

(Texas Department of Insurance www.tdi.texas.gov).



You must carry evidence of financial responsibility whenever you drive and show it to a police officer after a citation stop or collision either through a written or electronic (smartphone) versions of a proof-of-insurance identification card. However, keep a paper copy to produce for a hearing or court appearance.



You may have to pay a fine, or have your vehicle impounded if you don't. If you don't have acceptable proof of insurance and get into a collision, you may lose your driver's license for up to four years.

Now it's time for your second quiz. Click the button below to start. Thanks and good luck.



4. Signs, Signals and Road Markings

- Segment Objective
- Signs, Signals, and Markings
- Traffic Controls
- Signs
- Signals
- Road Markings
- Lane Use
- Divided Highway
- Service Road
- Special Lanes
- Turnout Slow Moving Vehicles
- Shoulders
- Stopping



4. 1. Segment Objective

This chapter reviews the signs, signals and road markings you will encounter while driving.

4. 2. Signs, Signals, and Markings

[Take the video quiz](#)

4. 3. Traffic Controls

Traffic controls are divided into three (3) groups:

- Signs
- Signals
- Road Markings

4. 4. Signs

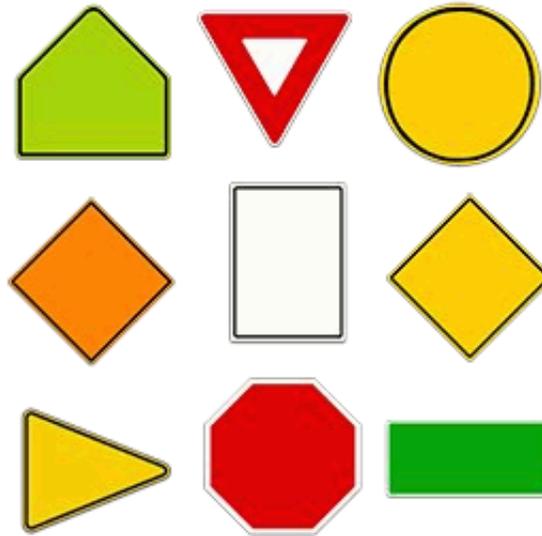
Traffic signs are divided into the following three (3) categories:

- Regulatory Signs
- Warning Signs
- Guide Signs

4.4.1 Know these Signs by their Shapes and Colors.

Did you know that shapes of signs are also indicative of what is ahead? A school zone is in the shape of a schoolhouse. Warning signs are always diamonds. A railroad crossing is round, and a stop sign is octagon-shaped. A regulatory sign like the speed limit sign or no parking sign is always rectangular.

The color and placement of street markings is also very important.



4.4.2 Regulatory Signs

Regulatory signs are white or red signs that regulate the flow of traffic and advise the motorists of any laws for that area. For instance, speed signs are posted in order to keep traffic from moving at an unsafe speed. "No parking" signs are posted because parked cars in that area would slow down or present a danger to traffic. School zone signs are posted to ensure that traffic moves at a speed safe for children walking to and from school.

Stop signs, yield signs and signal lights stop traffic so that cross traffic can continue to flow smoothly. You'll usually find yield signs when you are crossing a roadway or moving from one roadway onto another. You should slow down and check oncoming traffic. If you cannot safely enter the road, stop and wait until traffic is clear before moving ahead.

The stop sign is the only 8-sided traffic sign. It means that you must come to a complete stop before entering the intersection ahead and yield to traffic close enough to be an immediate hazard. If there is a crosswalk, stop before entering the crosswalk.



The yield sign means slow down so you can yield the right-of-way to pedestrians crossing the roadway and to vehicles on the intersecting street or highway.



Do not enter signs are white on red background. Motorist is approaching one-way highway or ramp from wrong direction. This marks a one-way roadway with traffic coming against you. You must not enter the one-way at this point.



Railroad crossing signs are posted to warn you that there are railroad tracks up ahead.



There might also be a large X or double-R marked on the pavement. Whenever you approach a railroad crossing, you should look for indications that a train is coming.



If electrical or mechanical warning devices are flashing, or a gate has come down, or a worker is signaling with a flag, or if an approaching train is clearly visible, you must come to a full stop no closer than 15 feet from the nearest rail. Never stop on a railroad track or within six feet of either rail. Certain vehicles, such as school buses & commercial trucks, are required to stop before crossing railroad tracks. As a driver in a passenger car you should be aware of these regulations - especially should you be driving behind a vehicle that is required to stop before crossing over the tracks.

The no right turn sign is red, white and black. This sign means no right turn is permitted at any time.



A similar sign indicates no left turn. This sign means no left turn is permitted at any time.



The "No Parking" sign is red and white. When you park your car, you should always check for signs telling you whether or not you can park there, or under what conditions it is okay to park. Now, unfortunately, there are no signs that say, "No parking - Well, unless you're only going to be a minute."



Parking signs must be obeyed. You should never park in a fire lane, unless, of course, you're driving a fire truck; and you should never park in a space reserved for handicapped drivers unless you're legally entitled to do so. When leaving a parking space, you should always check around to make sure that you yield the right-of-way to vehicles that are already in the lane you're trying to enter.

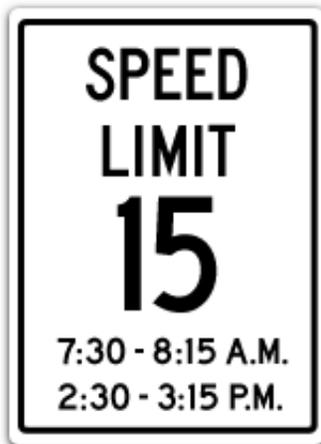
The handicapped parking sign is green, blue and white. You must not park in a parking space designated for the physically handicapped on either private or public property unless: (a) the vehicle being parked is operated by a physically handicapped person or under the direction of a physically handicapped person and, (b) the vehicle visibly displays the handicapped sticker.



A speed limit sign shows the maximum speed allowed as posted under normal conditions. This sign does not represent the speed limit in your state. It's used as an example of a sign.



"School Zone Speed Limit" signs post the speed limit in school zone during the hours indicated. School zone speed limit may also be displayed on lighted sign with flashing amber lights. Beware... this sign does not represent the speed limit in your state. It's used as an example of a sign.



"Emergency Stopping Only" signs designate areas along the roadway that allow for the vehicle to pull off the roadway. Stopping permitted only for real emergencies.



"No U-Turn" signs are posted where it is unsafe to turn. You're not allowed to make a U-turn where a "No Left Turn" sign is posted.



A one-way sign indicates traffic flow in one direction on posted streets. The arrow points in the direction of the traffic.



4.4.3 Warning Signs

Warning signs are black and yellow, except those used in construction areas, which are black and orange. These signs are used to warn you of hazardous conditions ahead, requiring you to drive with extra caution. Some warning signs tell you about changes in the road. For instance, a reduced speed sign is posted to tell you the highest safe speed you are allowed to drive when coming up on a curvy or bumpy road.

A merging traffic sign will indicate that you should be prepared for other vehicles entering from the roadway. Warning signs are usually diamond-shaped, but there are some exceptions.

When you see a school crossing sign slow down, prepare to brake, and watch for children crossing.



The "Pedestrian Crossing" sign indicates you must yield to pedestrians in the crosswalk. Just ahead is a location where people on foot often cross. The crosswalk may not necessarily be at an intersection. Use caution as you approach and drive more slowly and carefully, watching both sides of the street for pedestrians.



This is the "Bike Crossing" sign. When you encounter this sign, slow down and beware of people riding their bicycles.



A "Slippery Roadway" sign cautions that when it's raining, the roadway may become slippery. Slow down and drive carefully.



An uneven pavement sign will forewarn that the portion of the roadway you are about to enter is uneven. When you encounter one of these signs slow down and be prepared to maneuver safely.



This sign indicates lane ends - merge. The roadway ahead is about to change. The right lane is ending and you need to merge left.



The construction sign below advises there will be road construction for the next 13 miles. Reduce your speed. Be on the lookout for flagmen, one-way traffic, other signs or obstructions. Proceed with caution and obey signs and instructions.



The "Workers present" sign means there are construction workers present. Reduce your speed and watch out for the workers.



4.4.4 Guide Signs

Guide signs help us find our way on the highway system. These signs are normally green and white. For instance, "10 Miles to Disney World" is a guide sign. Some guide signs are blue, and indicate all the services coming up. Think of all the services and match them to the color blue: hospital, food, service stations, hotels, and disabled parking zones. Brown signs are also guide signs and they indicate parks and recreational areas. "Welcome to Yellowstone Park," camping and hiking trails are all brown.

This sign indicates an exit for a rest area which normally contains picnic tables and restroom facilities.



The "H" indicates a hospital is nearby. These signs are found at intersections with an arrow indicating the direction of the hospital attached below the sign.



This is considered a brown guide sign informing you of a park, recreational area or monument.



4. 5. Signals

Traffic signals are located at intersections where the level of risk increases. Special-use signals may operate at certain times or on demand at school zones, fire stations, or factories. Traffic signals may be vertical or horizontal. The most common lenses are red, yellow and green circles.

Red - a circular steady red light means stop. Do not enter the intersection.



Yellow - a circular steady yellow means clear the intersection. It follows a green signal. You must not enter the intersection when the red signal comes on.



Green - go when signal is steady circular green, after checking that the intersection is clear. You may go straight or turn right or left, yielding to other vehicles and pedestrians lawfully within the intersection. A sign may prohibit a turn or turns.



At a flashing signal, you must either stop or slow down, depending on the color of the light. A flashing red signal means that you must come to a full stop. You must slow down at a flashing yellow signal. A police officer can overrule traffic signals. If a police officer is present, follow the instructions provided by the officer.

A flashing red light indicates you must stop and proceed only when it is safe to do so.



A flashing yellow light indicates slow down and proceed with caution.



A red arrow means stop until the green signal or green arrow appears. A turn may not be made against a red arrow.



A yellow arrow means the protected turning time period is ending. Be prepared to obey the next signal which could be the green or red light or the red arrow.



A green arrow means go. Turn in the direction the arrow is pointing. But first, yield to any vehicle, bicycle, or pedestrian still in the intersection.



The green arrow pointing left or right allows you to make a protected turn. This means oncoming vehicles, bicyclists, and pedestrians are stopped by a red light as long as the green arrow is lighted.

4.5.1 Pedestrian Signals

Walk sign or a lighted picture of a walking person in white means it is legal to cross the street.



Don't walk or a lighted picture of a raised hand in orange means you may not walk across the street.



A flashing don't walk or raised hand signal means do not start across the street because you may not have enough time to make it across before traffic starts moving across your path. If the flashing starts after you have already started to cross, finish crossing the street.

At many traffic signals, you need to push the pedestrian push button once to activate the walk or walking person signal. If there are no pedestrian signals, pedestrians must obey the red, yellow or green signal lights.

4. 6. Road Markings

Generally there are four types of pavement markings: centerline striping, edge striping, crosswalks, and pavement messages.



4.6.1 Centerlines

The centerline is the painted stripe in the center of the road, which separates traffic, proceeding in opposite directions. Under the new Uniform Code, centerlines are to be painted yellow on two lane highways and white on multi-lane highways and one way streets. Broken lines are used in areas where there are no restrictions on passing when safe to do so. In those areas where passing is not allowed, a solid yellow line is painted alongside the broken line. If the solid yellow line is on your side of the centerline, you may not pass. If passing is not allowed for traffic in both directions, the broken line will be replaced by two solid yellow lines.

4.6.2 Lane Dividers

When a roadway consists of two or more traffic lanes for vehicles moving in one direction, the lanes are divided by broken white lines. These broken lines may be crossed when passing.

4.6.3 Edge Striping

In many areas, the right and/or left edges of the highway are marked with a solid white line. This line indicates the outside edge of the traffic lane, and may be crossed only by traffic moving to or from the shoulder. Occasionally yellow lines are used for left edge lines on divided roadways where traffic cannot pull entirely off the roadway, for marking of obstructions, and islands, which must be passed on the right.

4.6.4 White Solid Line

A normal solid white line is used to delineate the edge of a travel lane where travel in the same direction is permitted on both sides of the line but crossing the line is discouraged. A white solid line is used for emphasis where crossing requires unusual care.

4.6.5 Double Solid White Lines

A double solid white line is used to delineate a travel lane where travel in the same direction is permitted on both sides of the line, but crossing the double lines is prohibited.

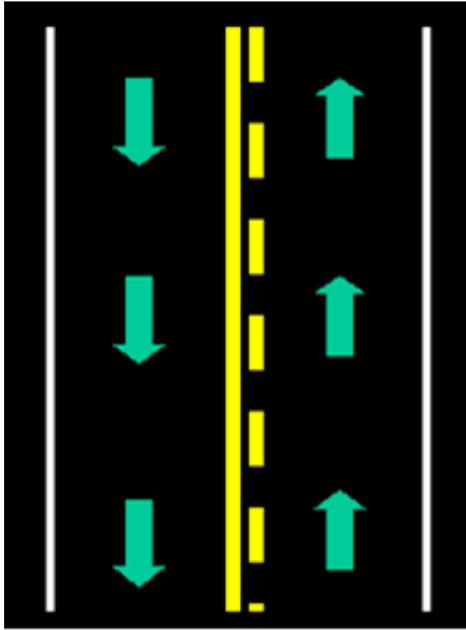
4.6.6 Crosswalks

White solid lines are used to denote pedestrian crosswalks at intersections and, in some situations, between intersections. A driver must stop at all crosswalks which are occupied by pedestrians if there are no controlling signals.

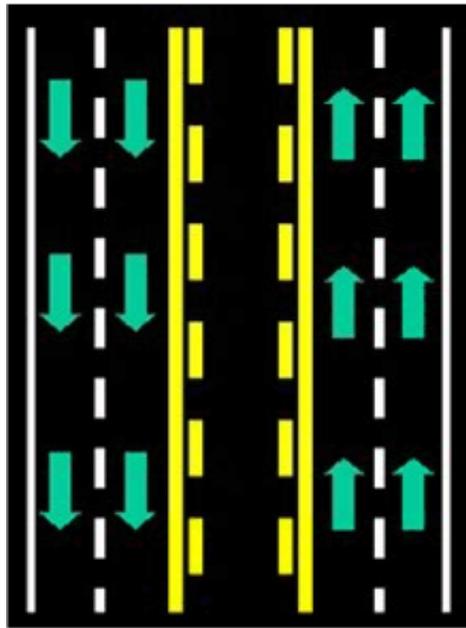
4.6.7 Pavement Messages

In some areas, pavement messages are used to warn of conditions ahead, such as school zone, RR crossing, etc. Such messages are lettered on the road surface in white paint. Here are some examples:

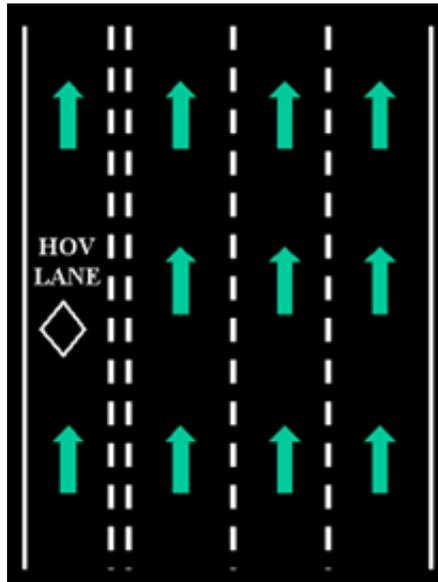
Two-lane, two-way roadway, passing prohibited one direction. The solid yellow line indicates a no passing zone for traffic flowing in that direction. The broken yellow line indicates a passing zone for traffic flowing in that direction.



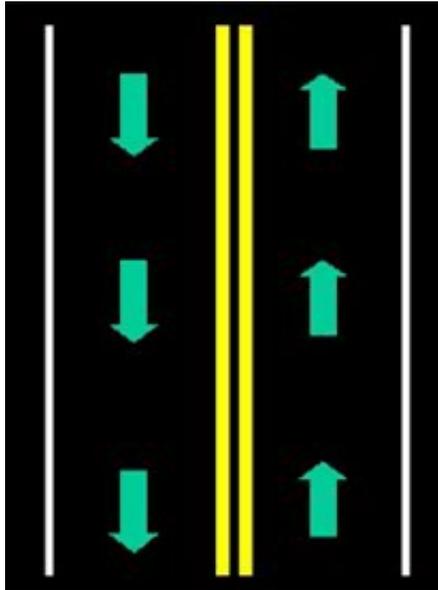
Multi-lane, two-way roadway, with two way left turn lane reserved exclusively for left turning vehicles in either direction.



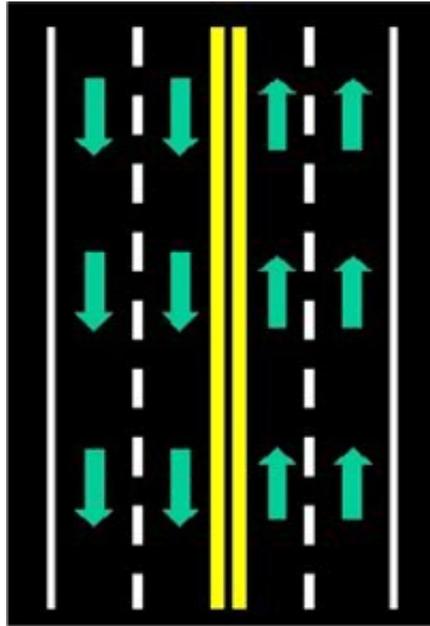
High Occupancy Vehicles Only (HOV Lane). The HOV lanes can be found on major highways. To occupy the HOV lane, you must have two or more passengers in your vehicle. These lanes are indicated by a diamond on the roadway.



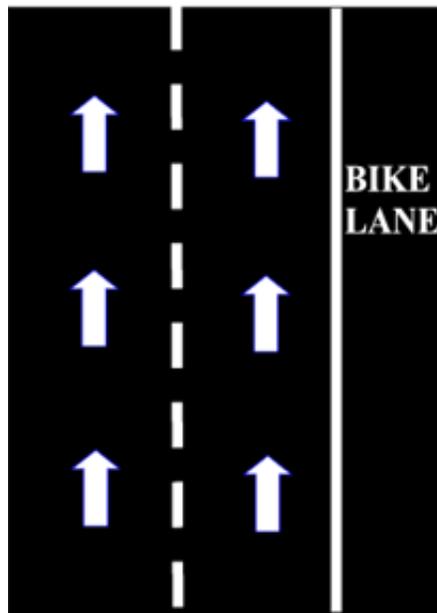
Double solid yellow lines in the middle of the roadway indicate no passing in either direction. However, you may cross these lines to turn into a driveway.



The broken white lines indicate lane separation for traffic flowing in that direction. Solid yellow lines indicate no passing in either direction.



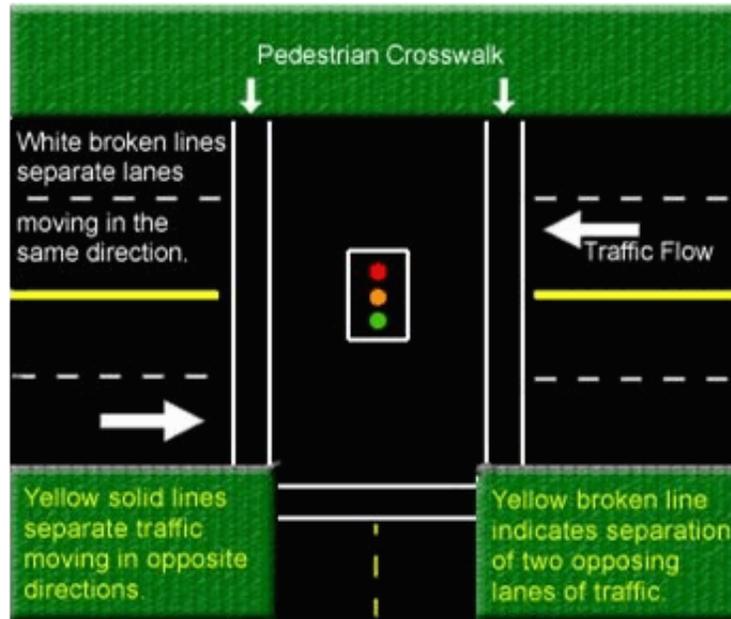
White lines also indicate a bicycle lane. Bicycle lanes are for bicycles only, and don't try to pass yourself off as a bicyclist. If you need to make a right turn or enter a driveway, you may use the bicycle lane, but only after you've checked carefully and made sure that there are no bicyclists nearby.



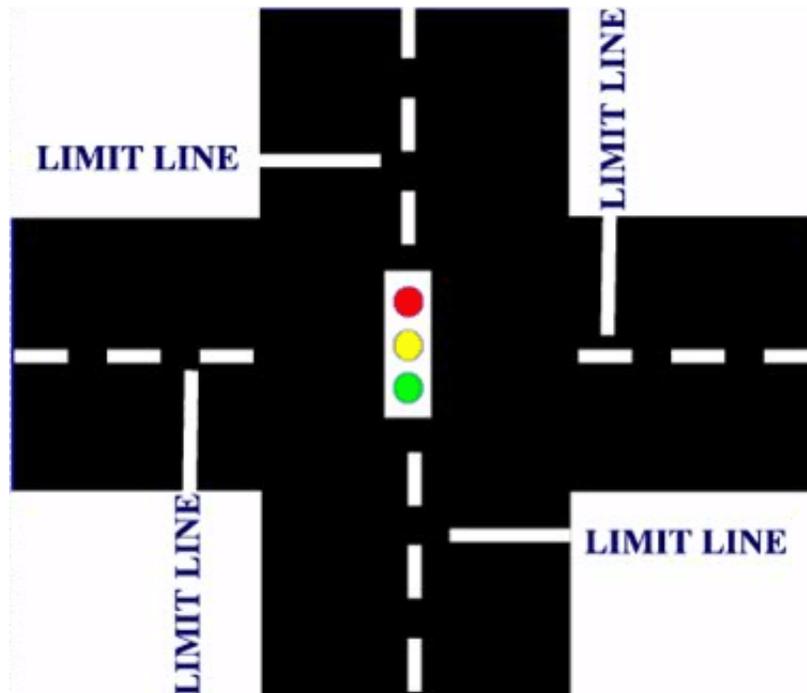
Two parallel white lines mark a crosswalk for pedestrians. Most of the time you'll find crosswalks at intersections where pedestrians can use them when they have a green light or "walk" signal.

Pedestrians can be unpredictable and may not cross with the green light, or may not allow themselves enough time to cross before the light turns red. Be aware of this and always yield to pedestrians when they are crossing. Crosswalks are not always at intersections. When approaching one of these crosswalks, slow down and keep a lookout for pedestrians. If anyone is in the crosswalk, you must come to a complete stop and allow them to cross before moving again.

Recognize that pedestrians may not always follow the pavement markings, so always be cautious and prepare to yield to anyone who steps into the roadway.

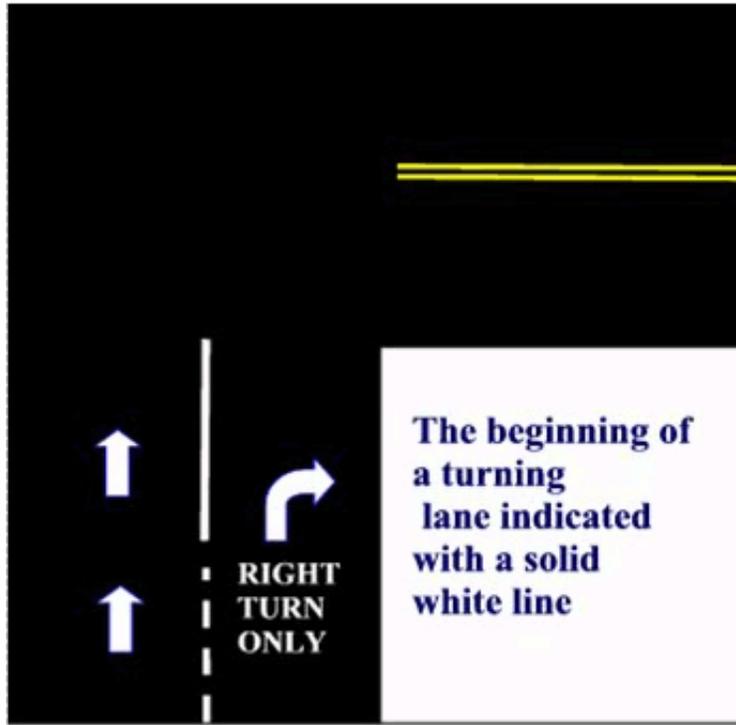


You will encounter limit lines at a stop sign or traffic signal. You must make a full stop before entering a crosswalk or at a white "limit line." A limit line is a wide white line painted on the street. When a crosswalk or limit line is not marked, stop at the corner.

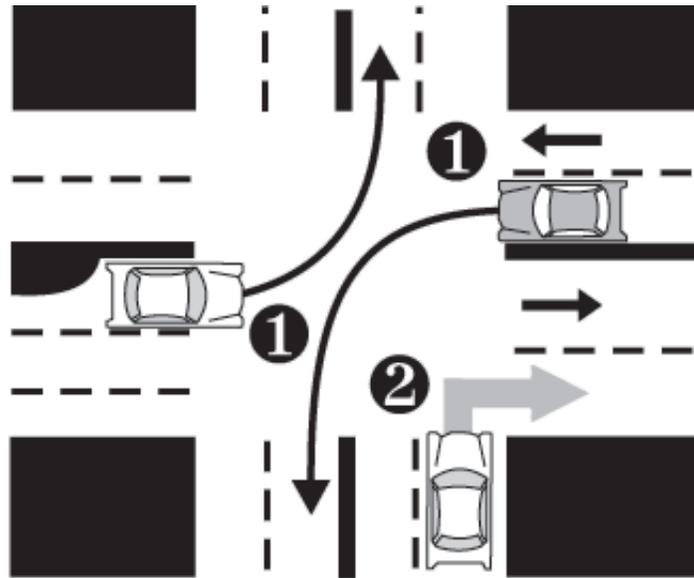


White lines also indicate the start of a turning lane.

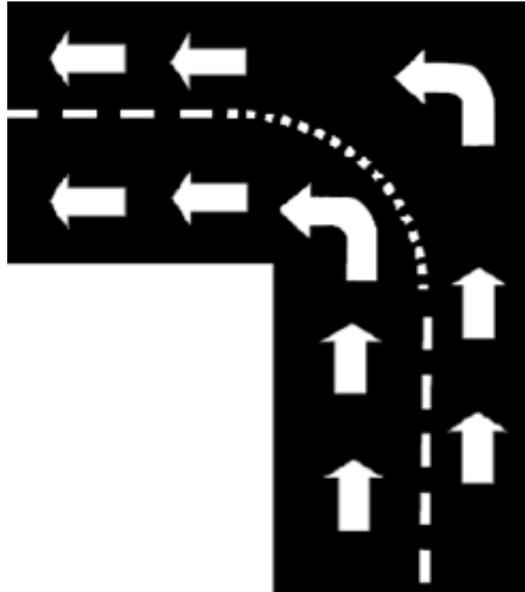
When you're making a turn, be sure to be in the proper lane. Use your signal at least 100 feet in advance of the turn. If you are not in the correct lane at that point, you should wait until the next intersection to make your turn.



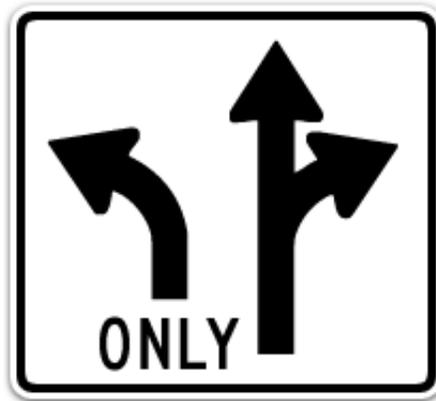
The diagram below demonstrates proper lane positioning during a turn. Car number one: Make a left turn from the leftmost lane into the left lane of the road you're entering. Car number two: Make a right turn from the right lane into the right lane of the road you are entering.



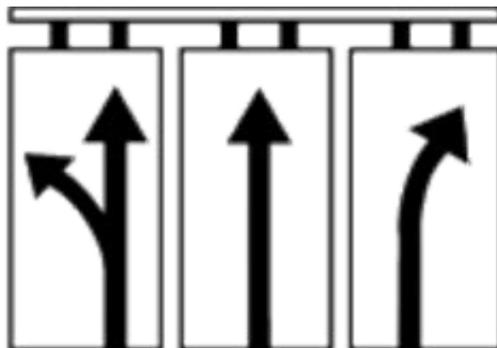
If the road markings allow more than one lane to make a left turn, you should turn into the lane that corresponds to the lane that you're leaving.



Some intersections will be marked with a special lane specifically for left turns, in which case you should be making your turn from that lane.



Always follow the white arrows marked in the lanes at an intersection. They will tell you whether you're allowed to make a right turn, a left turn, or only to go straight ahead. Always reduce your speed before making any turn.



Signs, signals and road markings keep traffic flowing safely. Always obey these controls and you'll reduce your chances of being in a crash.

4. 7. Lane Use

On all highways, a vehicle shall be driven upon the right half of the roadway, except as follows:

- When overtaking and passing another vehicle proceeding in the same direction under the rules governing that movement.
- When placing a vehicle in a lawful position for, and when the vehicle is lawfully making, a left turn.
- When the right half of a roadway is closed to traffic under construction or repair.
- Upon a roadway restricted to one-way traffic.
- When the roadway is not of sufficient width.
- When the vehicle is necessarily traveling so slowly as to impede the normal movement of traffic, that portion of the highway adjacent to the right edge of the roadway may be utilized temporarily when in a condition permitting safe operation. A bicycle operated on a roadway, or the shoulder of a highway, shall be operated in the same direction as vehicles are required to be driven upon the roadway.

4. 8. Divided Highway

Whenever a highway has been divided into two or more roadways by means of intermittent barriers or by means of a dividing section of not less than two feet in width, either unpaved or delineated by curbs, double-parallel lines, or other markings on the roadway, it is unlawful to do either of the following:

- To drive any vehicle over, upon, or across the dividing section.
- To make any left, semicircular, or U-turn with the vehicle on the divided highway, except through an opening in the barrier designated and intended by public authorities for the use of vehicles or through a plainly marked opening in the dividing section.

4. 9. Service Road

When any service road has been constructed on or along any public highway and the main thoroughfare of the highway has been separated from the service road, it is unlawful for any person to drive any vehicle into the main thoroughfare from the service road or from the main thoroughfare into the service road except through an opening in the dividing curb, section, separation, or line.

4. 10. Special Lanes

The Department of Transportation, cities and/or counties have the authority, determined on engineering and traffic investigations, to designate a specific lane on multi-lane highways for the travel of vehicles at reduced speeds which facilitates the safe and orderly movement of traffic. For example, the city or county might require you to slow down before exiting a freeway onto an access road for the safety of other drivers.

4. 11. Turnout Slow Moving Vehicles

On a two-lane highway where passing is unsafe because of traffic in the opposite direction or other conditions, a slow-moving vehicle, including a passenger vehicle, behind which five or more vehicles are formed in line, shall turn off the roadway at the nearest place designated as a turnout, or wherever sufficient area for a safe turnout exists, in order to permit the vehicles following it to proceed.

4. 12. Shoulders

As part of the continuing improvement of state highways and roads, shoulders have been added on both sides of the roadway. Most shoulders are clearly marked with a solid white stripe. Shoulders are designed for emergency stopping, standing or parking. You should use the shoulder if you ever need it to swerve onto when trying to prevent a collision.

You are also allowed to use a shoulder to slow down before making a right turn, unless there is a sign that indicates otherwise. And in the event someone is in a big hurry to pass you, move onto the shoulder to let him pass. But first, make sure there are no other vehicles that may be trying to pass you on the shoulder.

On a roadway which is divided into three lanes, the center lane is shared with other drivers, thereby increasing the risk of a crash. This lane is used in preparation for making a left turn. Close attention to markings and traffic flow are vital to driving in such lanes.

Drivers of vehicles proceeding in opposite directions shall pass each other to the right, and, except when a roadway has been divided into traffic lanes, each driver shall give to the other at least one-half of the main traveled portion of the roadway whenever possible.

Whenever upon any grade the width of the roadway is insufficient to permit the passing of vehicles approaching from opposite directions at the point of meeting, the driver of the vehicle descending the grade shall yield the right-of-way to the vehicle ascending the grade and shall, if necessary, back his vehicle to a place in the highway where it is possible for the vehicles to pass.

The driver of a motor vehicle traveling through defiles or canyons or upon mountain highways shall hold the motor vehicle under control at all times and shall do the following when applicable: If the roadway has no marked centerline, the driver shall drive as near the right-hand edge of the roadway as is reasonably possible.

If the roadway has insufficient width to permit a motor vehicle to be driven entirely to the right of the center of the roadway, the driver shall give audible warning with the horn of the motor vehicle upon approaching any curve where the view is obstructed within a distance of 200 feet along the highway.

4. 13. Stopping

Believe it or not, you're supposed to actually stop at the stop sign. Some people believe this sign means "Slow To Observe Police."



4.13.1 Signal When Stopping

No person shall stop or suddenly decrease the speed of the vehicle on a highway without first giving an appropriate signal to the driver of any vehicle immediately to the rear.

4.13.2 Method of Signaling

Signals shall be given either by means of the hand and arm, or by a signal lamp. When you stop at a stop sign, wait two or three seconds if it's a busy area. When you stop, think one thousand one, one thousand two, look both ways and then go. If you're from the south, think one Mississippi, two Mississippi then look both ways and go.

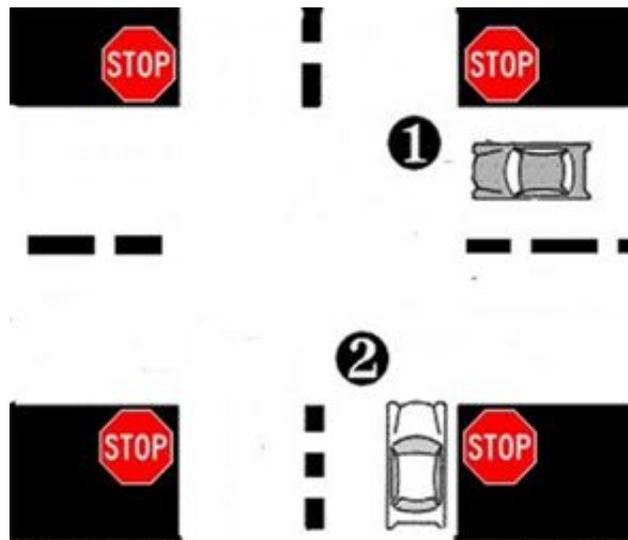
When you come to a stop sign, you count, look both ways, and you go. Why is that? Here's a little secret. Have you ever been on a roller coaster and when you get to the end of the ride, you feel like you have stopped? You say to yourself, "I'm going to take-off my seat belt," but when you look around the crowd is moving just a little bit. And because the roller coaster is so heavy, you think you've stopped, but in actuality you're still moving. That's what the police officer sees.

So, if you swear you have stopped at a stop sign you may not have because your car is so heavy. There is a change in momentum, because of the weight of your car. It feels like you've stopped, you could swear you've stopped, but you haven't stopped. You're still moving, and that's what the officer sees. So, that's why you need to come to a complete stop and count one thousand one, one thousand two, look both ways, and then go.

4.13.3 Who has the Right-of-Way at a Four-Way Stop Sign?

Or who should we give the right-of-way to? Who should be allowed to go first at a four-way stop sign?

Take a look at the picture on the right.

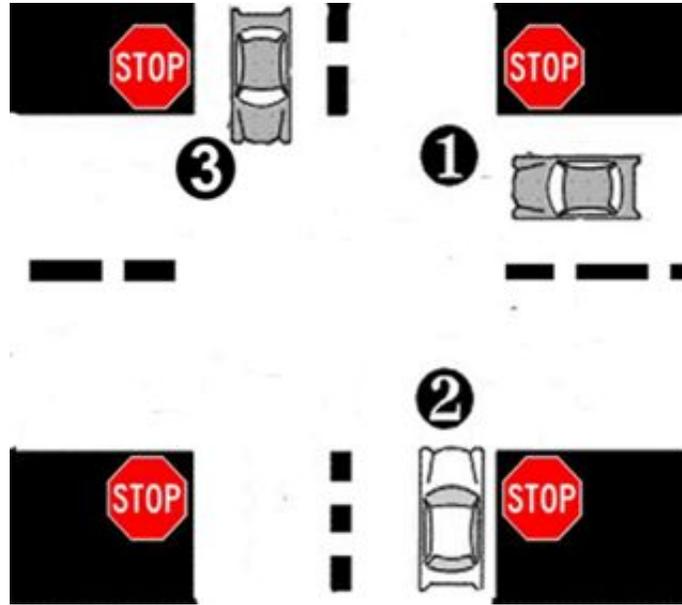


Car number one gets there first, car number two gets there second. Who goes first? Do you think it is car number one or car number two? It's a trick question, car number one got there first so car number one is allowed to go first. Car number two should yield the right-of-way to car number one.

But remember; never insist on the right-of-way. We never want to say, "I got here first, so I'm going no matter what!" That's how crashes occur. You should know the proper order when encountering these situations. It's like being at a dance. When you ask someone to dance you would say, "Would you like to dance?" You don't say "I'm going to dance with you. Get up!" You will never get anywhere that way. It's the same when yielding the right-of-way. Car number one should be allowed to go first, so car number two should yield the right-of-way.

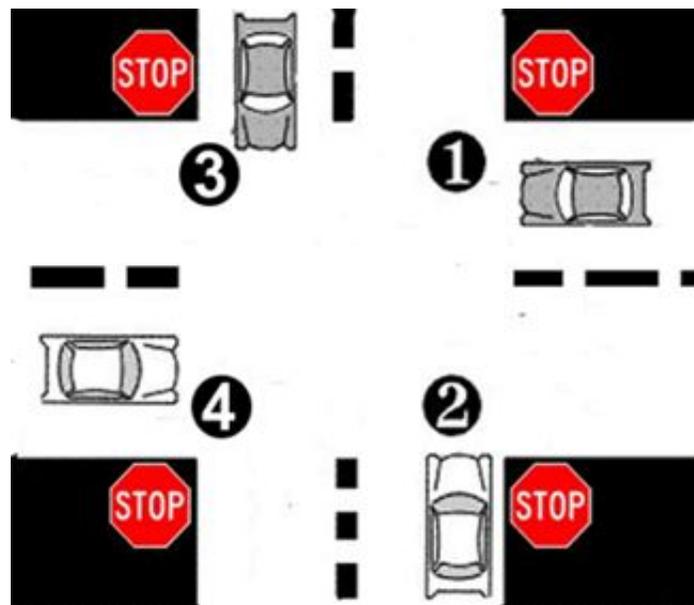
What if two cars get there at the same time? Who goes first? Car number two should allow car number one to go first. You should always yield the right-of-way to the car on your right.

What if three cars arrive at the four-way stop at the same time? Who should go first? The answer is car number three. Look at the diagram. Car number one is on the right of car number two and car number three is on the right of car number one and most people don't realize that!



Many people think car number two and three should go at the same time. They say, "I've got a blocker now!" They run interference for each other. Remember, you should always yield to the car farthest on the right.

What if four cars arrive at the four-way stop at the same time? Who goes first? The person with the biggest car. And because they're driving one of those big boats, you let them go. They deserve it, and they pay so much for gas.



In this case, somebody must start the process and let one of the cars go first. It's very rare to have four cars arrive at the same time. Let's say you're a nice person on the road you're going to let everyone else go first.

Another sample story:

Our instructor Dave, whose stories we will tell throughout the course, loves to tell stories about his Uncle Buck. One of the funniest persons you'll ever meet. He's about 80 years old, three feet tall and always wears a big hat. He's a rascally guy and always says what's on his mind, no matter what. During this course you'll learn more about Dave's uncle and his driving habits.

Dave's uncle is so happy that he's teaching people how to drive, because he taught Dave how to drive back in Mississippi. He will never forget the first time driving with his uncle in his pickup truck. Everything was fine. He's driving and we'd get to a red light and he goes right through the red light. I said "Didn't you see that red light?" He said "Yes I seen the red light, don't worry about them red lights. My uncle taught me how to drive and my uncle never stopped for red lights in his whole life. My uncle is the best driver in the world."

Next red light, he went right through it again. I said, "Look another red light." He said, "I told you partner, don't worry about them red lights." One red light after another he wouldn't even slow down. We got to a green light, he slammed on the brakes. I said, "Look the light's green now". He said, "Yeah I see it partner, but that's my uncle coming though the intersection."

[Take the video quiz](#)

Now it's time for your third quiz. Click the button below to start. Thanks and good luck.



5. Speeding

- Speeding
- Why People Speed
- Study Number 1
- Study Number 2
- Velocitation and Highway Hypnosis
- Speed Limits
- Stopping Distance and the Force of Impact
- Stopping Distance
- Kinetic Energy
- The Force of Impact
- Friction
- Centrifugal Force
- Inertia
- Speeding Facts

This chapter covers the Texas speed limit laws and the effects of speeding on your vehicle and stopping.



5. 1. Speeding

[Take the video quiz](#)

Just because the signs say 55 mph or 65 mph doesn't mean you have to drive at that speed. How much time do you think you actually save by speeding? You'll be amazed. What you should know is that you don't lose that much time by slowing down, and, in the end, you might even save your life or save the life of someone else. There are so many excuses as to why we speed. You have so many people who feel they got a ticket in the past and they absolutely did not deserve it. We also have people who have no clue. They don't see the forest for the trees.

Remember what you read earlier about the things people do in their car that are distractions like eating, drinking, and shaving? Now that you know the definition of the basic speed law, let's review. These people who do these things may be cited for the basic speed law. Do you know why? If you are putting on your contacts, eating, drinking, or shaving in your car, the police can cite you for driving at an unsafe speed for those conditions.

Understand? So, if you're the guy we read about earlier in a magazine, who's reading a magazine and drinking a soda, the police can go to court and say the guy was driving at an unsafe speed. Five mph is an unsafe speed on the freeway if you are doing other things. You can be cited for talking on a cell phone if the officer thinks you are being unsafe, even though the state may not have a law pertaining to cell phones. If you're not paying attention and cutting people off because of the cell phone, they can cite you for the basic speed law.

It happens all the time where you see people cut other people off and they are not even aware of it because they are having an argument on the cell phone.

Another example is when you're eating an Oreo cookie going down the road. If you are weaving all over the road while you are eating the center out of the Oreo cookie and drinking milk at the same time, then you can be in violation of the basic speed law.

5. 2. Why People Speed

The main reason people speed is they perceive that they are saving time. They think they're going to get to their destination quicker if they go faster than everybody else on the road. The following are two studies conducted on speeding. The results of the studies you will find very interesting.

5. 3. Study Number 1

This study looks at two cars traveling the same distance at different speeds on city streets. Car "A" traveled at a rate of speed of 35 mph. Car "B" traveled at 45 mph. Both cars traveled a distance of ten miles. How much sooner did car "B" arrive at their destination than car "A"? Five minutes? Eight minutes? Ten minutes?

The answer is: 90 seconds, a minute and a half. The perception is you're getting there much faster than car "A", but you're not because the lights are synchronized on city streets with the speed limit, usually by computers. So, if it says 35 mph is the speed limit that's the speed traffic should flow. If you are going exactly 35 mph, you will catch all of the lights green. Try it one day!

Some people asked, "What if I go 70 mph in a 35 mph speed limit zone would that work?" That might work...but the idea is to leave your house 90 seconds sooner and get there on time. Those of you who think you're great drivers weaving in and out of traffic me, me, me... Not using your turn signals, me, me, me...Thinking that you're getting there so much faster, you're not. You're just making everybody else mad and driving unsafe. The last few times you were late going someplace and speeding to get there didn't you catch every single red light? Next time, leave your house a little bit earlier and don't speed.

5. 4. Study Number 2

This study is similar to number one, but the cars are traveling a greater distance and at a faster speed on the freeway. Car "A" traveled at a rate of speed of 65 mph. Car "B" went 55 mph. Both cars traveled a distance of 1,000 miles. How much sooner did car "A" arrive at their destination than car "B"? On the average car "A" arrived 31 minutes sooner than car "B". Again, the perception is you're getting there much faster than car "B", but you're not. Each time car "A" had to reduce their speed because of traffic, to get gas or to rest. car "B" would catch up.

Think about the last time you took a long road trip. Do you remember seeing the same cars over and over again? You remember that little red car with the couple in it that you went speeding past. They seem to keep reappearing. You keep seeing that little red car don't you? You look out your window, and there is that couple in that little red car again. "There is that couple in the little red car again. Now they have kids! That's amazing!"

The following is a chart illustrating the time saved over a ten mile trip on the highway:

MPH	ACTUAL TIME	TIME SAVED
55	10 MIN 55 SEC	0 SEC
60	10 MIN 00 SEC	55 SEC
65	09 MIN 14 SEC	1 MIN 41 SEC
70	08 MIN 34 SEC	2 MIN 21 SEC

It's true. It really doesn't do you any good to speed, so slow down and leave a little bit earlier. You'll be much more relaxed and you'll get there at the same time anyway.

It's important to be aware of all of your surroundings, both inside and outside the car.

If your mind, your eyes, or hands are elsewhere, you're not giving your full attention to driving. If you're not paying attention to the speed limits, and not bothering to look at your speedometer, you're going to get a speeding ticket.

Do you know when most people get a speeding ticket they say, "It didn't feel like I was going that fast. My car usually begins shaking at that speed." Unfortunately speed limit signs don't say, "55 but feels like 85." Do you know you have a device inside your car called a speedometer that tells you exactly how fast you're going? Some people completely ignore it, and virtually everything else around them depending on how they feel while they're driving.

Maybe this has happened to you. You go to and from work every day taking the same route. You've got your windows up, you're listening to the radio and you're thinking about how your day went, you're in your own little world. You get to where you're going and ask yourself, "How did I get here?" You know there's some time missing from your life and you can't account for it. Chances are, during that time you were probably speeding.

5. 5. Velocitation and Highway Hypnosis

Sometimes this lack of mental alertness can cause what traffic safety experts refer to as "Velocitation". Velocitation occurs when a driver unconsciously begins to speed up without realizing it! Drivers should always make sure that the speed they are driving is checked via the vehicle's speedometer on a regular basis while driving.

This type of "Mental Drifting" or "Daydreaming" can also lead to "Highway Hypnosis." Highway Hypnosis usually occurs on long, quiet stretches of roadway where our mind wanders and our thoughts are not on the road. The best way to cure this problem is simply being more aware of not letting our minds drift while driving, moving our eyes or making sure we "refocus" on the task of driving from time to time!

[Take the video quiz](#)

5. 6. Speed Limits



The maximum speed limit on most Texas freeways is 75 mph, unless otherwise posted.⁽¹⁾

- On two-lane undivided highways and for vehicles towing trailers the speed limit is 60 unless otherwise posted.
- On some freeways, State Highway 130 near Austin for example, the speed limit is 80 mph - but only if posted. Look for posted speed limit signs.⁽²⁾
- Speed limits may change on other multi-lane highways or freeways.
- In business or residential districts, the limit is 30 mph unless otherwise posted or stated by city ordinance.
- You must slow down when approaching a railroad track, approaching a curve, approaching a hill crest, bridge or overpass.
- In a school zone, the speed limit is 25 mph unless otherwise marked.
- Always follow the signs and traffic signals.

Prima Facie Speed Limits

The prima facie limits are as follows and shall be applicable unless changed when signs have been erected giving notice thereof.

When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along the railway.



When traversing any intersection of highways if during the last 100 feet of the driver's approach to the intersection the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the freeways entering the intersection for a distance of 100 feet along all those highways except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.

In any alley, on any highway other than a state highway, in any business or residence district unless a different speed is determined by local authority, the prima facie speed limit applies.

On any highway other than a state highway, in any business or residence district unless a different speed is determined by a local authority or commission.



When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period.



The prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign.



The prima facie limit shall also apply when passing a senior center or other facility primarily used by senior citizens.

5.6.1 Minimum Speed Limits

No person shall drive upon a highway or freeway at such a slow speed as to impede or block the normal and reasonable movement of traffic, unless the reduced speed is necessary for safe operation, because of a grade, or in compliance with the law.

No person shall bring a vehicle to a complete stop upon a highway so as to impede or block the normal and reasonable movement of traffic unless the stop is necessary for safe operation or in compliance with the law.

If slow speeds on any part of a state highway consistently impede the normal flow of traffic, the department may declare a minimum speed limit below which no person shall drive a vehicle, except when necessary for safe operation or in compliance with the law.

5.6.2 Blind Intersections and Alleys

Blind intersections are inter-sections where you cannot see for 100 feet in either direction during the last 100 feet before crossing. Trees, bushes, buildings, or parked cars at intersections can block your view of vehicles coming from the side. Slow to 15 mph for a blind intersection. However, you may drive as fast as the posted speed limit if YIELD or STOP signs on the side streets give you the right-of-way. The speed limit in an alley is 15 mph.

Speeding fines are doubled when workers in a construction zone or children in a school zone are present, and for good reason. Children require a safe environment in which to travel to and from school. Normal speed limits do not allow traffic enough time to stop suddenly if children step out into the road.



Recognize children often behave unpredictably, so obey the speed limit posted of 25 mph, and keep a lookout for them. It's the same with construction zones. Workers are often working on the roadway using heavy equipment close to traffic. Not to mention other hazards such as; dirt being stirred up, oil, diesel fuel on the road, sinkholes and concrete barricades. The workers are concentrating on their jobs and not the cars going by. So, it's important in construction zones that you obey the warning signs, speed limits and slow down to avoid endangering the construction worker.

In general, if you are not sure about your surroundings or what the actual speed limit is, SLOW DOWN until you're more certain of the speed limit or how well you can handle the situation.



There are two basic reasons why people violate traffic laws. They're either not paying attention, or they're in a hurry. Sometimes, it's a combination of the two. At one time or another we all have sped because we were in a hurry. But remember, if you get caught, you're going to spend much more time with the police officer than you'll save by speeding.

Even worse! What happens if you get in a collision? You'll definitely lose more time than you would save. The same is true for other violations like running a stop sign, a red light, and not using your turn signal all in the interest of some perceived timesaving - it's really just not worth it.

(1) Speed Limits - 75 and 80 Mile Per Hour. Texas Department of Transportation. 04 Nov. 2013 http://www.txdps.state.tx.us/director_staff/public_information/pr083111.pdf.

(2) "Speed Limits - 75 and 80 Mile Per Hour." Speed Limits - 75 and 80 Mile Per Hour. 01 Apr.2013. Texas Department of Transportation. 04 Nov 2013 <http://www.txdot.gov/driver/laws/speed-limits/approved.html>.

5. 7. Stopping Distance and the Force of Impact

While driving, always keep in mind that time, speed and distance are closely linked. Just take a minute to consider how much harder you would hit a wall while running full speed than if you simply walked into the wall. It is just common sense to figure that the faster you drive, the harder you are going to hit something.

Stopping Distance

Here's a story about a race car driver attending race car driving school. On his first day they said, "You're going out on the race course and drive a car at 160 miles per hour. There are four lanes on the course each with a red and green light. When you start all the lights will be red. Once you reach 160 mph one of the lights will turn green. When the light turns green immediately turn into that lane. The rest of the lanes will remain red."

He always thought it was cool to drive fast. Some of you have gone 80 mph, 90 mph or even 100 mph and think it is so great. But he said it's not so great after you learn more about driving. When you're going 120, 130, 140, 160, you sweat. You're so afraid. You don't even blink at 160 mph because if you do you might crash. Now they want you to change lanes at 160 mph when the light turns green. At first you can't do it because you're too scared. After a while, you build up your courage and you try it.

Before you know it everybody in the school can change lanes at 160 mph. Now they put you back in the classroom, and say "We want you to go 160 mph again, and stop the race car. Hit the brakes as hard as you can and stop the car."



At 40 mph, it takes about, half a football field (150 feet) to stop, and almost a full football field (300 feet) at 55 mph. Can you imagine 160 mph? He said you think you're never going to stop. You skid forever, and ever, and ever. It takes about two football fields (600 feet) before you begin to slow down.



You just keep skidding and skidding and skidding and skidding and skidding. Again you return to the classroom and they say "Here's what you just learned. If you're in the Indianapolis 500 going 160 mph, and the car in front of you crashes. It's not going to help if you slam on the brakes!" That's why they teach you to move to the lane with the green light, the open lane.

Think about the last time you saw a wreck at the Indianapolis 500, or Daytona 500 nobody slams on the brakes. Professional race car drivers will move to the next available lane when there is a crash. Our first reaction when we see a collision in front of us is to slam on the brakes. Unfortunately, slamming on the brakes will only make you skid all over the road. Remember, you want to move to the open lane and go around the crash.

If you're riding home today and there is a truck in front of you and it drops a big cinder block off the back onto the freeway. Don't slam on the brakes you're not going to stop. You're going to hit that cinder block. Try and move to the open lane.



What if the truck stops suddenly and you didn't realize it because you weren't paying attention. You wouldn't stop. So from now on, when you're driving on a city street, open roadway, or freeway, you say, "I must leave an out." Look for the open lane. You must constantly say, "I can go left. I can go left." If a car pulls up on the left side where you have no escape, you can say, "I can go right, I can go right now." If you can't go left or right, you should slow down, speed up, and get away from that situation.

Always leave a lane open. One day this is going to happen: a truck is going to drop something on the road and you're going to go right around it smooth as silk.



5. 8. Stopping Distance

The amount of time and distance you need to stop a vehicle increases with the amount of speed. Initial driver reaction time is on average approximately $\frac{3}{4}$ of a second.

The average human reaction time of $\frac{3}{4}$ of a second is based on a laboratory setting where the driver is prepared and waiting for the measurement of reaction time. In actual emergency driving situations, a driver's actual reaction time may be more than $\frac{3}{4}$ of a second.

Actual reaction time of an average driver is generally between 1 and 1.5 seconds.

Total stopping distance does not just mean the distance a vehicle travels once the vehicle brakes are applied, but includes the perception distance, response distance and the actual braking distance. Reaction time is a complicated behavior and is affected by a large number of variables. When a person responds to something he/she hears, sees or feels the total reaction time can be decomposed into a sequence of three components.

Mental Processing Time

This is the time for the responder to perceive that a signal has occurred and to decide the appropriate response.

Movement Time

This is the time that once a response is selected, the responder must perform the required muscle movement.

Device Response Time

This is the time that mechanical devices take to actuate, even after the responder has acted. Response speed depends on several factors so there can be no single, universal reaction time value.

There are ten factors that affect reaction time. The first factor is expectation. Reaction times are greatly affected by whether the driver is alert to the need to brake.

The second factor is urgency. People brake faster when there is urgency, because the time for a collision is briefer. This occurs when a driver is traveling fast and/or the obstacle is near when first observed.

Third factor is cognitive load. When other driving or non-driving matters consume the driver's attention, brake time becomes longer.

The fourth factor is stimulus-response compatibility. Humans have some highly built-in connections between percepts and responses. Pairings with "stimulus-response compatibility" tend to be made very fast, with little need for thinking and with low error.

The fifth factor is the psychological refractory period. Following a response, people exhibit a "psychological refractory period." During this period most responses are made more slowly than if there had been no previous behavior pattern to follow. For example, suppose a driver suddenly steers left and then right. The steer-right response will occur more slowly because it immediately followed the steer-left action.

The sixth factor is age. There is little doubt that reaction time slows with age. Yet, some studies find that older drivers compensate for slower reaction times with greater experience and the tendency to drive slower.

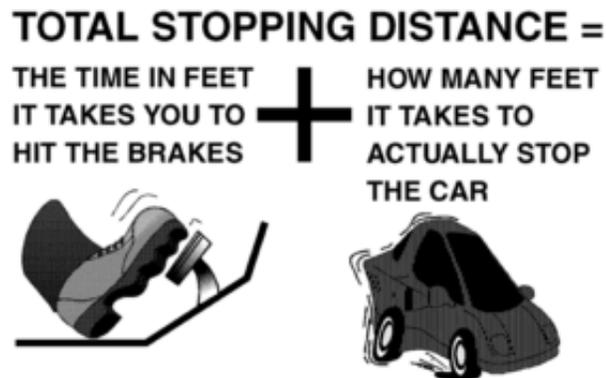
The seventh factor is gender. Although data is not entirely clear, it seems likely that females respond slightly slower than males at any age.

The eighth factor is the nature of the signal. The brain does not react as quickly to light intensity as quickly as it does movement or light color. Therefore, when a vehicle ahead stops at night it takes longer for the brain to determine if the brake lights are activated or the red lights are only the illuminated tail-lights. Also, movement of an object toward or away from a driver is more difficult to distinguish than movement across their path.

The ninth factor is visibility. Reaction time increases in poor visibility. Yet, at night, the recognition of vehicle lights can actually increase reaction time. During the day with bright sunlight, reaction time can be longer due to the lack of recognition of vehicle lights.

The tenth factor is response complexity. The more complex the muscle response action, the longer the reaction time will be. For example, braking requires lifting the foot from the accelerator and placing it upon the brake pedal and then depressing it. This is far more complicated than turning the steering wheel. It takes the brain longer to respond to the complex braking maneuver than to turn the steering wheel.

At 60 miles per hour, the force you produce is 4 times greater than at 30 miles per hour. Consider how much roadway you need to stop your car at different speeds. At 25 miles per hour, it takes you about 62 feet to stop a car.



At 35 miles per hour, it takes almost twice as long to stop the car, and at 65 miles per hour, it takes you a whopping 306 feet to stop that car. That's about the length of a full football field.

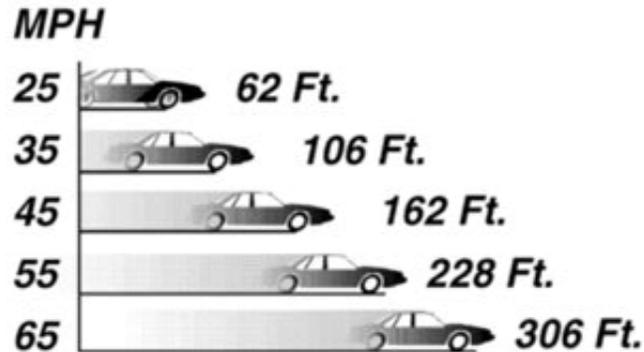
Complex and Simple Reaction Abilities

Poor drivers are known to have simple reaction abilities. This means they can only respond to one situation at a time whereas drivers with complex reaction abilities can respond to multiple situations at a time. By keeping your safe distance properly and controlling your speed, you can improve your ability to perceive and respond to different traffic situations.

5. 9. Kinetic Energy

Every time you stop your car, you have to overcome a force that is known as kinetic energy. This force is the energy developed by an object while it's in motion. In very simple terms, the law of kinetic energy means that when you double your speed, the kinetic energy of your car is four times as great! And that means the braking distance is four times as great. When you triple or quadruple your speed, the stopping distance is even greater.

Remember, at 55 miles an hour it takes you 228 feet to stop the car.



5. 10. The Force of Impact

The amount of energy that's absorbed by the vehicle is related to both the vehicle's design and the direction of the impact. More and more high tech research and development is being conducted to make cars safer and more reliable.

Newer, more modern cars have a front end that absorbs the force of impact and crumbles or gives in. This is called a "crumple-zone." It's designed to absorb the impact and reduce its force before it reaches the passengers.

Older cars have no "crumple-zones" to absorb the force of impact. When an older car strikes an object, you'll notice that the front-end stays rigid, it doesn't give. That's because, the force of the impact pushes the entire engine assembly into the passenger cabin. Not a very safe design.

There are many features throughout newer model cars that protect passengers from injury. The sides are designed stronger than ever with reinforced steel frames to reduce the chance of injuries in a side-angle collision. Roofs are reinforced to absorb the force of impact and to protect passengers in the event of a rollover. Side air bags and many other safety features prevent an impact from killing or injuring the passengers.

Each year and every new car design, safety engineers are making vehicles safer. But the fact remains that you, as a driver, are the most important factor for insuring your safety and the safety of those around you. Later in the course you'll read about the concept of a second collision which can also cause serious injuries.

A second collision means that even though your car avoids damage, you can be injured by flying objects from inside your car or by hitting your body against hard surfaces. The faster you are going, the more chances you have of being injured in a second collision, no matter how safe the car is designed.

Speaking of not getting it, I remember once I saw my uncle Buck standing up in his cane field when I passed by his farm in the morning. When I passed by again later he was still standing there just looking around. I stopped and asked him, Uncle Buck, you been standing out here all day?"

He said, "Yes, I have."

I asked, "How come?"

"I'm trying to win that 'Nobel prize'."

"The Nobel prize?"

"Yep, I read that it's awarded each year to a man that's outstanding in his field!"

5. 11. Friction

If it weren't for friction, you couldn't stop your car in an emergency. You'd have to wait for it to stop itself. Friction is critically affected by your brakes, tires, the road surface and speed. The brakes on your car have to be strong enough to lock the wheels into a skid. Your tires must have enough tread to create good traction. Traction is the friction of gripping power between a tire and the roadway on which it moves.

Traction is affected in one way or another by friction, stopping distance, centrifugal force and/or hydroplaning. An increase in any or all of these factors will decrease the amount of traction that your car will have. By decreasing a car's traction, you are thereby decreasing the amount of control you have over the vehicle.

When your car goes into a full skid, you don't get maximum braking. Sometimes, a driver will slam on his brakes and slide right into the object he was trying to avoid hitting.



When you're in a full skid, your front wheels are sliding and you lose control over the steering. The direction of your car won't change, even if you turn the steering wheel. Sometimes, you can regain steering control by releasing the brake enough so the wheels are not skidding...then steering around the object you're trying to avoid hitting. Tires with good tread are necessary for good traction on our roadways.

The purpose of tread is to increase frictional contact with the road to give us greater stopping power.



Good friction is also required for proper traction on the roadway. So is a good road surface. The type of road surface greatly influences the amount of friction our tires create with the roadway. A dry concrete road provides the best friction while dirt roads are some of the worst. On dirt roads, our tires are literally rolling across small stones that have a ball-bearing effect. Needless to say, you need a lot more room to stop on a dirt road than you do on dry pavement.

On wet pavement, most of the friction is lost due to hydroplaning. The mixture of oil and water on a concrete or asphalt road cause the tires to "float" on an emulsion. The tires, in effect, lose their contact with the pavement, and thus, lose the benefit of friction.

However, the most difficult surface to maintain any type of friction on is an icy road. It will take you three times farther to stop than in ordinary conditions.

5. 12. Centrifugal Force

Another force you need to understand is centrifugal force. A simple definition is the force that pulls an object out from the center of a curve. Centrifugal force comes into play when you're rounding a curve. It tends to pull your vehicle out away from the inside edge regardless of which direction you're traveling. If a car tries to navigate a curve at too great a speed, centrifugal force will pull it out away from the center into the path of the car in the other lane. Or, if a car tries to navigate the curve at too great a speed, centrifugal force will pull it out to the right, and off the roadway.

5. 13. Inertia

Inertia is the force that causes the second and third collisions in an automobile crash. It is the collision that occurs inside of the vehicle, with bodies hitting bodies, and objects in the car hitting bodies.

5. 14. Speeding Facts

Speeding is one of the most prevalent factors contributing to traffic crashes. The economic cost to society of speeding-related crashes is estimated by NHTSA to be \$40.4 billion per year. In 2011, speeding was a contributing factor in 30 percent of all fatal crashes, and 9,944 lives were lost in speeding-related crashes.

According to NHTSA's "2011 Traffic Safety Facts - Speeding" the cost of speed-related crashes was estimated to be \$40.4 billion, that breaks down to \$1,281 per second! Speeding reduces a driver's ability to steer safely around curves or objects in the roadway, extends the distance necessary to stop a vehicle, and increases the distance a vehicle travels while the driver reacts to a dangerous situation.

For drivers involved in fatal crashes, young males are the most likely to be speeding. The relative proportion of speeding-related crashes to all crashes decreases with increasing driver age. In 2011, 39 percent of male drivers in the 15- to 20-year-old and 37 percent of male drivers 21- to 24-year-old age groups who were involved in fatal crashes were speeding at the time of the crash.⁽¹⁾

⁽¹⁾ [Traffic Safety Facts 2011 Data Speeding. 26 Apr. 2013.](http://www-nrd.nhtsa.dot.gov/Pubs/811751.pdf) National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811751.pdf>.

Now it's time for your fourth quiz. Click the button below to start. Thanks and good luck.



6. Sharing the Road

- Objective
- Freeways
- Littering
- Helping Others, Emergencies and Breakdowns on the Freeway
- Breakdown
- City Streets
- Country Roads
- Backing Up the Car
- Parking
- Dealing with Traffic Congestion
- Inattention
- Other Users on Our Roads



6. 1. Objective

This chapter looks at how drivers interact with other users of the road.

6. 2. Freeways



Before traveling on the freeway, always plan ahead. Planning can help avoid unfamiliar or congested traffic situations.

6.2.1 Turnout Areas

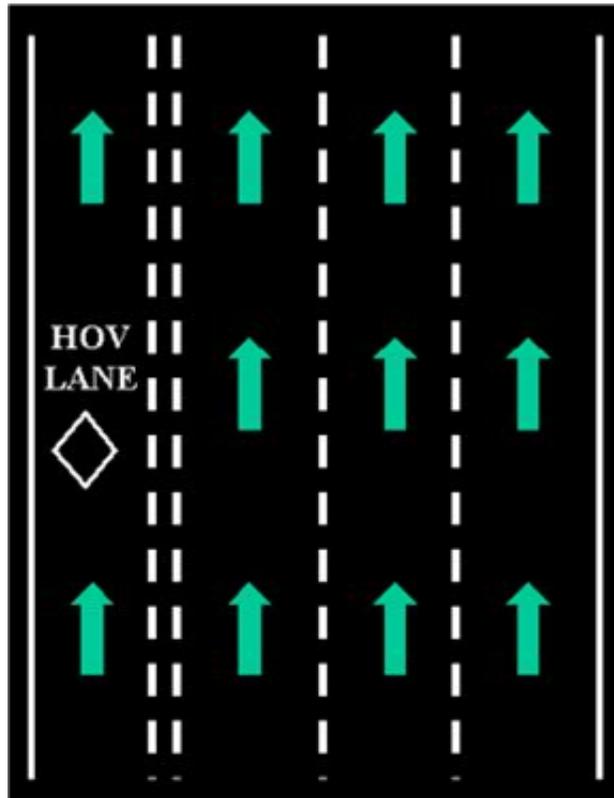
Special "turnout" areas are sometimes marked on two-lane roads. You should pull to the side in these areas and allow cars behind you to pass. Other two-lane roads sometimes have "passing lanes." If you are driving slowly on a two-lane highway or road where passing is unsafe, and five or more vehicles are following you, pull to the side of the road at a turnout or other safe place wherever you can do so to let the vehicles pass.

Anytime that you're impeding the normal and reasonable flow of traffic, you're breaking the law; even on the freeway. You can go as slow as 40 or 45 miles an hour in the far right lane, the slow lane. Don't go any slower, unless otherwise posted.

6.2.2 Carpool Lanes

Some freeways have special driving lanes for carpools called "High Occupancy Vehicle" lanes (HOV), sometimes marked by a diamond symbol. Most freeways have special on-ramps for carpools. Using high occupancy lane or carpool lane requires a minimum of two or three occupants per vehicle, as indicated by freeway signage, including the driver.

Signs at the on ramp or along the freeway will tell you the number of passengers needed to use that lane and the days and hours that the requirements apply. The pavement of these lanes is marked with a diamond symbol.



Some freeways may have a special lane for buses only, or buses and carpools. This lane is also marked by a diamond symbol.



[Take the video quiz](#)

6.2.3 Merging, Passing, and Entering Traffic

Whenever you enter traffic, signal and be sure you have enough room to enter safely. You have to share space with traffic already on the road and must know how much space you need to:

- Merge with traffic.
- Cross or enter traffic.
- Pass other cars.

Common mistakes entering the freeway are:

- Sudden slowing or stopping.
- Merging at too slow a speed.



6.2.4 Space to Merge

Enter the freeway at or near the speed of traffic. (Remember that the maximum speed allowed is 65 mph on most freeways.) Do not stop before merging with freeway traffic unless absolutely necessary. Freeway traffic has the right of way.

Any time you merge with other traffic, you need a gap of at least four seconds. That will give both you and the car you merge in front of a two-second following distance. Be careful to:

- Observe ramp speed.
- Be familiar with entrance warning signs.
- Check speed of freeway traffic.
- Watch the vehicle ahead for sudden stops.
- Don't try to squeeze into a gap that is too small. Leave yourself a big enough space cushion.
- Watch for vehicles around you.
- Use your mirrors and turn signals.
- Turn your head to look quickly to the side before changing lanes.
- Leave at least three seconds of space between you and the vehicle ahead.
- Make sure you can stop safely if you must.
- If you have to cross several lanes, cross them one at a time. If you stop to wait until all lanes are clear, you will tie up traffic and may cause an collision.

6.2.5 Acceleration Lanes

Limited access freeways are entered by way of an on ramp, which sometimes includes an acceleration lane, allowing you to accelerate to the same speed as the traffic so you can merge smoothly. Try to locate a gap in the traffic, and adjust your speed to match the speed of the other cars on the freeway. Act decisively, and avoid merging too slowly, which could cause a collision.

No acceleration lane can be identified by the entrance having yield or merge signs before entering. You must be traveling at or near the speed of the freeway traffic.

- Wait for a longer gap to enter.
- Look over your shoulder quickly to spot a gap.
- Don't stop or hesitate.
- Accelerate speed to blend into traffic.

6.2.6 Special Situations

Always anticipate and be prepared to respond to special situations on the roadway, including emergencies, evasive maneuvers due to traffic or construction reroutes. Stay alert to the driving environment and control devices.

6.2.7 Timed Entrance Lights

These lights are used to avoid having too many vehicles trying to get on the freeway at the same time. These ramp meter lights have a sign indicating the number of vehicles allowed per green - which is usually two. Double merge lanes are provided to give slower moving vehicles more time to get up to freeway traffic speed, and more space to do it in.

6.2.8 Choosing a Lane of Travel

As you maneuver the roadway, special consideration should be made as you choose which lane to travel. Consider how far you are traveling, how fast you are going and which lane will allow for the most ideal following distance and space cushion around your vehicle.

6.2.9 Two-Lane Freeways

In the interest of safety the right hand lane should be used for slower moving vehicles, or vehicles which are exiting. The left hand lane should be used for driving faster or passing.

6.2.10 Three Lanes or More

The right hand lane should be used for slower moving vehicles, or vehicles which are exiting. Use the center lane for smoother travel. This is the recommended lane for safest travel! The left hand lane should be used for driving faster or passing.

6.2.11 Approaching Interchanges

Avoid merging conflicts when approaching an interchange, move over to the next lane, away from the other vehicles merging onto the freeway.

6.2.12 Driving too Slow on the Freeway

If you are driving too slow you can impede the normal flow of traffic causing other drivers behind you to either make an irrational decision to pass you unsafely, or someone who's not paying attention could rear-end your vehicle. A driver who's traveling behind your vehicle at a higher rate of speed could be forced to make a sudden lane change to avoid hitting your vehicle and be forced into oncoming traffic. It is recommended that if you want to drive slower than the other traffic on the freeway that you ride in the far right lane.

6.2.13 Space to Exit

Have you ever been in a traffic jam? Sometimes you see a driver pass the stopped cars by using the right shoulder and then darting back into traffic. If a police officer sees this they would ticket the driver for passing on the right or for an unsafe lane change. The law states that when there is enough room on a normal, city street for two cars to pass and one car is turning left, you can go ahead and pass on the right. On the freeway there is no set "passing lane". On the freeway you can pass on the right. However, you cannot use the right shoulder as a passing lane.

If you ever miss your exit, do not attempt to exit suddenly. Instead of putting yourself and other people on the road in danger, go to the next exit, turnaround, and then exit at your proper exit.

When you plan to exit the freeway, make sure to give yourself plenty of time. You should know the freeway exit you want as well as the one that comes before it.

To exit safely, you should:

- Change lanes one at a time until you are in the proper lane to exit the freeway.
- Signal your intention to exit-approximately five seconds.
- Be sure you are at the proper speed for leaving the traffic lane-not too fast (so you won't lose control) and not too slow (so the flow of traffic can still move freely).

6.2.14 Deceleration Lanes

Allow drivers to reduce their speed without endangering traffic to the rear. If you see another driver trying to exit slow down gradually and allow the driver into the lane ahead of you. Try to drive at the posted speed limit and watch out for curves. Speed can be critical when exiting on a ramp that has a curve. You can be traveling too fast and swerve over into another lane or not being able to stop before rear-ending the vehicle in front of you.

6.2.15 Toll Booths

A sign will be posted at least one mile before the toll. Speed limits are posted. When approaching a toll booth on the freeway, reduce your speed, and allow trucks and trailers to cross over to their designated lanes. When leaving a toll booth, look on both sides before merging from multiple toll booth lanes back into the regular freeway lanes.

6.2.16 Before Changing Lanes

Have you ever changed lanes without using your signals on the freeway because people will speed up and keep you from getting into the next lane? That's very dangerous!

Before making a lane change be sure to:

- Signal for 100 feet (approximately five seconds) before changing lanes.
- Look over your shoulder before changing lanes.
- Look in your rearview mirror before changing lanes.

Scan ahead, to the sides and behind your vehicle. Use your turn signals. Make sure to leave three seconds or more between you and the vehicle ahead. Make sure you can stop safely, if you must. Use your mirrors and check for blind spots.



6.2.17 Check Your Speed

You drive too fast on the freeway. How many times are you on the freeway and traveling at the same rate of speed as the other cars on the road? Safety experts call this factor "Velocitation" and it is also discussed in our chapter on speed. It happens when you assume that you're doing the speed limit because everybody else is traveling at the same speed. You look down at your speedometer and you're going faster than the speed limit. Every now and then, check your speedometer to make sure you're not going too fast.

6.2.18 Hypnotized by the Road

Be careful not to get hypnotized by the road. When you're driving on the freeway and staring at the centerline you can become hypnotized. Some people have even fallen asleep while driving. This can be very dangerous. Keep your eyes moving at all times; make sure you're not getting hypnotized by the road.

6. 3. Littering

The Texas Litter Abatement Act defines litter as both decayable waste and non-decayable solid waste. Decayable waste is that from a public or private establishment, a residence or a restaurant. This includes animal and vegetable material. Non-decayable solid material includes combustible material such as paper, plastics, yard trimmings and leaves and non-combustible solid waste, such as glass, aluminum cans, discarded or worn-out materials and machinery.

It is illegal to dispose of litter at a location other than a legal landfill and transport litter to a location other than a legal landfill with the intent of dumping. Here are some of the many ways people violate the Texas Litter Abatement Act:

- Throwing trash out of a car, boat, or other vehicle, such as cigarette butts, soda cans, or candy wrappers.
- Dumping trash in a landfill where it is not legal.
- Pouring motor oil or grease into storm drains or down manhole covers or directly onto the ground.

If you get caught littering, here is what can happen:

Throwing litter out of your vehicle is considered a Class C misdemeanor and can be punishable by a fine of up to \$500.

For a repeat offender it is considered a Class B misdemeanor and can be punishable by a fine of up to \$2,000 and you can be jailed up to 180 days.

So take responsibility for your own garbage and try these tips:

- Keep a litterbag in your vehicle and use it to dispose of trash.
- In the back of an open-bed vehicle, cover your load to secure trash.
- In your neighborhood make sure trash is put where it belongs.
- To learn more information on littering, please visit:

www.dontmesswithtexas.org

- Littering is not only a crime punishable by fines, but it is also an insult to the Lone Star State!

6. 4. Helping Others, Emergencies and Breakdowns on the Freeway

Being Courteous

Create space for other drivers. When merging signs appear move to the next lane and allow other vehicles to merge safely. Adjust your speed to open a gap allowing another vehicle to merge in front of you.

Road Blocks

Sometimes roads are blocked; this might be because of construction ahead, the road might be flooded, or the road could be closed because of a collision. Whatever the reason, if you find yourself approaching a blocked road you will need to find an alternate route. Sometimes you will see detour signs indicating another path you could take, or if the situation is temporary (as when there is a collision) you might just have to stop and wait it out.

Closed Lanes

For many of the same reasons a road might be blocked, a single lane (or more) might be closed to traffic. In this case you should be able to continue on the same road - but in another lane. When you see signs indicating your lane ending or is closed to traffic - slow down (or stop if you have to) and signal your intent to move over. Once it is safe to do so, change lanes.

If you notice a problem ahead, warn drivers behind you to slow down by lightly tapping your brakes. This will warn drivers coming from behind to be ready to stop or slow down.

Brake lights in the distance could mean traffic is very heavy or a collision has occurred. Slow down gradually and be prepared to stop.

Hazard lights in the distance could mean there is a collision, slow-moving or stalled vehicle.

6. 5. Breakdown

Signal your intention that you are going to be pulling over on to the shoulder. Turn on your 4-way flashers to warn drivers that you are driving slowly or about to stop. Pull off the shoulder as fast as possible. Your vehicle should be completely off the road. Warn approaching traffic by turning your headlights on and off, while leaving your 4-way flashers on. If you have time, place emergency flares or triangles 200 to 300 feet to the rear and front of the vehicle.

6. 6. City Streets



6.6.1 Route Planning

Plan your route ahead of time in the city. Try to travel at times other than the morning and afternoon rush hour, and find roads where traffic travels most easily.

Whenever possible, stay on the main streets, which are wider and controlled by traffic lights. Traveling side streets can present hazards and make it more difficult to travel across town.



6.6.2 Choose a Lane:

- Choose the appropriate lane to drive in.
- The center lane for smoother travel.
- The right lane to drive slowly, to enter or turn off the street.
- The left lane to go faster, or turn left.

6.6.3 Blind Spots

Most people don't realize that all vehicles have blind spots. A blind spot is when you look in your mirror or over your shoulder and for a brief second no one is there. All of a sudden, a car or truck appears alongside you. Like magic!

To reduce blind spots:

- Always position your vehicle so that you are keeping up with the flow of traffic within the legal limit.
- Avoid another driver's blind spot by driving ahead or directly behind the other driver.
- Avoid letting another driver into your blind spot. You can speed up, slow down, or change lanes. Give yourself a space cushion.
- Avoid side-by-side driving. Give yourself and the driver in the lane next to you plenty of space in case they have to swerve or change lanes quickly.
- Avoid driving in bunches. Drive in the least congested lane. This will give you time to react and act to avoid collisions, closed lanes, pedestrians, or bicycle riders.

6.6.4 Trucks



Trucks have larger blind spots than cars because they're four times longer. Try to avoid driving alongside a truck if you can help it. If you're next to a truck, slow down or speed up to get out of the blind spot, which is the entire side of the truck.

Before you challenge a truck for road space, think about its stopping ability. Trucks are frequently heavily loaded which means it takes them longer to stop than it does your passenger vehicle. Also air brakes on some trucks have a one-second lag time before they engage. At 55 mph a truck will travel 80 feet before it even begins to stop. You should also consider the truck's cargo load. It could shift or break loose, causing a serious hazard for any vehicles close by. Some trucks are top heavy and can easily flip over on curbs or when rounding corners too fast.

Driving in the city where trucks are present poses its own special set of hazards. Keep as much distance as possible between your car and the truck since they can generate a strong wind that could startle you and affect your control over your car.

Also, when it rains, try to stay away from big trucks. In the event of standing water, they can spray water onto your windshield and impair your vision. In addition, keep in mind that in slippery conditions, trucks have more difficulties when braking and stopping.

Trucks have to swing out wide to make right turns on narrow city streets. Also, trucks sometimes have to start their turn on the wrong side of the road where you could easily have a head on collision with one of these large rigs. Be extremely cautious, and don't pass a truck on the right, especially near an intersection. In passing a truck, make sure there is ample room ahead before starting to pass. Recognize that because the truck is longer, it will take more time to pass it completely.

6.6.5 Trains and Railroad Crossings



Drivers should also be cautious when encountering railroad crossings and trains. If your vehicle stalls at the highway rail intersection, get everyone out of the vehicle immediately and as far away from the tracks as possible.

Move away from the tracks in the direction that the train is coming from. This way you can avoid being injured if the train hits the vehicle and drives the car forward and make sure you call 911 to report the emergency situation.

Be prepared to stop when following buses or driving behind trucks with hazardous material placards. Federal Regulations and laws of Texas require them to stop at every highway rail intersection.

You cannot accurately judge a train's speed or distance. Do not take chances. Optical illusions makes a train seem farther away and moving slower than it is.



TRAINS CAN'T STOP QUICKLY! The distance it takes to stop varies on the type of train and load carried.

For example, stopping distance can be:

- Freight Train - 1 mile or more.
- Light Rail - 600 feet.
- 8-car Passenger Train - 1 mile.

After fully applying the brakes, a loaded freight train traveling 55 mph takes a mile or more to stop. A light rail train can take 600 feet to stop and an 8-car passenger train traveling 80 mph requires a mile to stop.

In 2012, there were approximately 1,960 train/motor vehicle collisions. ⁽¹⁾



⁽¹⁾ [1.01 - Accident/Incident Overview](http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/statsSas.aspx). Federal Railroad Administration Office of Safety Analysis. 04 Nov. 2013

6.6.6 Special Lanes

In high traffic density areas, you may sometimes see an entire street or a few lanes on a street marked with cones. The cones may indicate that a lane or street is being used "out of the normal." For instance, to help relieve congestion at a sports or cultural event, entire streets or a few lanes will be used for traffic going in the opposite direction from what is "normal" until the traffic congestion is cleared.

6.6.7 Special Problems Associated with City Driving

Driving on city streets requires extra vigilance. Defensive driving strategies need to be fully engaged to handle the special situations covered below.

6.6.8 Parked Cars Hiding Cross Traffic

When this situation arises - slow down to a crawl. Assume that another vehicle is going to be coming through the intersection.

6.6.9 Detour in Lane of Travel

Scan ahead at least 10 to 12 seconds to spot hazards or detours. Give yourself plenty of time to slow down, signal, look over your shoulder, and if the lane is clear, move over.

6.6.10 Two-Way Left Turn Center Lane

The "Suicide Lane" is used by vehicles moving in both directions to turn left. Move into the lane, stop and allow oncoming vehicles to pass. Then turn left.

6.6.11 Turning Right at Corners

You'll find a lot more activity at any given intersection in almost any big city. Before making a right hand turn remember to signal your intent. If you are not already in the right hand lane move over once it is safe to do so. Be sure to check for bicycle riders, pedestrians and oncoming vehicles completing left hand turns. If the lane is clear complete your turn.

6.6.12 One-Way Streets

If the direction is right, enter in the right hand lane. If the direction is left, enter in the left hand lane.

- **Speed**

When you have a large enough gap, accelerate and move into the lane closest to you.

- **Lane Choice**

Choose the right hand lane if you are turning right or driving slowly. Elect the left hand lane if you are driving faster or turning left. Pick the center lane for smoother travel.

- **Exiting**

Signal your intentions well in advance of the turn (at least 100 feet), look over your shoulder for vehicles in lane, move to the appropriate lane and proceed to exit.

- **Dealing with Wrong-Way Drivers**

Flash your lights on and off, honk your horn, slow down and be ready to stop or pull off the road, if necessary.

6.6.13 Watch out for Pedestrians and Bicyclists



Pedestrians are seen jaywalking, at intersections, and coming out between parked cars. Bicycle riders can be seen riding against traffic, riding in the right hand lane, or riding in the crosswalk.

6.6.14 Reduce your Speed

Reducing your speed while driving on city streets allows for:

- More time to see details and identify their meaning.
- More time to analyze Information and predict what might happen.
- More reaction time to decide what to do.
- Additional time to execute decisions or avoid dangerous situations.

The slower you travel, the shorter the stopping distance. When traveling on city streets in certain situations you should cover the brake. This means you should have your foot hovering over the brake pedal prepared to stop. Some of these situations are:

- Next to parked cars.
- Passing a school.
- Passing a park.

A brake light on another vehicle could mean there's a collision ahead, or a traffic jam.

When you approach signal lights slow, and proceed with caution. Be ready to stop for pedestrians, a red light or another driver who does not stop.

6.6.15 Looking Ahead of Traffic

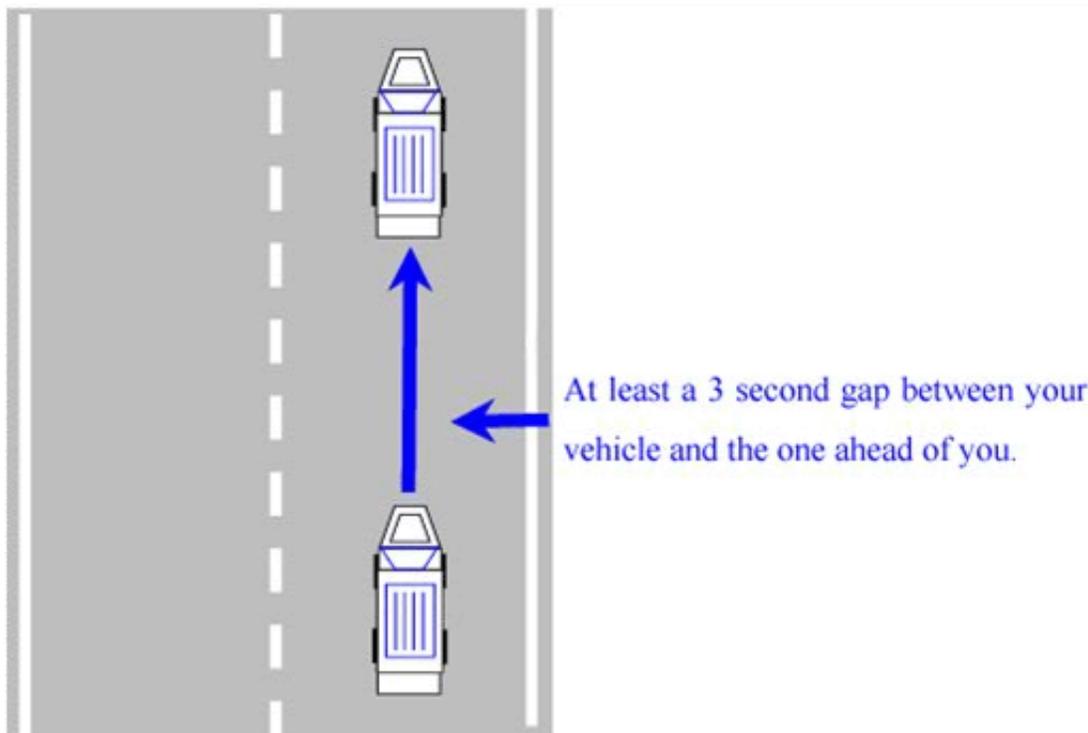
When driving you should always keep your eyes moving searching for potential dangers. Look ahead for traffic hazards, scan at least 12 seconds ahead. This will allow you to spot potential hazards, collisions, stalled vehicles, or lanes closed for repair. Leave enough distance to maneuver. A space cushion around your vehicle will give you enough time to stop, or change lanes.

Driving in the City, Country Road, and on the Freeway



In all cases, the following distance between you and another vehicle should be a minimum of 3 - 4 seconds.

The following will explain how to leave a three second gap between you and the vehicle in front of you. You're in car "A" following behind car "B". In the old days you had to have a degree in mathematics to figure out how far behind you should be from the car in front of you.



Now, it's simple, at any speed this works. Pick a stationary object on the side of the road in front of both cars: a tree, a sign or a telephone pole. When car "B" passes that stationary object, begin counting one thousand one, one thousand two, one thousand three.

If you only get to one thousand one, adjust your speed you're too close and try it again until you are a safe distance away from car "B".

Trucks on the roadway naturally go slower than other vehicles on the road because they're pulling a heavy load. Trucks will leave a larger gap between themselves and the vehicle in front of them because they require about four times the stopping distance than that of a car. When a truck is driving down the freeway, they'll leave a large space in front of them, for a larger space cushion. People mistake that space cushion for an opportunity to get in front of the truck.

You know the scenario. Everybody is following behind the truck and some guy in a little Hyundai will say, "Hey, look I got a space to get into" and cut right in front of the truck. If that truck driver doesn't have enough room to stop, and hits the little car, all it will leave on the highway is a little tire valve. That's all that will be left. Don't ever cut in front of a truck.

6.6.16 Signal Lights

- Look ahead for signal changes scanning 10 -12 seconds ahead of your vehicle.
- Drive at a consistent speed.
- Be ready to stop.
- Anticipate signal changes, be ready to stop.
- Check for stale green lights. A stale green light is a light that has been green for a while and is about to turn yellow.

6.6.17 Space to Cross or Enter

Whenever you cross or enter traffic from a full stop, you will need a large enough gap (from cars approaching in either direction) to get up to the speed of other vehicles. You need a gap that is:

- About half a block on city streets.
- About a full block on the highway.

If you are crossing lanes or turning, make sure there are no cars or people blocking the path ahead or the path to the side. You don't want to be caught in an intersection with traffic coming at you.

Even if you have the green light, don't start across if there are cars blocking your way. It is against the law to enter an intersection unless there is space to get completely across it. You can receive a citation if you block other traffic.

Don't start a turn just because an approaching car has a turn signal on. The driver may plan to turn just beyond you. The signal may have been left on from an earlier turn. This is particularly true of motorcycles. Their signal lights don't always turn off by themselves. Wait until the other driver actually starts to turn before you continue.

6.6.18 City Passing

Streets used for two-way traffic are marked with yellow lines in the center. The lines are either solid, broken or a combination of the two. It is important to understand what the differences mean.

6.6.19 Two Solid Yellow Lines

No passing allowed but you may turn left at an intersection or into or out of a private road or driveway.



6.6.20 Broken Yellow Line

When you see the yellow line broken intermittently, this indicates that you may pass if it is safe to do so.

6.6.21 Both a Solid and a Broken Yellow Line

You cannot pass if you are driving next to the solid line. If you are on the broken line side then you may pass if and when it is safe to do so. Drivers can be cited for "unsafe lane change" or "unsafe passing" while changing lanes near an intersection, across yellow lines, near curves or whenever a police officer deems the action unsafe.

Have you ever driven on city streets where cars can park on the side of the road? When these parking spaces are empty have you ever pretended you're parking, then pass on the right and cutoff the cars in front of you? That's illegal!

6. 7. Country Roads

The difference between driving on the freeway and open road (in the country) is the roadways are not well lit. As a result, when you're coming up to a curve or going around curves, they're hard to see. You can't see there is no shoulder on the side of the road. You can't see the signs until the very last minute.

Country roads have different obstacles that we don't see in every day driving: livestock crossing the road, farm equipment crossing the road, tractors driving slowly, all terrain vehicles and of course deer jumping out in front of your car. There are stands on the side of the road selling peaches and apples, country stores and little mom and pop gas stations. People are pulling in and out of these places. You really need to pay close attention. If it's dark, use your high beams when there is no oncoming traffic within 500 feet and if you're not following another vehicle within 300 feet.

Country roads are not maintained as well as city streets and freeways. More potholes may exist on these roads that you cannot see. Dirt, oil and fuel accumulate which increase your chance of skidding or hydroplaning, especially during the first half hour of rainfall. All of the fragments of dust, oil, gas, and other kinds of residue dropped by vehicles accumulate on the road surface. The mixture of the rain and fragments make it very slippery when driving. So be very careful during the first half hour to hour of rainfall. Try to avoid driving during these periods.

It's harder to have an escape route on a country road. Most country roads are narrow two-lane roads without a shoulder. If someone crosses over into your lane and is about to hit you, where do you go? On a freeway or on most city streets, you have more lanes. You could escape. On country roads, when you go off the side of the road, that is it.

6.7.1 Hills

Many times country roads are narrow and hilly. If you're driving on a two-lane road in the country, traveling uphill and you are faced with another vehicle coming toward you travelling downhill, who would have the right-of-way going?

The vehicle travelling uphill would have the right-of-way. The reason is when you're going uphill you need momentum to climb the hill. If you stop on the hill, it is extremely hard to build up momentum again to continue climbing the hill. If you're going downhill, you just have to apply the brakes to stop, and release them to start movement again. Think how hard it would be to maneuver if you had to back your car down the hill.

[Take the video quiz](#)

6. 8. Backing Up the Car

Backing up your car can be a hazardous maneuver. Whenever possible, drivers should avoid backing up (try to find parking spaces that do not require you to back up). Yet, from time to time, it will be necessary to back up your vehicle either to maneuver into or out of a parking space or to change the position of the vehicle. Proper backing, like proper passing or lane changing, can be safely completed when drivers use a simple sequence of moves to complete the maneuver.

To back safely and effectively, drivers should:

- Check behind the car BEFORE you get in. Little ones such as children, pets are hard to see from the driver's seat.
- Once you are in your car and ready to back up, physically turn around and look over your right shoulder when backing up the vehicle. Use your mirrors to assist you, but never rely solely on them.
- Move slowly, and avoid sharp turns or sudden movements of the steering wheel.
- Use special care if you must back around a visually blind corner.
- Continue to look back until the vehicle has stopped completely and you have re-shifted and reset your brake.

When backing up, steer for a target at the end of your path and proceed slowly toward its imaginary center. Turn the wheel toward the right if you wish the car to go to the right and remember that this will cause the front of the car to move to the left.



6. 9. Parking

When you park on a public road. move the vehicle as far away from traffic as possible. If you're parking next to a curb pull as close as possible. Always park on the right side of the road, unless it's a one-way street.

6.9.1 Parking on Hills

When parking on a hill:

- If there is a curb and your vehicle is facing down the hill, turn the front wheels towards the curb.
- If there is a curb and your vehicle is facing up the hill, turn your front wheels towards the roadway.
- If there is no curb, turn your wheels so the vehicle will roll away from the traffic.
- Always set your parking brake and leave the vehicle in gear if it's a manual shift transmission. If you are driving an automatic put the gear shifter in the park position.

6. 10. Dealing with Traffic Congestion



Traffic congestion is the driver's biggest headache, but even small changes in driving habits could provide fast relief. Several driving behaviors which contribute to congestion include:

1. Rubbernecking - perhaps the most frustrating of behaviors. Slowing down to look at crashes or virtually anything else out of the ordinary, is one of the worst congestion offenders.
2. Tailgating - following too closely is common on highways, accounting for innumerable crashes which in turn clog major highways, often for hours.
3. Unnecessary Lane Changes - although it produces virtually no improvement in arrival times, many drivers insist on weaving in and out of traffic, which actually slows down all traffic.

6. 11. Inattention

Drivers can be seen eating, grooming in the rearview mirror, talking on a cellular telephone, and even reading the newspaper as they drive to work.

Traffic congestion can also be caused by drivers who do not watch the fuel gauge or maintain their vehicles properly. These vehicles can malfunction or stall on highways or city streets causing bottlenecks and major slowdowns in traffic flow.

6. 12. Other Users on Our Roads



Let's review other important users of our roads and how we should share the road with them:

6.12.1 School Buses

All drivers (moving in either direction) must stop for a stopped school bus which is picking up or dropping off children. The bus will have flashing red lights at this time. The flashing red lights are located at the top front and top back of the bus. You must remain stopped until all children are clear of the roadway and the bus signal has stopped flashing. The bus will flash a yellow light when it's preparing to load/unload children as a warning to other drivers that they be prepared to stop.

The only time you do not need to stop is if the bus is on the other side of a divided or a multilane (two or more traffic lanes in each direction) highway. Painted lines or pavement markings are not considered to be barriers. If you are moving in the same direction as the bus, you must always stop - and not go forward until the bus stop signal has been withdrawn. Not stopping for a school bus is a serious violation; you may be fined up to \$1250 and your driving privilege could be suspended for a period of six months (Texas Transportation Code Section 545.066). A second violation occurring within five years may result in a fine of up to \$2,000.

6.12.2 Emergency Vehicles

You must yield the right-of-way to a police car, fire engine, ambulance, or any other emergency vehicle using a siren or red light. When not on the highway, drive as close to the right edge of the road as possible and stop until the emergency vehicle has passed. However, don't stop in an intersection. If you are in an intersection when you see an emergency vehicle, continue through the intersection and then drive to the right as soon as you can stop. Emergency vehicles often use the wrong side of the street to continue on their way. They sometimes use a loudspeaker to talk to drivers blocking their path.

It is against the law to follow within 300 feet of any emergency vehicle which is answering an emergency call.

If you drive for sight-seeing purposes to the scene of a fire, crash, or other disaster you may be arrested. Casual observers interfere with the essential services of police, fire fighters, ambulance crews, or other rescue personnel. You must obey any traffic direction, order, or signal by a traffic or police officer, or a fire fighter.

Obey law-enforcement, fire engines, ambulances, and other emergency vehicles using sirens or flashing lights. When you encounter an emergency vehicle pull over to the closest edge of the roadway immediately and stop until the emergency vehicle has passed. Do not block intersections. Sometimes it's hard to believe, but there are actually vehicles on the road that have more important places to go than you do.

Move Over Act

In the United States, an average of one emergency worker a month is killed while responding to a road side emergency. To protect first responders while they are engaged in their jobs, most states have now enacted some version of a Move Over Act or Slow Down/Move Over Law. Texas law is similar to the law in most states; it requires that:

Unless otherwise directed by a law enforcement officer, a driver who is approaching an emergency vehicle, tow truck or TxDOT highway maintenance and construction vehicles by the side of the road that has its emergency or overhead lights activated must:

Move out of the lane next to the emergency, tow truck or TxDOT highway maintenance and construction vehicle if traveling on a roadway with two or more lanes; or,

If unable to move into another lane or if traveling on a roadway with single lanes going in opposite directions, slow to a speed not more than 20 mph below the posted speed limit if the posted speed limit is 25 mph or more; or

Slow to a speed not more than 5 mph if the posted speed limit is less than 25 mph.

(www.txdps.state.tx.us.)

6.12.3 Slow Moving Vehicles

Some vehicles are not designed to keep up with the speed of traffic. Look for these vehicles and adjust your speed accordingly before you reach them. Farm tractors, animal-drawn carts and road maintenance vehicles usually travel 25 mph or less. Slow moving vehicles have an orange triangle on the back. Also be aware that large trucks and small cars lose speed on long steep hills and may take longer to get up to speed when entering traffic.

6.12.4 Large Trucks

Trucks take longer than cars to stop because of their size. Trucks have much larger blind spots than a car. If you are following or riding next to a truck, make sure that a truck driver sees you in their side mirrors. Recognize that trucks and commercial vehicles make very wide turns. When you are behind a truck that is turning you should stay well out of its way and don't proceed forward until it has completed its turn.

6.12.5 Pedestrians

It's the motorist's responsibility to do everything possible to avoid colliding with pedestrians, bicyclists, skaters and skateboarders. Motorists must always yield to pedestrians. This is very important because pedestrians can be unpredictable. They don't always cross the street at crosswalks. They could step off the curb suddenly and may not be watching where they're going.

You always have to keep an eye out anytime there might be people near the street. Look far enough ahead while you're driving to anticipate any pedestrians trying to cross the street. Don't forget about pedestrians with impaired vision. When you see someone with a white cane, or a guide dog, you must always, slow down or stop and yield them the right-of-way. Many blind pedestrians are hit from behind as they cross the street, hit by cars that are just turning a corner, or where the driver just wasn't paying close enough attention to the road.

Remember if you are the pedestrian, you still have to take responsibility for your own safety. You cannot just jump out in front of traffic. Just because you have the right-of-way at the corner does not mean you can just run out in front of cars and yell, "I have the right-of-way." You must use the crosswalk, if there is one, and you must allow the oncoming vehicles a chance to see you and yield to you.

6.12.6 Motorcycles



It's more dangerous driving a motorcycle than driving a car. The first and most obvious reason is that if you get hit, or hit something on your motorcycle, there is nothing shielding your body from the roadway.

NHTSA's most recent statistics show motorcyclists were 30 times as likely as passenger car occupants to die in a motor vehicle crash and five times as likely to be injured. In 2011, there were 4,612 motorcycle fatalities. An additional 81,000 motorcycle occupants were injured.⁽¹⁾

Texas law requires anyone riding a motorcycle to have either an M license or class A, B, or C license with a motorcycle endorsement. In order to get a class M license or a motorcycle endorsement, the operator must provide proof of completion of an approved motorcycle operator training course. Three-wheeled motorcycles, referred to as trikes, operate much differently than two-wheeled motorcycles. As such they require special training administered through the Department of Public Safety before a Class M restricted trike drivers license will be issued.

One problem with sharing the road with motorcycles is that motorcycles have a low profile making them harder to see. Motorists who don't make a habit of looking out for motorcycles when turning or changing lanes, run a high risk of being involved in a collision with a motorcyclist. In 2011, there were 1,998 two-vehicle fatal crashes involving a motorcycle and another type of vehicle. In 38 percent (757) of these crashes the other vehicle was turning left while the motorcycle was going straight, passing, or overtaking the vehicle. Both vehicles were going straight in 447 crashes (23%).⁽¹⁾

Under Texas law, "if a person fails to yield the right-of-way and it results in a collision causing injury the minimum fine shall be \$500. If the collision results in a serious bodily injury or death the minimum fine shall be \$1,000, maximum fine of \$4,000."

It is estimated that helmets saved the lives of 1,617 motorcyclists in 2011. If all motorcyclists had worn helmets, an additional 703 lives could have been saved. Helmets are estimated to be 37 percent effective in preventing fatal injuries to motorcyclists. This means for every 100 motorcyclists killed in crashes while not wearing a helmet, 37 of them could have been saved had all 100 worn a helmet.⁽¹⁾

One final note, when following a motorcycle, remember that motorcycles have the ability to stop quicker than other vehicles in an emergency. That means that following them too closely endangers both your life and that of the motorcyclist.

⁽¹⁾ Traffic Safety Facts 2011 Data Motorcycles. 17 July 2013. National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811765.pdf>.

6.12.7 Bicycles



People driving mopeds or bicycles on the roadway have the same rights and duties as motor vehicle drivers. They must obey all traffic controls and signals, and may be ticketed for traffic violations. But while they may have the same responsibilities as motorists, a bicycle is different than a motor vehicle.

Like motorcycles, they offer no protection to the rider in a collision, and they can easily be hidden from a driver's sight by other vehicles, or caught in a driver's blind spot. You should always be aware of the possibility that a bicyclist is nearby, hidden from your view. If you're sharing the road with a bicycle, there are many things you can do to minimize the risks. First, make the bicyclist aware of your intentions. Signal well ahead of time if you are planning to stop, make a turn, or change lanes. If you're driving behind a cyclist, increase your following distance and give them space to maneuver.

Do not try to pass a cyclist until you have plenty of room to do so. Anticipate potential problems for the cyclist on the roadway ahead - puddles, potholes, or wet or rough surfaces that could cause them to veer dangerously or go into a skid. Keep in mind some bicyclists may ignore their responsibility to obey all traffic laws. They can behave unpredictably, and you must be prepared for their sudden maneuvers or inattention to traffic signals. Don't forget, children being carried or riding bicycles should wear properly fitted bicycle helmets.

6.12.8 Neighborhood Electric Vehicles

Golf carts or small utility carts are common sights in many neighborhoods. Texas law authorizes neighborhood electric vehicles (NEVs) to be operated on roads with a posted speed limit of 45 miles per hour or less. The bill authorizes driver license holders to operate NEVs without having a motorcycle endorsement, clarifies that drivers and passengers in such vehicles are not required to wear helmets and specifies that enclosed three-wheeled vehicles as described in the bill are authorized to operate in preferential lanes.

Just like bicycles and motorcycles, these vehicles have a small profile and drivers may not anticipate their presence. These vehicles normally have a top speed of around 25 mph so drivers may come up on them very quickly. These vehicles should be treated as a slow moving vehicle and, if lanes are designated for their use, drivers should stay out of those lanes unless turning across them to enter a driveway or cross street. If you are crossing a street or turning in a neighborhood where NEVs are common, look out for them before proceeding.

In addition to NEVs, an Aware Driver will be scanning neighborhoods for recreational vehicles such as All Terrain Vehicles (ATVs). Texas law requires that the operator hold either a driver's license or commercial license and a ATV safety certificate. These documents must be carried with the operator at all times when operating the ATV. Both riders and drivers are required to wear eye protection and a safety helmet.

Remember:

- You must have at least two people in your vehicle to use a High Occupancy Vehicle lane (HOV).
- Before changing lanes, you must signal at least five seconds ahead of time or during the last 100 feet before the lane change.
- Don't cut across lanes if you are about to miss your exit on the highway.
- Trucks require a larger gap between them and the vehicle in front. They require four times the stopping distance of a car.
- Trucks have larger blind spots. Don't drive on the side of a truck.
- Always yield to pedestrians.

On a two-way street or highway, all drivers moving in either direction must stop for a stopped school bus which is picking up or dropping off children. You must remain stopped until all children are clear of the roadway and the bus signal has been withdrawn.

Now it's time for your fifth quiz. Click the button below to start. Thanks and good luck.



7. Crash Prevention

- Distractions are Everywhere
- Are You Being Driven to Distraction?
- Did You Know There are Eight Collision Types?
- Backing Up
- Covering the Brake
- Positioning the Vehicle
- Avoiding Multiple Hazards
- More Damage Reduction Ideas...
- Passing
- Intersections
- Turning on a Highway
- On a One Lane Mountain Road
- Collision Cases
- Crashes
- What to do if you're Involved in a Traffic Crash

This chapter covers defensive driving techniques and crash prevention.

Crashes not only ruin the day for most drivers, they also sometimes cause a lot of confusion!



7. 1. Distractions are Everywhere

[Take the video quiz](#)

Driving is a serious responsibility that demands and deserves your full attention. Driver distractions may occur anytime, anywhere. A distraction is anything that takes your attention away from driving, such as:

- A billboard
- The passengers in your car
- Choosing a CD or tape

L. Robert Shelton, Past Executive Director, National Highway Traffic Safety Administration (NHTSA) stated on May 9, 2001, before the Subcommittee on Highway and Transit Committee on Transportation and Infrastructure United States House of Representatives, that the agency estimates that driver distraction in all of its various forms probably contributes to between 20 and 30 percent of all crashes. NHTSA defines distracted driving is any non-driving activity a person engages in that has the potential to distract him or her from the primary task of driving and increase the risk of crashing.

There are three main types of distraction:

- Visual - taking your eyes off the road
- Manual - taking your hands off the wheel
- Cognitive - taking your mind off what you're doing

Distractions contribute to approximately one out of four collisions. Earlier we read that there are over five million crashes per year. If we estimate that 25% of those were caused by driver distraction - that's more than 1.2 million crashes a year and more than 3,000 PER DAY!

The Virginia Tech Transportation Institute (VTTI) found nearly 80% of crashes and 65% of near crashes involved some sort of driver inattention within 3 seconds of the event. The majority of the incidents involved drivers who took their eyes off of the road ahead for more than two seconds.⁽¹⁾

Driving behaviors that indicate a driver may be distracted:

- Driving below the speed limit
- Swerving
- Driving off the road, or in the middle of the roadway
- Braking frequently
- Head movements

7.1.1 Driving Distractions Study

Some of the leading factors causing distracted driving collisions are:

- Cell phone use
- Attending to children
- Eating

While all distractions can endanger drivers' safety, cell phone use represents the greatest factor in causing distractions while driving. With cell phone use texting is the most alarming behavior, because it involves all three types of distraction; visual, manual and cognitive. Text messaging creates a crash risk 23 times higher than choosing to drive while not distracted. (VTTI)

7.1.2 Dial "D" for Disaster

While it's hard to imagine life without a cell phone, you increase the risk of having a collision by 400 percent every time you use your cell phone when driving. Your focus on driving is diverted when you enter a number or get involved in a conversation. Doing other tasks while talking on the cell phone, such as note-taking or searching for something, increases your risk of having a collision. If you are on the freeway, take the next exit and park in a safe location before you use your cell phone.

7.1.3 Cellular Telephones

Cellular telephones are everywhere. In an emergency, they can be a lifesaver. In a non-emergency situation they can be distracting to a driver. Drivers who talk on their cellular telephones while driving are putting themselves at risk of being in a crash or causing another driver to crash.

Keep in mind, under Texas law, it is illegal to use a wireless communication device in a school zone, or anywhere on public school property while the reduced speed limit is in effect, unless the vehicle is stopped or a hands-free device is used. Texas law also restricts all drivers under the age of 18 from using a wireless communication device while operating a motor vehicle.

Here are some tips:

- Research technology. Several companies and phone carriers offer services that will notify your caller that you are driving and cannot answer the call or text. There are products that will prevent the call or text from delivery if the vehicle is in motion.
- Turn your phone off or put it in silent mode before getting in the vehicle.
- Reduce temptation; lock your phone up in the glove compartment.
- Pull over to the side of the road to use your cellular telephone. This is the safest precaution you can take.
- Enlist your passengers to make or respond to any calls or messages
- Don't use the telephone during hazardous conditions. If driving conditions are hazardous (heavy traffic, construction, weather etc.), avoid answering the phone. Recognize your first responsibility is to pay close attention to the road.

- Pay attention to the road. While you are driving, don't take notes or look up a number.
- Be aware of the cell phone laws in any state you may travel. Several states have banned the use of hand held devices.

Remember: driving safely is always more important than using or answering your cell phone.

7.1.4 Are You Eating a Crash Diet?

Eating while driving is not only messy, but also very dangerous. It usually involves driving with one hand and juggling your food or beverage with the other. Leave a little early, to allow yourself time to stop for a bite to eat. Pull over to a safe location and enjoy your meal.



(1) "[Breakthrough Research on Real-World Driver Behavior Released](http://www.nhtsa.gov/Driving+Safety/Distracted+Driving+at+Distraction.gov/ci.Breakthrough+Research+on+Real-World+Driver+Behavior+Released.print) . Breakthrough Research on Real-World Driver Behavior Released. 30 Apr. 2006. National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www.nhtsa.gov/Driving+Safety/Distracted+Driving+at+Distraction.gov/ci.Breakthrough+Research+on+Real-World+Driver+Behavior+Released.print>.

7. 2. Are You Being Driven to Distraction?

Be sure your children are properly and safely buckled up, and give them distractions like books, games, or other items-to occupy their time.

Avoid arguments and other disturbing conversations while driving.

Pets can be unpredictable. Properly secure them in a pet carrier or portable kennel before moving your vehicle.

7.2.1 Turning Dials Can Turn Your Head

"Dialing in" your destination on a navigation system, searching for your favorite tune on the radio, or adjusting the vehicle's climate control can be hazardous. These activities make you six times more likely to be involved in a crash!

Taking your eyes off the road for two seconds at 60 mph means you have traveled blindly for half the length of a football field. Try these tips:

- Adjust controls before you begin your trip.
- Take advantage of normal stops to adjust controls.
- Ask your passenger to adjust the radio or climate control.
- Pull over to a safe place before you adjust the dials.

7.2.2 Looks Can Kill...

The urge to get a good look at a crash, a vehicle pulled over by law enforcement, construction work, a billboard advertisement, a scenic view, or to look for an address-is just human nature. The best advice: Don't look! Those things are never more important than focusing on your driving. Diverting your concentration from driving can be deadly.

7.2.3 Distractions and Young Drivers

In the U.S., vehicle crashes are the number one killer of teenagers. Driver distractions, risk-taking, and inexperience contribute to more than 4,000 fatal crashes involving teen drivers. Talking with other teenage passengers or friends in another vehicle, cruising, or playing music too loudly, can be deadly when combined with driving. Keep focused on driving safely and staying alive.⁽¹⁾

7.2.4 Other Deadly Distractions

Reading a newspaper, a book, or a map, and personal grooming, such as hair-combing, shaving, or applying makeup, are examples of what people should not do while driving. Smoking is a health and safety hazard, especially while driving. Lighting up, putting out cigarettes, or dealing with falling ashes can present a deadly distraction. Brain scan studies show that our brains really aren't adapted to multi-tasking especially when we are driving. The safe solution is simple: Never do any of these things while driving.

⁽¹⁾ [Traffic Safety Facts 2011 Data Young Drivers. 12 Apr. 2013.](http://www-nrd.nhtsa.dot.gov/Pubs/811744.pdf) National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811744.pdf>.

7. 3. Did You Know There are Eight Collision Types?

Several different collision types include:

- Head-on
- Sideswipes
- Rear-End
- Broadside
- Hit Object
- Overturned
- Auto/Pedestrian
- Other

7.3.1 Typical Collision Factors

What causes a collision?

The following are some of the typical reasons that people get into collisions:

- Speeding
- Assume they have the right-of-way
- Improper turning
- Disobeying stop signals and signs
- D.W.I. or D.U.I.
- Making unsafe lane changes
- Driving on the wrong side of the road
- Following too closely
- Pedestrian violations
- Unsafe starting and backing
- Improper passing
- Falling asleep behind the wheel
- Equipment failure
- Impeding traffic

7.3.2 Contributions to Collisions

What are some other factors contribute to a collision?

- Lighting conditions
- Mental state of the driver
- Physical condition of the driver
- Weather conditions
- Roadway conditions

No wonder why it feels like to get from one point to another is like a game plan for a football team. You have to plan ahead to reach your goal, and you have to be ready for the little emergencies that might trip you up.

The term, "defensive driving" is just common sense driving. It's a strategy for survival.

It's important that you know the rules of the road. But simply knowing the rules doesn't make you a safe driver. To become a safe driver you must practice defensive driving techniques. This means perfecting your powers of observation, your traffic safety attitudes, your courtesy to other drivers, your communication abilities and overall driving skills.

Collision prevention involves many factors. Here are some key points to become a successful defensive driver.

Be extra cautious in dangerous driving locations (i.e., intersections, broken traffic signals, bottlenecks).

7.3.3 Protect Yourself

If a collision is imminent, avoid head-on collisions and multiple vehicle collisions and even sideswipe if possible. If a collision is unavoidable, you can try to lessen the severity with certain actions. Properly worn seatbelts and shoulder belts decrease the chance of injury in a collision. If there is adequate warning, you can try to brace yourself against the steering wheel as this can help you from being thrown around within the vehicle. Releasing the brake during rear-end collisions can lessen the chance of severe back or neck injury as the vehicle rolls forward.

A depressed brake will focus the entire collision force within the vehicle without any "give". To help absorb the force of the collision, it is important to have the steering wheel turned in the direction you intend to travel in this situation. Turning the wheels into oncoming traffic may have tragic results if the vehicle is pushed forward. During a head-on collision, it is vital to protect the face and the driver should make any move possible to lessen the chance of injury in an unavoidable crash.

7.3.4. Avoiding a Rear-End Collision



Even though you might practice good driving skills, others may not. Hopefully, you will be a more informed driver after these tips.

1. Three second rule - Allow more space between you and the car ahead. Don't tailgate - Maintain at least a three second gap between you and the vehicle in front of you. And if you're on the highway or driving in bad conditions, increase that time to three to five seconds. Never use tailgating to express your anger or frustration. It's senseless and it puts others at risk. If you're being tailgated, don't take it personally: stay calm, and change lanes to let the tailgater pass or slow down slowly so as to encourage the tailgater to pass you.

Measure your following distance in seconds. Pick any fixed object on the road, a telephone pole, a tree.... and when the vehicle in front of you passes that object - start counting the seconds. Once you've reached the same point, stop counting. The count at which you stopped indicates your following distance in seconds.

2. Give notice - Let other drivers know what your plan is by signaling to turn or tapping your brake lights to stop.

3. Brakes - Use your brakes smoothly by applying gradual pressure. If you ride your brakes, other drivers behind you will also slow down and eventually may not pay attention to your actual intent. It is similar to the concept of the "boy who cried wolf". When you really do stop, you may be rear-ended.

4. Keep pace - Keep up the pace with traffic around you, but do not go over the posted speed limit.

5. Check your rearview mirror - Check behind you constantly. Be aware of the proximity of the vehicle behind you.

6. Changing lanes - Before changing lanes, make sure the lane you are moving into is clear. Also, make sure your speed is sufficient enough so that pulling in front of another car does not cause that vehicle to brake to avoid hitting you.

7. Keep your foot on brake pedal - After stopping, continue to keep your foot pressed on the brake pedal to alert others that you are stopped.

8. Keep rear lights clean and in working order - Maintain the working order of your brake lights and keep them clean.

9. Adjust in advance - Always adjust headrests prior to driving to reduce the chance of whiplash in a rear-end collision.

7.3.5 Focus Ahead

Focus the eyes one to two blocks ahead (1/8 kilometer) to see upcoming hazards and traffic conditions.

7.3.6 Anticipate

Immediately recognize potential trouble signs as they appear, be aware of hazards, and take actions to avoid trouble in ample time.

A signal should be given if a vehicle's maneuver is going to affect any other vehicle and should be given continuously during the last 100 feet or five seconds traveled before a turn or action.

7.3.7 Scan

Always scan the road and keep rapid eye movement, never focusing on just one point. Scanning the road ahead, particularly during freeway driving, will keep the driver aware and prepared for oncoming road hazards.



7.3.8 Using Your Common Senses

By using all of your senses while driving, you become a more alert driver. Your eyes tell you what's happening on the road. You also rely on your other basic perceptual skills of touch to detect vibrations coming through the steering wheel. This allows you to feel road conditions or problems that can occur with your car's tires. Your sense of smell can alert you to problems with fluids and exhaust from your car. Your sense of hearing alerts you to warnings such as horns, sirens, or unusual noises coming from your car's engine.

The point is, just because you can't see something doesn't mean something dangerous isn't happening around you.

These are just a couple of examples of how perceptual skills are applied in different situations, but they're called for every time you get behind the wheel. All your senses are used while driving, which allows your brain to process information so you can make safe driving decisions. You use these senses constantly and never give them any thought. But while driving, paying attention to them can make a real difference.

By paying attention to your other basic perceptual skills, you're better able to assess the dangers around you and make appropriate, safe driving decisions.



7. 4. Backing Up

The law states that you may not back a vehicle unless it can be done with reasonable safety. It is unwise and unsafe to back up around corners or curves in the road.

When backing up, it is important to remember the following:

- Be aware of children and objects on the road.
- Use side mirrors as much as necessary.
- Keep backing speed at a slow and controlled level.
- Avoid sharp turns and be aware of odd angles that may result from backing up.
- Use passengers to lend assistance.
- Avoid backing up altogether if possible
- Try and locate parking spaces that may not require backing up.
- Make sure your head and body are in the proper position, alert and facing the direction in which you are moving.
- Only release the brake pedal when you are prepared to back up and your view is to the rear.

7. 5. Covering the Brake



Drivers should be able to distinguish situations when the brake needs to be covered in preparation for use. Covering the brake means the driver's foot needs to be hovering over the brake pedal for quicker response time.

Situations where covering the brake may be necessary include:

- When driving next to parked cars.
- When approaching intersections.
- When approaching signals.
- When driving in a school zone.
- When seeing brake lights of other cars.

Riding the brake (keeping your foot pressed down on the brake slightly), not only adds much wear and tear on your vehicle, but it also gives other drivers the false impression that a stop is imminent. However, covering the brake is often prudent and a safe driving practice, riding the brake is not.

7. 6. Positioning the Vehicle



Laterally position your vehicle by adjusting your speed to position yourself between clusters of vehicles. Select a lane that provides the best escape route allowing you the greatest maneuverability within traffic clusters.

7. 7. Avoiding Multiple Hazards

Techniques to use to avoid multiple hazards in a driving scenario include:

- Identify hazards early.
- Predict potential hazards.
- Adjust speed and position to avoid potential hazards.
- Anticipate and plan possible escape routes.

7. 8. More Damage Reduction Ideas...



Special attention must be paid to potential trouble spots on the road. This can be the difference between a collision and a close call.

These situations include:

- Construction areas.
- Crosswalks.
- Entrances to parking lots.
- Controlled and uncontrolled intersections.
- Freeway on and off-ramps.
- School zones.
- Icy streets.

7.8.1 Detours

Detours are common due to construction or maintenance work on the roads. At any time, there are many highway construction and maintenance projects being worked on in Texas. Follow signs as indicated and observe reduced speed limit signs. Be aware that traffic fines are usually doubled in these areas and delays often occur. Be patient!

7.8.3 Control your Emotions

Remain calm. Don't let other drivers control your emotions.

7.8.4 Give yourself Room to Maneuver

Have an escape plan. Your car should be in a position that gives you the most options to maneuver in case of an emergency. If you need to brake ahead, start early as possible, and also keep an eye out for brake lights in adjacent lanes. Most likely they mean that you'll have to use your own brakes momentarily.

7.8.5 More on Following Distance

3 SECONDS	4 SECONDS	5 SECONDS	6 SECONDS PLUS
Normal Traffic Condition	Following a Van	Following Trucks or Large Vehicles	Crossing Intersections
Entering the Freeway	Merging on a freeway	Pulling a Trailer or Carrying a Heavy Load	Driving on Icy Roads
Exiting the Freeway	Following a Motorcycle		Driving on Snow-packed Roads
	If Crowded by a Tailgater		Driving in Rain
	If the Driver Behind You Wants to Pass		Night Driving

7.8.6 Never Insist on the Right-of-Way

Even if you have it.

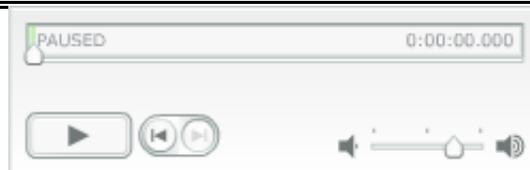
Always ask yourself, "what if..." -

"What if someone cuts in front of me?" "What if the car in front of me makes a sudden stop?" "Am I ready for the next move?" If any of these questions makes you think twice, then adjust your speed or change your position in traffic. Do whatever you can to reduce the risk of hazard. For example, if you see a long line of cars approaching, you should be prepared to brake and move into the right lane in case a car tries to dart into your lane to pass you.

7.8.7 Stay Alert

Keep all your senses engaged in driving. Your hearing is more important than you might realize. For instance, it can alert you to a car that's in your blind spot. Don't play your stereo so loud that you cannot hear outside your car. That's dangerous!

7. 9. Passing



Passing requires good judgment and rapid decision making, At highway speeds of 65 to 70 mph, you need a 12 to 15 second gap in oncoming traffic to pass safely. It's hard to judge the speed of an oncoming vehicle a third of a mile away. They don't seem to be traveling as fast as they really are. When a vehicle is far away it's almost as if they appear to be standing still. If you can see the vehicle movement, they are probably too close to pass.

When you decide to pass, don't hesitate. You may anger the driver behind you, who may try to pass you and the vehicle you are following. Never overtake or pass another vehicle if the line on your side is solid yellow, or if you are at an intersection, or if a "Do Not Pass" sign is posted. You should have clear visibility for at least 1,000 feet. Don't pass on hills, or around curves, if you can't see, or within 100 feet of an approaching bridge, viaduct, tunnel, intersection, or railroad crossing.

If a school bus is displaying a flashing red light, the driver of the vehicle shall stop immediately before passing the school bus and not proceed past the bus until the flashing red light and stop signal arm, cease operation. Trying to pass a long line of cars would keep you in the lane for oncoming vehicles too long to be safe. Ask yourself if the risk is worth the few minutes you will save.

If the vehicle in front of you has their signal on, or is slowing down, don't try to pass, as the driver could turn right into your vehicle.

Remember, if the vehicle ahead of you is near or at the speed limit, you will have to build up a lot more speed, than is legal or safe to pass. Stay behind the vehicle.

If you cannot complete a passing maneuver before reaching a no passing zone, stay where you are. Wait until it's legal and you can pass the vehicle in front of you safely.

7.9.1 Space to Pass

Avoid passing other vehicles, including motorcycles and bicycles, on two-lane roads. It is dangerous. Every time you pass, you increase your chances of having a collision. Ask yourself if the risk is worth the few minutes you will gain. Remember, whenever you pass another vehicle on a two-lane road you must enter a lane that belongs to oncoming cars.

At freeway speeds of 50 to 55 mph, you need a 10 to 12 second gap in oncoming traffic to pass safely. You must judge whether or not you have enough room to pass whenever you approach:

- An oncoming car.
- A hill or a curve.
- An intersection.
- A road obstruction.

Be patient when passing a bicyclist. Slow down and pass only when it is safe. Do not squeeze the bicyclist off the road.

7.9.2 Oncoming Vehicles

At 55 mph, you will travel over 800 feet in 10 to 12 seconds. So will an oncoming vehicle. That means you need over 1600 feet (or about one-third of a mile) to pass safely. It is hard to judge the speed of oncoming vehicles one-third of a mile away. They don't seem to be coming as fast as they really are. A vehicle that is far enough away generally appears to be standing still. In fact, if you can really see it moving closer to you, it is probably too close for you to start to pass.

7.9.3 Check Traction before Passing

Check the road for traction by driving slowly. If the steering wheel feels loose in your hands, you have no traction. In this situation, you have no control of your vehicle.

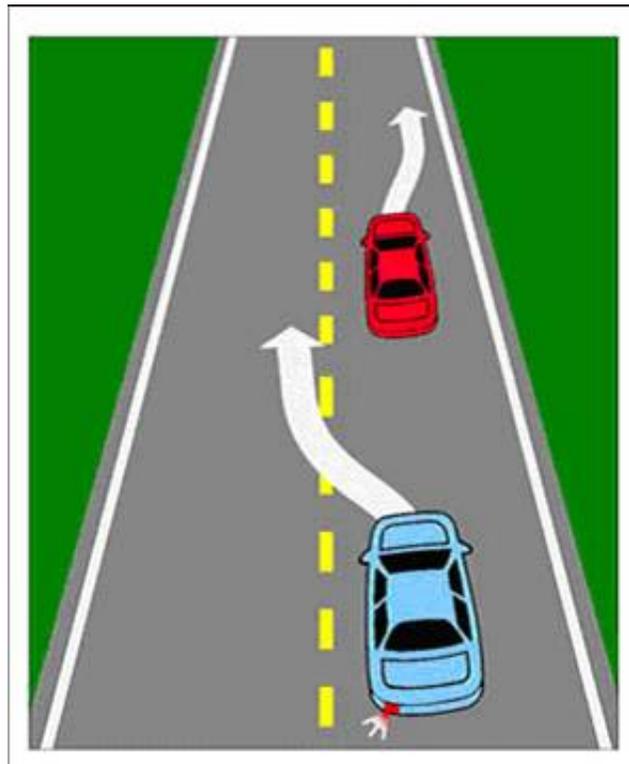


7.9.4 Hills or Curves

To pass safely, you must be able to see at least one-third of a mile. Any time your view is blocked by a hill or a curve, you should assume that there is an oncoming car just out of sight. This means you should only pass if a hill or curve is one-third of a mile or more away.

You **MUST NOT** drive on the left side of a roadway when coming to a curve or the top of a hill where you can't see far enough ahead to be sure it is safe to pass.

7.9.5 What if you Need to Pass Someone?



Remember passing is a hazardous maneuver, so before passing, ask yourself the following:

Steps for Successful Passing

1. Is passing legal in this situation?
2. Scan for hazards.
3. You will need at least a 12 to 15 second gap (one-third of a mile) between you and any oncoming vehicles.
4. Check over your shoulder; a vehicle may be trying to pass you.
5. If a vehicle is merging, adjust your speed and move to the next lane away from the merging vehicle.
6. Is your visibility limited? Check your blind spots.
7. If you are passing on the freeway signal your intentions for at least five seconds or 100 feet in city driving.
8. Warn the vehicle ahead of you that you are passing by flashing your lights or tapping your horn.
9. Obtain a speed advantage by driving 10 to 15 mph faster than the overtaken vehicle.
10. Re-check condition ahead of you to insure that no one has entered the roadway.
11. Create a return space. If you can see the overtaken vehicle's headlight you have enough room to return.
12. Signal that you are returning to the driving lane.
13. Check your blind spot before returning to the driving lane.
14. Create a space cushion for the overtaken vehicle (a four second gap).

7.9.6 When Being Passed

If you are be overtaken by another vehicle yielding is required. For the safety of the driver passing you slow down or pull off the road if necessary. Do not speed up, as this will only keep the driver of the other vehicle who is trying to pass, in the lane of oncoming vehicles too long.



7. 10. Intersections

7.10.1 Intersection Definition

An intersection is the area embraced within the prolongations of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict.

7.10.2 Controlled

As you approach an intersection, check for signs that control your movements. Is there a signal light, yield right-of-way sign, or a stop sign? Are turns allowed? If turns are allowed, may they be made only at certain hours of the days or days of the week? May they be made only by certain types of vehicles? Are there special turning lanes?

7.10.3 Uncontrolled

These intersections are very dangerous, as they have no lights, signs, or yield right-of-way signs. Slow down and be ready to stop or yield the right-of-way to a pedestrian, bicyclist or vehicles already in the intersection.

7.10.4 Skills Required for Crossing and Turning

Several skills are needed to safely navigate these maneuvers.

7.10.5 Judging Time to Make a Maneuver

There is no simple rule for judging intersection time gaps for all speeds. For vehicles moving at 30 mph, a time gap of six seconds equals a half of block. Try to determine a six second time gap.

7.10.6 Judging Speeds and Distance of Other Vehicles

You would use the same procedure used for judging time. You must have a half of block space gap for you to be able to cross an intersection, without interfering with cross traffic.

7.10.7 Choosing a Traffic Gap or Space to Enter or Cross Traffic

If it takes you four seconds to cross a street that is 24 to 30 feet wide, you should have a 6 second gap in traffic from both directions in order to cross. At 30 mph, six seconds equals a half of block

It is dangerous to pass another vehicle where someone is likely to enter or cross the road. Such places include crossroads, railroad crossings, and shopping center entrances. While you are passing, your view of people, cars, motorcycles, bicycles, or a train is blocked by the car you are passing. Also, a driver turning onto the road into the left lane won't expect to find you in his lane. He or she may not even look your way.

7.10.8 Left Turn - When View is Blocked

This turn is not advised. Go to the next intersection where your view is not blocked. Make your turn and proceed to where you want to go.

7.10.9 Right Turn - When View is Blocked

Proceed with caution, drive slowly until you can see around the construction, allow oncoming vehicles to pass, and complete your turn.

7. 11. Turning on a Highway

Use the following information to successfully turn on the highway.

7.11.1 Right Turns

Both the approach and the actual turn should be made as close as practicable to the right edge of the roadway.

7.11.2 Left Turns

Both the approach and the actual turn should be made as close as practicable to the left edge of the extreme left hand lane or portion of the roadway lawfully available to traffic moving in the direction of travel from which the turn is commenced.

7.11.3 Proceeding Straight

Scan for hazards, other vehicles, pedestrians or bicycles. Keep your eyes moving; look through your mirrors every two to five seconds. Look for stalled vehicles, pedestrians coming out from between parked vehicles, children, accidents and bicycles.

Be sure to cover the brake pedal when approaching a situation which you might have to brake. This means have your foot ready, but not actually applying pressure to the brake.

7.11.4 Lane Restrictions

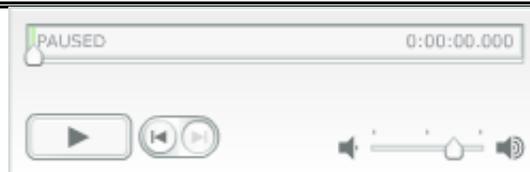
Before you pass, look ahead for road conditions and traffic that may cause other cars to move over into your lane.



7.11.5 Space to Return

Always signal before passing. Don't pull out to pass unless you know you have enough space to return. Before you return to the driving lane, be sure you aren't dangerously close to the car you have just passed. One way to do this is to look for the car in your inside rearview mirror. When you can see both headlights, you have enough room to return to the driving lane. Don't count on having enough time to pass several cars at once. Don't count on other drivers making room for you.

7. 12. On a One Lane Mountain Road

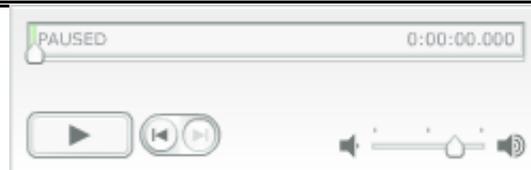


When two vehicles meet on a steep road where neither can pass, the vehicle facing downhill must back up until the vehicle going uphill can pass. (The driver going downhill has the greater amount of control when backing.)



[Take the video quiz](#)

7. 13. Collision Cases



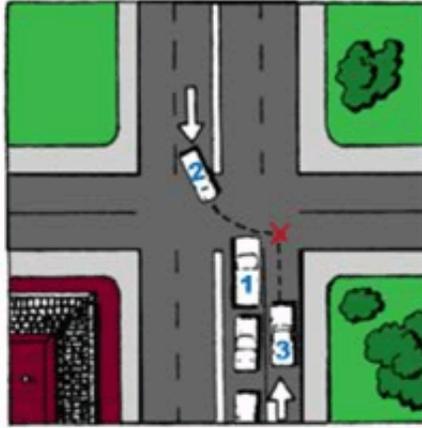
1

Case Review

The Case of the Volunteer Policeman

7.13.1 Case Review This crash scenario takes place at an intersection where two cars are making left turns and a third car is proceeding through the intersection. As you're reading pay close attention to each car's involvement in the crash. Determine who is at fault and if any laws were violated. Keep in mind, sometimes more than one car causes the crash even if they're not legally liable.

Cars number one and two are stopped at the intersection waiting to make left turns. The driver of car number one, motions to the driver of car number two to go ahead and turn. The driver of car number two starts turning.



Car number three is traveling in the right lane proceeding through the intersection and hits car number two broadside. The driver of car number two suffers several fractures. The passenger in the right front seat of car number two is badly injured.

The driver of car number three is wearing a seat belt and shoulder harness and escapes with minor injuries.

Who caused the crash? Car number one? Car number two? Car number three?

Usually more than one person, sometimes two, cause the crash. In this case, two people caused the crash. Car number two is turning left into oncoming traffic. Car number three should have slowed down when he sees other cars stopped at the intersection. These drivers are not really doing anything wrong or illegal. They're going right through the intersection. Car number one shouldn't have waved car number two on. Never tell someone to go on, even if you think it is okay. Don't direct traffic.

Car number two was at fault.

[Take the video quiz](#)

7.13.1.1 Turning

After reading the first crash scenario let's read more about turning and the proper methods to avoid getting into a collision.

7.13.1.2 Signal When You Change Direction

Drivers signal:

- To let other drivers know their plans.
- Before pulling next to (or away from) the curb.
- Before turning or changing lanes.

Use arm signals or the signal lights on your car. On sunny days, signal lights may be hard to see. If the sun is bright, use arm signals as well as signal lights. Caution-Even though you signal, do not automatically assume that the space you wish to occupy is clear. Look over your shoulder to check your blind spot before making a lane change.

Turn on your signal light during the last 100 feet before turning or at least five seconds before changing lanes on the freeway.

7.13.1.3 When Changing Direction

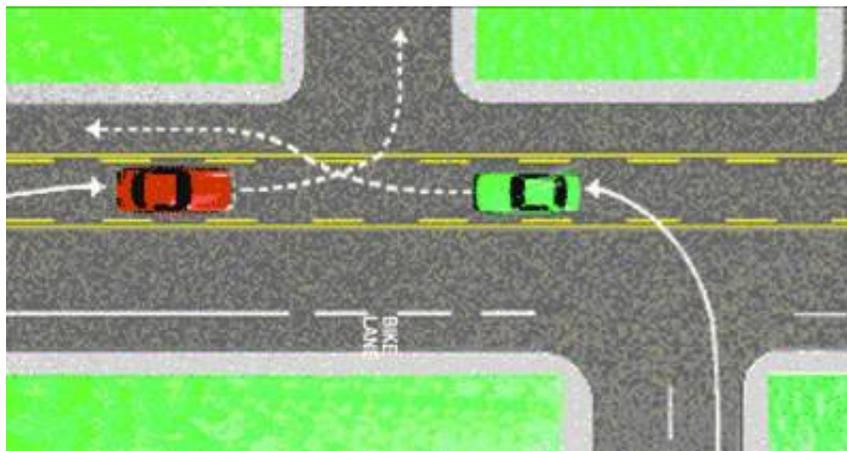
Even when they don't see any cars around because they know a car they don't see might hit them.

If you plan to turn beyond an intersection, don't signal until you are actually in the intersection. If you signal too early, another driver may think you will turn before you reach him or her and might pull into your path.

If you plan to turn at an intersection (for example) which is close to a business driveway, be especially careful. People leaving that business may think you are turning into the driveway when you really intend to turn at the intersection. These drivers may pull out right in front of you. In a case like this, it might be better to signal after the driveway but before the intersection.

Check your signal after turning. Turn it off if it hasn't clicked off by itself.

7.13.1.4 Center Turning Lane



If a street has a left turn center lane, you must use it when you turn left. The center turn lane, when available, may not be used to pass another vehicle.

To turn left from the street, drive completely inside the center turn lane. Don't stop part way into the lane with the rear of your vehicle blocking traffic. Turn only when it is safe. Look for vehicles coming head-on towards you in the same lane as they start to make their left turns.

When turning left from a side street or driveway, wait until it is safe, and then drive into the center left turn lane. Signal before moving into regular traffic. Enter traffic only when it is safe. You may drive across a center left turn lane.

7.13.1.5 Examples of Left and Right Turns

Left turn from a two-way street. Start the turn at the left hand edge of the lane closest to the middle of the street.



7.13.1.6 Left Turn from a Two-Way Street

You may complete the turn in the left lane of the cross street (as shown by arrows) if it is safe to do so. You must use a left turn lane if there is one. A left turn from the next lane may be made if signs or arrows show it is okay.

Right Turn from a Two-Way Street

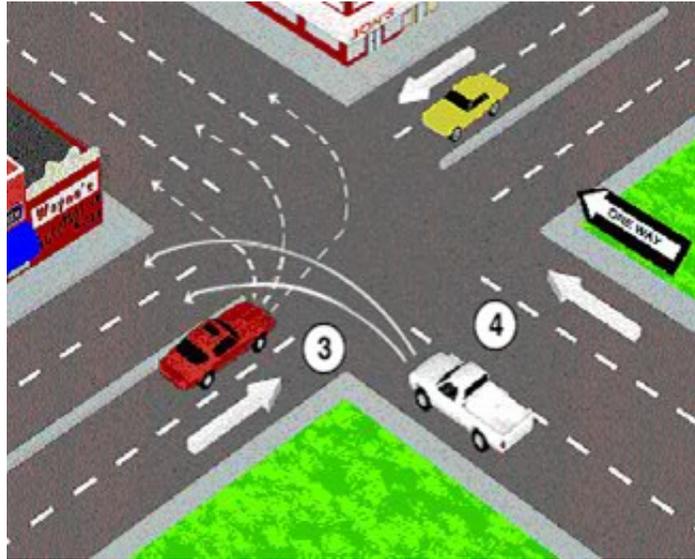
The automobile is turning correctly. It began the turn in the lane nearest the right-hand curb. It will end the turn in the lane nearest the right-hand curb. Do not swing wide into another lane of traffic.

7.13.1.7 Right Turn

You may start a right turn from other than the far right lane only where pavement or overhead markings show that using that lane for a right turn is permitted.

7.13.1.8 Left Turn from a Two-Way Street into a One-Way street

Start the turn from the far left hand portion of your side of the road.

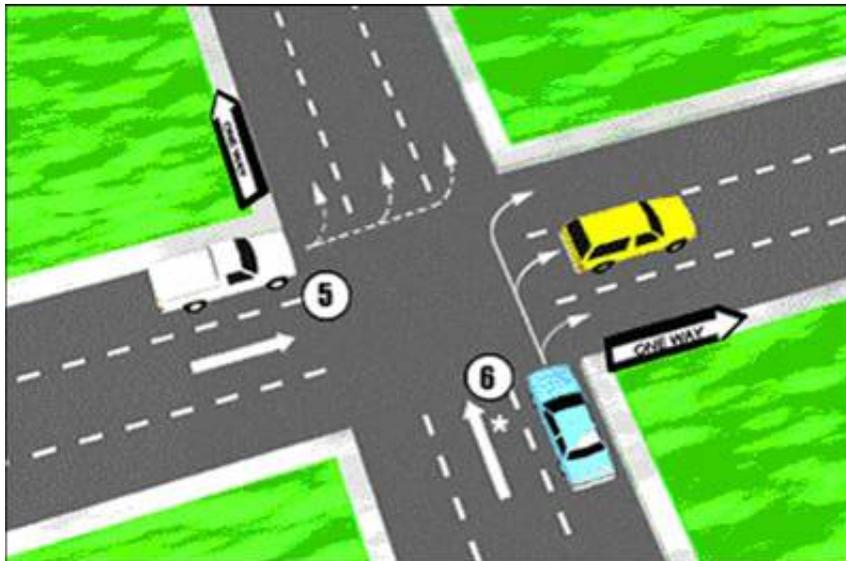


7.13.1.9 Left Turn from a One-Way Street into a Two-Way Street

Start the turn from the far left hand portion of your side of the road. The automobile should turn into the lane shown by the arrows.

7.13.1.10 Left Turn from a One-Way Street into a One-Way street

The turn must be started from the left hand portion of the road. Watch for bicycles between your vehicle and the curb because they can legally use the left turn lane for their left turns.

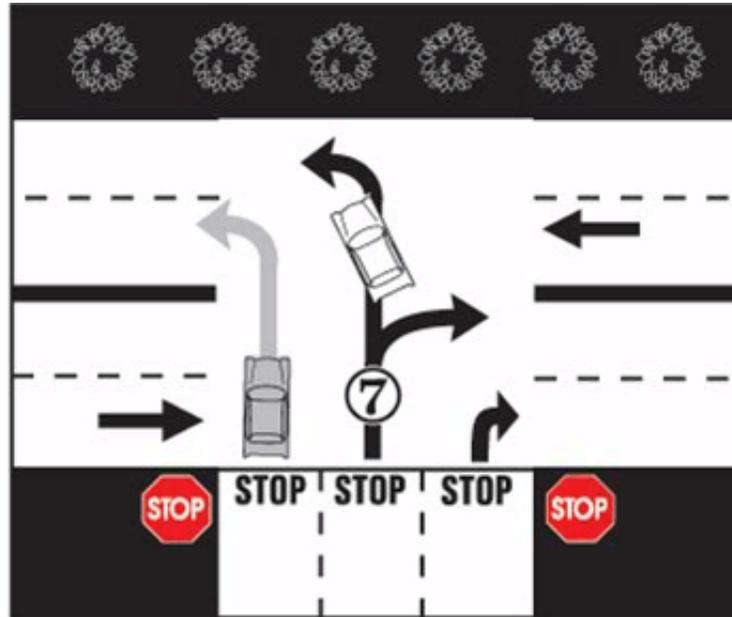


7.13.1.11 Right Turn from a One-Way Street into a One-Way Street

After starting your turn in the far right lane, your turn will end in the lane nearest you. Sometimes signs or pavement markings will let you turn right from a lane next to the far right lane (shown by *).

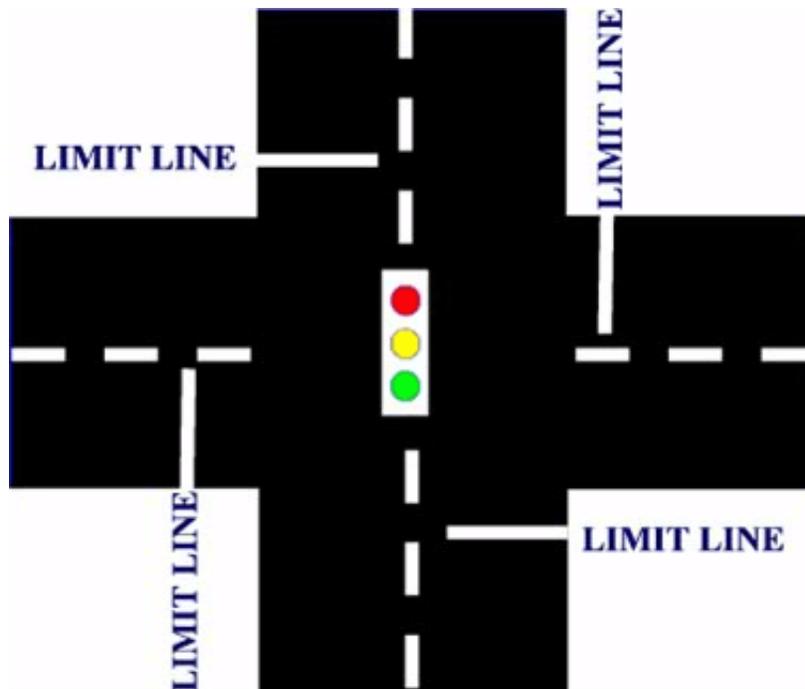
7.13.1.12 Turn at a "T" Intersection from a One-Way into a Two-Way Street (unless otherwise marked).

Through traffic has the right-of-way. You may turn either right or left from the center lane. Watch for vehicles and bicycles inside your turn.



7.13.1.13 Other Types of Turns; Right Turn Against a Red Light

Make a full stop for a red traffic light at the limit line, if there is one, or before entering the intersection.



7.13.1.14 Left Turn Against a Red Light on a One-Way Street Only

Make a full stop for a red traffic light at the limit line, if there is one, or before entering the intersection. On a one-way street, you may turn left into a one-way street where traffic moves left if there is no sign which prohibits the left turn. If the light is red, be very careful that you do not interfere with pedestrians, bicyclists, or vehicles moving on their green light.

7.13.1.15 No Turn Against a Red Arrow

A right or left turn may not be made against a red arrow.



7.13.1.16 Legal U-Turns

When you make a U-turn, you turn around and go back the way you came.

1. Make the turn only from the far left lane on your side of the road.
2. If the street has a center left turn lane, begin your U-turn in that lane, provided there are no vehicles to your left.
3. At an intersection, unless a "No U-turn" sign is posted.

Before you make a U-turn on a divided highway, be sure you won't drive over or across any dividing section, curb or strip. This includes: 1) Double lines marking a center divider, except through an opening provided for turns. 2) The unpaved median in the middle of the freeway.

U-Turn in a Business District

No person in a business district shall make a U-turn except at an intersection, or on a divided highway where an opening has been provided. This turning movement shall be made as close as practicable to the extreme left hand edge of the lanes moving in the driver's direction.

U-Turn in a Residential District

No person should make a U-turn when any other vehicle is approaching from either direction within 200 feet, except at an intersection when the approaching vehicle is controlled by an official traffic control device.

Unobstructed View Necessary for U-Turn

No person shall make a U-turn upon any highway where the driver does not have an unobstructed view for 200 feet in both directions along the highway and of any traffic thereon.

7.13.1.17 Illegal U-Turns

Never make a U-turn on a highway by crossing a curb, or a strip of land, or two sets of double lines.



YOU MAY NOT MAKE A U-TURN:

1. Where you cannot clearly see in each direction because of a curve, hill, rain, fog, or other reason.
2. Where a "No U-Turn" sign is posted.
3. When vehicles may hit you.
4. On a one-way street.
5. In front of a fire station. Never use a fire station driveway to turn around.

Anytime you're turning follow these simple step-by-step procedures:

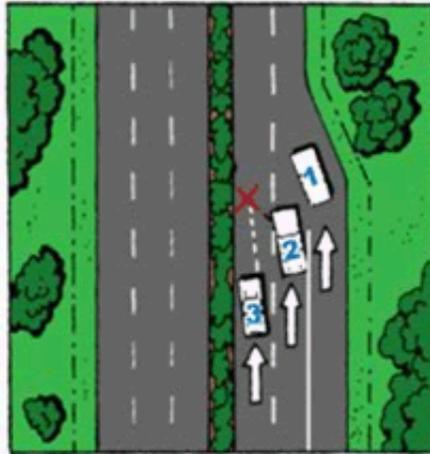
1. Signal to let others know of your intentions.
2. Move into the proper lane from which to turn.
3. Yield to oncoming cars and pedestrians.
4. Complete the turn into the proper lane.

7.13.2 Case Review



This crash scenario takes place on a highway where the right lane is ending. The car needs to merge left into the next lane. As you're reading, pay close attention to each car's involvement in the crash. Determine who is at fault and if any laws were violated. Remember sometimes more than one car causes the crash even if they're not legally liable.

Car number one is in the far right lane of a highway where the lane is ending. Car number one doesn't notice the arrows on the road pointing to merge left. Car number two is in the middle lane and Car number three is in the left lane alongside car number two.



Car number one all of a sudden realizes they have no more lane and puts on their left turn signal attempting to change lanes. They roll down the window and start waving. Car number two and three speed up not allowing car number one to merge left.

Now car number two and car number three are alongside of car number one giving him the evil eye. Car number one accelerates, attempting to pull out in front of car number two. To avoid a collision car number two swerves over into car number three's lane causing a collision.

Car number two and car number three having crashed pull off to the side of the road to fight, and exchange information. Car number one drives away laughing.

Who caused the crash?

Car number one, car number two or car number three?

The answer is car number one.

Car number one caused the crash because their lane ended. We covered yielding the right-of-way earlier in this course. Car number one had no more road! Car number two and car number three should not have sped up.



Whenever you can avoid a crash, you do it! It's the same scenario as pulling out of your driveway. If this was your driveway you wouldn't just pull out and force people to stop.

When your lane ends you need to slow down!

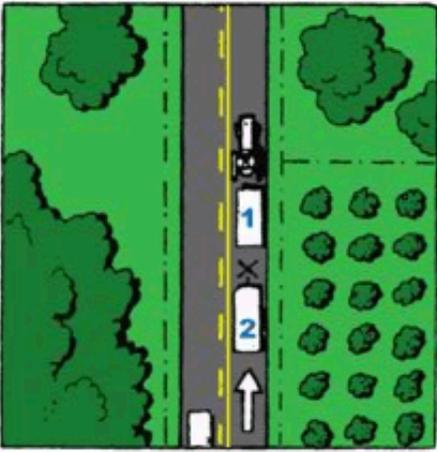
It's like leaving a football game. There are 10,000 cars pulling out of the parking lot onto the highway. Sometimes you have to stop and merge with the other cars. You must wait for somebody to let you in.

7.13.3 Case Review



This is a picture of a small country road going uphill with a solid yellow line on the right hand side of the road. There's a van full of rock-n-roll musicians coming back from an all-night concert. It's about 6:00 a.m. in the morning and they're impaired. The van is driving extremely slow causing traffic to build up behind them.

Two cars have been following this van for the last 15 miles. There are about 18 people in this van, the road crew and the band going up this hill 10 mph in a 35 mph speed zone. Car number one and car number two have been behind this van for the last 15 miles.



They're saying, "What's going on! We can't stay behind this van any longer!" Finally, car number one says, "I'm going to try and pass." Car number one pulls out to pass. As car number one pulls out car number two speeds up, of course. There is an unwritten law that you have to speed up and take the place of the car that was in front of you.

As they start to pass, car number one sees another car coming head-on straight at them from the other direction. That's why there is a solid yellow line on their side of the road (NO PASSING ZONE).

Car number one, not being able to pass, tries to squeeze back into the lane, but car number two has closed the gap between themselves and the van and there's not enough

room. Car number one and car number two having crashed, pull off onto the side of the road. The van pulls over to see what happened. Who's at fault?

The answer is car number two.

Here's why. This is considered a rear-end collision. Anytime you're hit from behind the driver who hits you is at fault because they're not leaving enough room between them and the car in front. Car number two should have maintained at least a three second gap between themselves and the van, or at least two seconds. In this scenario all the drivers contributed to this crash. The driver of the van should not have been driving under the influence, or impaired.

The van should not have been going so slow, impeding traffic. Car number one should not have been trying to pass where there's a solid yellow line. Car number two should have maintained a gap of at least three seconds between them and the van.

When you have space in front of you, don't close the gap. Always keep a minimum three second gap between you and the car in front.

7.13.4 Case Review

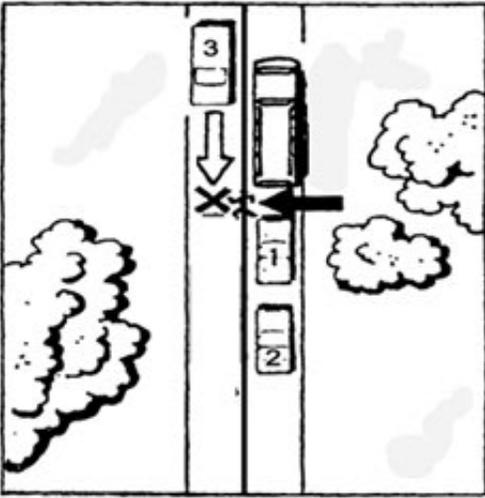
4

Case Review

The Case of the Invisible Pedestrian

This is a picture of a small country road going uphill with a solid yellow line on the right hand side of the road. Two cars are following the bus up the hill. A third car is approaching in the opposite lane from the other side of the hill. It is mid-morning and road conditions are good.

The bus, for no apparent reason, all of a sudden stops in the middle of the road. The bus driver is having a heart attack and has passed out behind the wheel. The door swings open and Pete the pedestrian jumps out of the bus and yells "Our driver passed out, we need help!!"



The bus is now stuck in the middle of the road. Car number one and car number two are not going to try and pass the bus after what happened in the last crash scenario; they're stuck behind the bus. Pete knows he needs to call for help.

He sees a farm house across the street and wonders if they have a phone. He makes eye contact with the driver of car number one. Can I cross? Car number one gestures to go ahead and cross. Pete is distracted as he begins crossing between the bus and car number one.

As he runs across the street Pete laments never signing up for that CPR course he'd seen offered. Just as Pete makes himself a promise to sign up for the next course, guess what? Here comes car number three over the hill going 35

mph in a 35 mph speed zone.

The driver of car number three sees Pete too late, slams on the brakes and skids for almost 100 feet. Car number three hits Pete so hard, that he flies up over the roof of the car. Dead!

Who's at fault in this fatal crash?

The bus?

Car number one?

Car number two?

Car number three?

Pete?

The bus driver?

The answer is Pete.

Pete crossed between two stopped vehicles. A pedestrian must use the crosswalk at an intersection, wait on the corner until cars stop for them, make eye contact with each driver as they cross, and walk briskly across the street. A driver must always try to avoid pedestrians but pedestrians are responsible for their own safety. Car number three couldn't see Pete as they were coming over the hill. They tried to stop to avoid Pete. This is considered a non-chargeable fatal crash.

When driving a car, you must take every possible step to insure pedestrian safety. It's a simple fact of physics: if you hit a pedestrian with a car, the pedestrian is going to get hurt. Be extra careful around pedestrians and always lookout for them.

7. 14. Crashes

If you see vehicle hazard lights ahead slow down. There may be a crash or other road emergency ahead. Stop and give assistance, or pass carefully. Radio or news reports often provide information relating to crashes. Avoid driving near crashes. Take another road, if you can. Those injured will be helped faster if other vehicles are not blocking the roadway. If you must drive near a crash, don't slow down or stop just to look. You may cause another crash.

Drive by carefully, watching for people in the road. Never drive to the scene of a crash, fire or other disaster to look. You may block police, fire fighters and ambulances, and you may be arrested.

7. 15. What to do if you're Involved in a Traffic Crash

Your chances of being involved in a crash will be significantly reduced assuming you use the tools you've just learned. Here are some basic steps to follow if you are ever involved in a car crash.

First, you must stop - unless you're in the line of oncoming traffic, stop. If you're in the line of oncoming traffic, then pull off onto the nearest shoulder on the road and stop. You are breaking the law if you do not stop at the scene of a crash.

Move your car - away from the traffic flow and warn oncoming traffic, if possible. You should turn on your emergency flashers and place flares or safety triangles at least 200-300 feet behind your vehicle.

Exchange information - with the other driver and passengers. You should exchange names and addresses, driver license information, names of insurance companies, and vehicle registration information. If you're involved in a collision with a parked car, you must leave this information on or in the car. Perhaps on a sheet of paper placed under the wiper blade.

Make sure you have accurate information, including the license plate numbers of all the cars involved. Take pictures if you have a camera. Get names or business cards of witnesses you may need to verify the events of the crash. Not doing so may result in hit-and-run charges against you.

Now it's time for your sixth quiz. Click the button below to start. Thanks and good luck.



8. Environmental Hazards and Vehicle Emergencies

- Driving Conditions
- Environmental Hazards
- Use Caution
- Vehicle Emergencies
- Use Your Emergency Signals



8. 1. Driving Conditions

This chapter covers driving conditions (rain, fog and snow) and how to cope with the emergencies you may encounter.

8. 2. Environmental Hazards

[Take the video quiz](#)

8. 3. Use Caution

8.3.1 Darkness

Drive more slowly at night because you cannot see as far. Motorcycles are harder to see at night because most have only one taillight. You will have less time to stop if there is a hazard ahead. Make sure you can stop within the distance lit by your headlights.

You must turn your headlights on 30 minutes after sunset and leave them on until 30 minutes before sunrise. Also, turn your lights on any time you can't see at least 1000 feet ahead. Use your low beam headlights whenever it is raining. Don't drive with only your parking lights on.

Use your headlights:

- When it is cloudy, raining, snowing, or foggy.
- On frosty mornings when other drivers' windows may be icy or "foggy".
- Any time you have trouble seeing other cars. Other drivers will be having trouble seeing you, too.
- On small country or mountain roads, it is a good idea to drive with your headlights on, even on sunny days. This will help other drivers see you and may help you avoid a head-on crash.
- Under certain circumstances, you may have to flash your headlights to get another driver's attention.

8.3.2 Be on the Lookout

Whether it is day or night, always be on the lookout for hazardous roads conditions. Sometimes you find yourself on a road that's poorly maintained. These roads could have rough areas or pot holes that cause you to lose your traction and possibly some control of your vehicle. When you encounter these parts of the road, slow down to increase your traction and prepare yourself to maneuver around the bad areas.

Also, keep an eye on the shoulder of the road. Normally the shoulder provides you with an additional place maneuver in order to avoid a crash. Sometimes you have soft shoulders that can't support your vehicle or a sudden drop off from the side of the road. Be aware of these conditions and reduce your speed to better deal with an emergency.

8.3.3 Check the Weather Report

Adverse weather conditions include rain, fog, snow, ice, and high wind. While driving under such conditions, you should adjust your normal driving habits. For instance, high winds can affect the control you have over your vehicle and it is always wise to reduce your speed under these conditions. The most important thing to understand is that bad weather means increased stopping distance and reduced visibility. In bad weather you must take extra care to see and to be seen.

8.3.4 Don't Drive in Fog

Fog is especially treacherous. The best advice is, don't drive in fog if you can help it. If you have to go out, drive very slowly. Keep in mind that a light fog can change quickly to a thick fog. Your speed should never exceed the point at which you think you can stop and at which you can clearly see for a distance ahead. Always use your low beam headlights when you're driving.

High beam rays reflect off the fog, the rain, or the snow particles at about the same level as your eyes, making each particle act like a tiny mirror. It reflects the light right back into your eyes and reduces your vision.



Remember, when driving through fog or snow, don't use your high beams.

- Drive slowly and turn on your low beams.
- Increase your following distance and be on the alert for brake lights up ahead.
- If you are behind another vehicle be prepared to stop.
- If you can't see pull completely off the road and turn off your lights so that another vehicle doesn't see your tail lights and plow into you.
- Don't drive until conditions improve.

8.3.5 Slow Down During Rainstorms

In rainy weather, the hazard of reduced visibility is compounded by reduced traction. Traction is the grip between your tires and the road. As the moisture reduces friction, tires lose their grip. The distance needed to stop a car increases and the driver has less control of their vehicle. The danger of reduced traction is greatest within the first half hour of rainfall. At that time, the pavement becomes especially slippery, as the water mixes with the oil and the dust on the surface of the road.

8.3.6 Be Cautious

You should always drive with caution whenever there is a chance that your traction will be reduced. The roads could be slick with rainwater or with spilled oil or fuel. Water on the road can create a slippery surface.



If you find yourself driving on slick roads, here are some safety tips to follow:

- Gradually reduce your speed.
- Do not brake hard or suddenly on wet or slippery pavement.
- Avoid any sudden acceleration. When you change your speed or direction, do so smoothly and gradually rather than sharply.
- Increase your following distance to allow more time to stop. If you approach a sharp curve or a hill, grip the steering wheel firmly and give yourself time to slow down.
- In heavy rain or still water, your tires can actually lose contact with the road and glide over the water. It's called HYDROPLANING. If you start to hydroplane, first of all, stay calm.
- Don't brake suddenly, but apply gentle pressure on your brakes. Plan ahead so that you don't come to a full stop until you are out of the water.

Skidding

Remember, your chances of going into a skid increase drastically when driving on slick or wet roads, so adjust your speed and stay alert. You could even skid on dry pavement. When you skid, the back of your car begins to turn. The main thing to remember is:

- Never lock your brakes.
- Ease your foot off the accelerator.
- Steer in the direction of the skid.
- Stop when you have regained control of your car.

8.3.7 Anti-Lock Brakes

If you must stop quickly, your next action will depend on whether your vehicle is equipped with anti-lock brakes (ABS). If you have anti-lock brakes, just press firmly and the computer will take over.



Do not pump your brakes. You may hear noise coming from your wheels or a vibration in the brake pedal. Don't panic this is all part of the braking system adjusting the pressure applied to each wheel to prevent the car from skidding out of control.

8.3.8 Non Anti-Locking Brakes

If you do not have antilock brakes, you must do the complete opposite. Apply a quick pumping motion onto your brake. It's very, very important that you steer smoothly, not sharply, into the skid.



8.3.9 Water on the Road

After a storm be aware of standing water. When you see a large pool of water covering the road, you should do whatever you can to avoid it. Even if the water doesn't look that deep, don't drive through it. Find a way to go around it.



Many hazards can be hiding in standing water. One of the most treacherous is sinkholes. After a heavy rain or tropical storm, the ground can sometimes do unpredictable things. The ground will give way from all the water soaking through it, and forms huge depressions in the roadway. But, because it's covered by a pool of water, you have no idea it's there. Its appearance is deceiving. You may think you can just drive through this water, it's just a puddle. The next thing you know your car is twenty feet underwater.

8.3.10 Flash Floods

Another danger is flash floods. That pool of water, even just six inches of water, could be hiding a current that will just sweep your car away. Every year cars and trucks flip over into ditches and get carried away by runoff from a flash flood. Find a safe way around it. If you have absolutely no other option but to drive through it, then please be careful. Keep an eye out for currents. Drive slowly. You never know how deep the water really is or what it's hiding.

8.3.11 Snow and Ice

One of the most difficult times to drive is when the roads are covered with snow and ice.



In snowy conditions, a four-wheel drive vehicle will outperform any other type of vehicle, even one with chains on the rear wheels. Your performance can be helped by using snow tires or chains. Snow tires are not good for ice or packed snow; they will slide more than regular tires.

When driving on snow, do not slam on the brakes as you will lock them and lose steering control. When you slow down, lightly pump the brake to prevent skidding.

And when driving on ice, be extra careful. You may notice that the car has a slight drifting motion. This is your sign that the car has lost traction. In cases such as this always steer straight. And ease your foot off the accelerator. Don't make sudden steering changes or you may lose control of the car.

Don't try to navigate hills, either up or down. In these conditions, you have very little control over steering or stopping. Remember, snow and ice reduce visibility, steering control, traction and maneuverability.

Other precautions to take:

- If you have to drive in snow or sleet, drastically reduce your speed, and greatly increase your following distance.
- If you have a stick shift, drive in the next highest gear. You can also shift down to a lower gear to aid in braking.
- If you have an automatic transmission, use the "Drive" position you normally drive in and always avoid slamming on your brakes.
- If at any time you start to skid, take your foot off both the accelerator and brake, and turn your wheels into the direction of the skid. When you start to skid to the right, turn your wheels to the right. This action will minimize the skid and enable you to regain better control of your vehicle's direction.

8.3.12 Driving in Traffic

- Drive slower in heavy traffic because you have less room.
- Drive slower so you can stop in the distance you have. As a general rule, drive more slowly:
 - In shopping centers, parking lots, and downtown areas.
 - On roads with heavy traffic.
 - When you see brake lights coming on several vehicles ahead of you.
 - Over narrow bridges and through tunnels.
 - Through toll plazas.
 - Near schools, playgrounds, and in residential areas.

8.3.13 Dealing with Traffic Congestion

Chronic traffic congestion is the Texas commuter's biggest headache, but even small changes in driving habits could provide fast relief. Several driving behaviors which contribute to congestion include:

Rubbernecking-perhaps the most frustrating of behaviors. Slowing down to look at collisions or virtually anything else out of the ordinary, is one of the worst congestion offenders.

Tailgating-following too closely is common on Texas freeways, accounting for innumerable collisions which in turn clog major freeways, often for hours.

Unnecessary lane changes-although it produces virtually no improvement in arrival times, many motorists insist on weaving in and out of freeway lanes, which slows down all traffic.

Inattention-commuters can commonly be seen eating, grooming in the rearview mirror, talking on a cellular telephone, and even reading the newspaper as they drive to work.

Traffic congestion can also be caused by drivers who do not watch the fuel gauge or maintain their vehicles properly. These vehicles can malfunction or stall on freeways or surface streets and cause bottlenecks and major slowdowns in traffic flow.

8.3.14 How Fast is Traffic Moving?

Crashes tend to happen when one driver is going faster or slower than other cars on the road. If you are going faster than traffic you will have to keep passing other cars. Each time you pass another car, there is a risk of a collision.



The car you are passing may suddenly change lanes. On a two-lane road, an oncoming car may appear suddenly. You may not think that this is a big risk, but if you are passing one car after another, the risks begin to add up. Studies have shown that speeding does not save more than a few minutes in an hour's driving.

Going slower than other cars or stopping all of a sudden can be just as bad as speeding. It tends to make cars bunch up behind you and it could cause a rear-end collision. If many cars are pulling out to pass you, move into the right hand lane and let them pass.

8. 4. Vehicle Emergencies

[Take the video quiz](#)

8. 5. Use Your Emergency Signals



If your car breaks down on the road, make sure that other drivers can see it. Many collisions happen because a driver didn't see a stalled vehicle until it was too late to stop.

If you are having car trouble and need to stop, follow these rules:

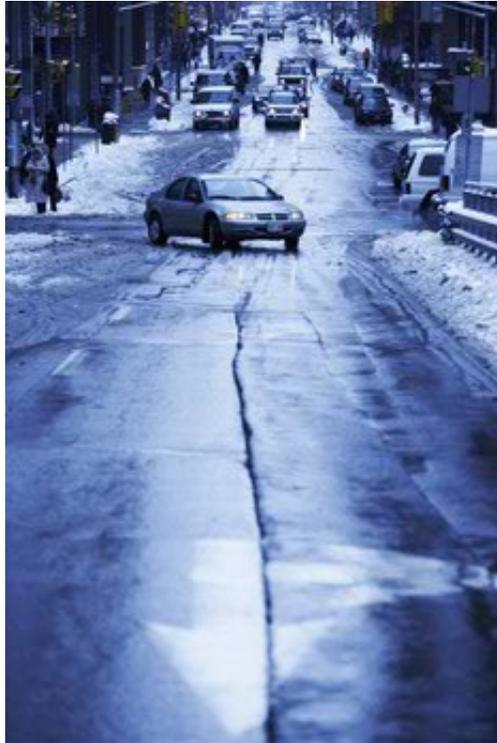
- Pull off the road away from all traffic, if possible.
- If you cannot get completely off the road, stop where people can see you and your car from behind. Don't stop just over a hill or just around a curve.
- Turn on your emergency flashers if you see a hazard or collision ahead.
- Also, use your emergency flashers if you are not moving.
- If your car doesn't have flashers, turn signals may be used instead.
- If it is safe, lift the hood to signal an emergency.

8.5.1 Give Other Drivers Plenty of Warning

Place emergency flares or triangles 200 to 300 feet behind the car. This allows other drivers time to change lanes, if necessary. Be very careful when using flares. They may cause fires, especially when used near flammable liquids.

If you don't have emergency flares, follow the rules listed and stay in your vehicle until help arrives. Be careful for your safety and stay off the road. Don't even try to change a tire if it means you have to stand in a traffic lane. You never know what potential environmental hazard or vehicle emergency you will encounter when driving.

Remember, you never know what potential environmental hazard or vehicle emergency you will encounter when driving.



Now it's time for your seventh quiz. Click the button below to start. Thanks and good luck.



9. Safety Equipment and Vehicle Maintenance

- Safety Equipment
- Review
- Lighting
- Brake System
- Tires
- Horn
- Muffler
- Windshield
- Check Your Fluids
- Safety Features
- Why Should You Wear Your Seat Belt?



This chapter looks into the safety features of your motor vehicle, the laws associated with these safety features and the maintenance of your vehicle.

9. 1. Safety Equipment

[Take the video quiz](#)

9. 2. Review

In Texas, vehicles are required to display a license plate on both the front and back of the vehicle, otherwise they risk being charged with a misdemeanor a fine of up to \$200.

Let's review a list of required safety equipment and some reasons why it is there.

9.2.1 Mirrors

Every motor vehicle and motorcycle, subject to registration in this state, shall be equipped with a mirror so located as to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear of such vehicle.

Every motor vehicle subject to registration in this state, except a motorcycle, shall be equipped with not less than two such mirrors, including one affixed to the left-hand side.



Rearview mirror

You should get in the habit of checking your rearview mirror every two to five seconds.



Safety Belts

These should be available for every passenger, and not stuck under the seat! As a matter of fact, this is such an important component we have dedicated a whole section to this topic later in this chapter.

9. 3. Lighting

9.3.1 Light Equipment Requirements

- All lighting equipment of a required type installed on a vehicle shall at all times be maintained in good working order.
- Lamps shall be equipped with bulbs of the correct voltage rating.

- The voltage at any tail, stop, license plate, side marker or clearance lamp socket on a vehicle shall not be less than 85 percent of the design voltage of the bulb.
- Two or more lamp or reflector functions may be combined, provided each function subject to requirements established by the department meets such requirements.
- No turn signal lamp may be combined optically with a stop-lamp unless the stop-lamp is extinguished when the turn signal is flashing.
- No clearance lamp may be combined optically with any tail-lamp or identification lamp.

9.3.2 Headlights

During darkness every motor vehicle, other than a motorcycle, shall be equipped with at least two lighted headlamps, with at least one on each side of the front of the vehicle. Low beams: should illuminate the road at least 100 feet ahead of you. High beams: should illuminate the road at least 350 feet ahead of you. Keep them clean and check for burned out bulbs and you should always make sure that your high beams aren't directly in the eyes of oncoming drivers.

9.3.3 Auxiliary Driving Lamps

Any motor vehicle may be equipped with two auxiliary driving lamps mounted on the front at a height of not less than 16 inches nor more than 42 inches. Driving lamps are lamps designed for supplementing the upper beam from headlamps and may not be lighted with the lower beam.

9.3.4 Fog Lamps

Any motor vehicle may be equipped with two fog-lamps which may be used with, but shall not be used in substitution of, headlamps. Fog-lamps shall be mounted on the front at a height of not less than 12 inches nor more than 30 inches.

9.3.5 Fog Tail Lamps

- A vehicle may have no more than two red fog tail lamps mounted on the rear (in addition to the required tail lamps).
- The rear fog tail lamps may be lighted only when atmospheric conditions, such as fog, rain, snow, smoke, or dust, reduce the daytime or nighttime visibility of other vehicles to less than 500 feet.
- When two lamps are installed, one shall be mounted at the left side and one at the right side at the same level and as close as practical to the sides. When one lamp is installed, it shall be mounted as close as practical to the left side or on the center of the vehicle.
- The lamps shall be mounted not lower than 12 inches nor higher than 60 inches.
- The edge of the lens of the lamp shall be no closer than four inches from the edge of the lens of any stop lamp.
- The lamps shall be wired so they can be turned on only when the headlamps are on and shall have a switch that allows them to be turned off when the headlamps are on.
- A non-flashing amber pilot light that is lighted when the lamps are turned on shall be mounted in a location readily visible to the driver.

9.3.6 Multiple Beams

Except as otherwise provided, the headlamps, or other auxiliary driving lamps, or a combination thereof, on a motor vehicle during darkness shall be so arranged that the driver may select at will between distributions of light projected to different elevations, and the lamps may, in addition, be so arranged that the selection can be made automatically.

9.3.7 Upper and Lower Beam

Upper and lower beams shall be aimed and produce light sufficient to:

- **Upper** - reveal a person or vehicle at a distance of at least 450 feet ahead.
- **Lower** - reveal a person or vehicle at a distance of at least 150 feet ahead.

9.3.8 Use of Multiple Beams

- When driving during darkness, you should use the correct lighting that provides sufficient intensity to reveal persons and vehicles at a safe distance in advance of the vehicle, subject to the following requirements and limitations.
- Whenever you approach an oncoming vehicle within 500 feet, you should use a distribution of light or composite beam so aimed that the glaring rays are not projected into the eyes of the oncoming driver.
- Use your low beams to avoid glare at all times regardless of road contour.
- Whenever you follow another vehicle within 300 feet to the rear, use your low beams.

9.3.9 Single Beams

Headlamps arranged to provide a single distribution of light not supplemented by auxiliary driving lamps are permitted on motor vehicles manufactured and sold prior to September 19, 1940, in lieu of multiple-beam road lighting equipment if the single distribution of light complies with the following requirements and limitations.

The intensity shall be sufficient to reveal persons and vehicles at a distance of at least 200 feet.

9.3.10 Maximum Number of Lamps

You cannot have more than four lamps of the following types showing to the front of a vehicle lighted at any one time:

- Headlamps
- Auxiliary driving or passing lamps
- Fog lamps
- Warning lamps
- Spot lamps
- Gaseous discharge lamps

9.3.11 Turn Signal Lights

You should have flashing signal lights on the front and rear of your vehicle, which are visible from 300 feet and clearly indicate an intention to turn. The front turn signals should be white or amber, and the rear turn signals red or amber.

9.3.12 A White Light

The light on your license plate should make the numbers on the plate readable from a distance of 50 feet.

9.3.13 Two Tail Lights

Tail lights must be red in color and visible 1,000 feet behind your vehicle.



9.3.14 Brake Lights

There should be two stop lights, bright enough that you can tell them apart from the tail lights and visible 300 feet behind you during the day and at night.

9.3.15 Backup Light

At least one white light in the back of your vehicle that lights up when you put your car in reverse warning other drivers that you are backing up or are about to back up.

9. 4. Brake System

Every motor vehicle shall be equipped with a service brake system, and every motor vehicle, other than a motorcycle, shall be equipped with a parking brake system. Both the service brake and parking brake shall be separately applied. If the two systems are connected in any way, they shall be so constructed that failure of any one part, except failure in the drums, brake shoes, or other mechanical parts of the wheel brake assemblies, shall not leave the motor vehicle without operative brakes.

The parking brake must be able to hold your vehicle stationary on any grade. The parking brake shall be applied either by the driver's muscular efforts, by spring action, or by other energy which is located and used exclusively for the operation of the parking brake or the combination parking brake and emergency stopping system. The parking brake shall be held in the applied position solely by mechanical means.

The service brakes of your vehicle must be able to control the movement of and to stop and hold your vehicle under all conditions of loading on any grade on which it is operated.



Your vehicle, at any time and under all conditions of loading, shall, upon application of the service brake, be capable of stopping from an initial speed of 20 miles per hour according to the following requirements:

	Maximum Stopping Distance (feet)
Any passenger vehicle	25
Any single motor vehicle with a manufacturer's gross vehicle weight rating of less than 10,000 lbs	30
Any combination of vehicles consisting of a passenger vehicle or any motor vehicle with a manufacturer's gross vehicle weight rating of less than 10,000 lbs. in combination with any trailer, semi-trailer or trailer coach	40
Any single motor vehicle with a manufacturer's gross vehicle weight rating of 10,000 lbs. or more or any bus	40
All other combinations of vehicles	50

Check the pads and parking brake systems regularly. All brakes and component parts should be maintained in good condition and in good working order. The brakes must be adjusted as to operate as equally as practicable with respect to the wheels on opposite sides of the vehicle.

9. 5. Tires

Tread Depth of Pneumatic Tires

What is a pneumatic tire? Basically it is any tire filled with air, such as the ones on a car, or bicycle. You've probably heard people say 'Your tires are bald' - well that means that there is not enough tread on them. Texas regulates the amount of tread that you must have on your tires.

Texas law requires that all pneumatic tires on passenger vehicles have at least $\frac{1}{32}$ nd of an inch tread depth in any two adjacent grooves. The measurement of tread depth shall not be made where tie bars, humps, or fillets are located. You can gauge the depth of your tire treads by inserting a penny into the tread. If you can see Lincoln's entire head, it's time for you to get new tires.

If your tread depth is less than $\frac{1}{32}$ nd then you may not operate your vehicle on a highway. The only exception is if you become disabled (i.e. get a flat) and temporarily install a spare tire.



Snow Tires must be $\frac{6}{32}$ of an inch tread depth at all points in all major grooves on snow tires used in lieu of tire traction devices in posted traction device control areas.

Your tires should be inflated to produce maximum contact between the tires and the road. Over-inflation will decrease that contact area, reducing traction. Under-inflation will put pressure on the sidewalls of the tires and raise their temperature, which could cause a blowout. You should check tire pressure daily, and you should also check for wear on the treads. You should also equalize the wear on your tires by having them rotated every 12,000 miles.

Keep in mind that tire depth rules are different for other types of vehicles. Trucks of three or more axles that are more than 10,000 pounds gross, buses, school buses, trailers and semi-trailers or any truck, or any combination of a truck and any other vehicle, transporting hazardous materials - they all must have a tread depth of 4/32nd of an inch at all points in all major grooves on tires mounted on the steering axle and 2/32nd of an inch tread depth at all points in all major grooves on all other tires on the axles.

9. 6. Horn

Every motor vehicle, when operated upon a highway, shall be equipped with a horn in good working order and capable of emitting sound audible under normal conditions from a distance of not less than 200 feet, but no horn shall emit an unreasonably loud or harsh sound.

No driver of a vehicle shall operate, or permit the operation of, any sound amplification system which can be heard outside the vehicle from 50 or more feet when the vehicle is being operated upon a highway, unless that system is being operated to request assistance or warn of a hazardous situation.

You should only use your horn to warn other drivers or to prevent a crash, not to show how upset you are because you missed your morning coffee or to say "hello".



9. 7. Muffler

To reduce noise and pollution it is illegal to remove or disconnect any pollution control device on your vehicle. I'm sure that law makes us all breathe a little easier.



9. 8. Windshield

The windshield must be made of special safety glass and cannot be tinted with any film that restricts your view or makes the surface reflective. Any crack in the windshield, regardless of size, must be repaired immediately (within 48 hours). Even a tiny chip could violate the integrity of the windshield and cause it to shatter. If you have sun visors over your windshield, they must be non-reflective and easily moved out of the way.

You cannot have any objects attached to your windshield, side or rear windows that would obstruct your vision. It is against the law to drive with any defective or obstructed windshield or rear window.

Keep your windshield and side windows clean inside and out. Bright sun or headlights on a dirty window make it hard to see out. You should clear ice, frost, or dew from all windows and outside mirrors before you drive.

It is illegal to block your view of the road by putting signs or other objects on the front windshield. Don't hang things on the mirror. Don't block your view through the back or side windows with objects or signs.

Tinted safety glass is allowed in permitted locations. Motorists with sun-sensitive skin can use removable sun screens on their vehicle's side windows during daylight travel if they have a letter from their physician. Under Texas law, if you have a window tinting applied to your windows, the installer is required to place a safety compliance label certifying that the tint complies with the appropriate provisions of the Transportation Code.

Windshield stickers, etc., are permitted only in four places:

- A seven inch square in the lower corner of the windshield farthest from the driver
- A five inch square in the lower corner of the windshield nearest the driver
- A seven inch square in the lower corner of the rear window farthest removed from the driver
- Side windows to the rear of the driver.

Make sure you can see and be seen. If you drive in rain or snow, you may have to stop sometimes to wipe mud or snow off your windshield, headlights, and taillights.



Windshield Wipers

To keep the dirt and rainwater away from your windshield, you will need two windshield wipers. Check the wiper fluid and replace the rubber blades regularly.



9. 9. Check Your Fluids

Check all your fluids: oil, water, steering, transmission, brake. Change and check all the light bulbs and listen for unusual noises and sounds. These are probably the easiest and most important maintenance tips. Driving without water or oil can cause thousands of dollars in damage to your engine, when it costs \$20 to \$35 to change the oil in your vehicle. You can add water for free at most service stations.

Now, with all the precautions you are going to take after you complete this course, your chances of being involved in a crash, assuming you follow our advice, will be drastically reduced. However, you should be prepared - just in case.

9. 10. Safety Features

9.10.1 Headrests

One of the most overlooked safety features in your vehicle is the headrests. Believe it or not, it is not just for comfort but is a very important safety device. If your headrest is not properly adjusted, and you are involved in a crash, your head will actually snap back. I'm sure you've heard of the term WHIPLASH. The headrest should always be adjusted so that it fits right along the center of the back of your head.

9.10.2 Airbags

The invisible safety feature in most newer cars today is the airbag. Airbags are designed to soften the force of impact during a crash. Many manufacturers are also installing side and head airbags as well.

Airbags absorb only the initial impact in a crash. If you are involved in a crash where your vehicle hits more than one object it's only effective during the initial impact. There is still a danger of sustaining injuries from a secondary collision.

Air bags are more effective in certain types of crashes than others. They're more effective in a head-on collision versus a crash that occurs from an angle. The airbag alone is not adequate protection. It will only do its job if combined with properly worn and properly adjusted headrest and safety belt.

How does an airbag work? There is this little sensor installed somewhere in front of the driver under the hood. If this section of the vehicle is jarred by a collision, the sensor sends a message to the airbag to activate.

Have you ever seen an airbag activate? On television when you see an airbag deploy, they show it in super, super slow motion. It looks like the airbag stays inflated for a long period time, but it's not. Did you know that an airbag inflates and deflates in the time it takes you to blink your eye? Approximately a 10th of a second. Why is that? If the airbag stayed inflated after the initial impact in a crash, you wouldn't be able to see. So, the airbag inflates and deflates quickly so you can avoid having a second collision.

A second collision may occur if your vehicle bounces off the car you crashed with, and starts heading for a cliff or tree. The airbag deflating quickly allows you to steer away from the other object you're about to hit.

In 2011, an estimated 2,204 lives were saved by air bags. From 1987 to 2011, a total of 34,757 lives were saved.⁽¹⁾

There are actually some dangers associated with airbags! Let's put a few things in perspective. The airbag is a very important safety feature in your car, but like anything else, it could have an adverse effect if not properly used. Because of the force produced when the air bag inflates, it could cause injuries or death to small children and even to adults.

Here are some basic precautions you should follow:

- Position your seat as far away from the airbag as possible.
- Don't sit any closer than ten inches from the steering wheel.
- Place children and special child seats in the back seat.
- If you absolutely must place a child on the front seat, move the seat as far back as it will go.

If you don't think you can follow these guidelines, you might have one other option. Some newer cars allow you to install a kill switch to disconnect your passenger side air bags. If your car doesn't have that feature, you can take it to your dealership or an authorized mechanic. However, keep in mind you must get permission from the National Highway Traffic Safety Administration before you install a kill switch or deactivate the airbag.

9.10.3 Safety Belts and Child Seats

The law requires that any child younger than 8 years of age be restrained in an approved child passenger safety seat unless the child is at least 4 feet, 9 inches in height. Additionally, no one younger than 18 years old may ride in the open bed of a vehicle or trailer, unless it's the only vehicle owned by the household.

In choosing a safety seat for your child, remember three important points. It must have a seal of federal approval, it must fit properly in your car, and it must be the proper size for your child.

And remember; never place a child safety seat in the front seat of any vehicle. Deaths of children in collisions have occurred at speeds of less than 10 mph. So be safe and always secure your child in a federally approved safety seat in the back seat of the car.

Front seat belts are required equipment if seat belt anchorages were part of the original equipment of your automobile. This applies to most cars on the road today.

The law requires all occupants of a vehicle, no matter what their age, to be secured by a safety belt, no matter where they are seated in the vehicle.

The law also prohibits a motorcycle operator from carrying a passenger under the age of 5 unless the child is seated in a sidecar attached to the motorcycle.

If you're involved in a collision, your safety belts are designed to keep you well within the safety zone within your car. This helps you maintain better control of the vehicle to avoid secondary collisions.

By making the impact of the first crash work on you sooner, belts give you the benefit of decreasing stopping distance, while dissipating the forces of the impact quickly. The belt takes the brunt of the impact instead of your body taking it by flying through glass and steel. According to a recent research report from the National Highway Traffic and Safety Administration, in 2011, seatbelts saved an estimated 11,949 lives among passenger vehicle occupants aged 5 and older.⁽¹⁾

Remember to wear lap belts around your hips, not your stomach. Fasten them snugly. Wear a shoulder belt only with a lap belt. Don't just use your safety belt for long trips or high-speed highways. More than half of the crashes that cause injury or death happen at speeds less than 40 mph, and within 5 miles of home.



Nationally in 2011, an estimated 51% of all vehicle occupants killed in crashes were unbelted (for which restraint use was known). The statistics are even more alarming for pickup truck drivers. In 2011, 64% of the pickup truck drivers killed in traffic crashes were not using restraints.⁽¹⁾

The National Highway Traffic Safety Administration (NHTSA) estimates if ALL passenger vehicle occupants over age 4 wore safety belts, 15,333 lives (that is, an additional 3,384) could have been saved in 2011.⁽¹⁾

9.10.4 Protecting Children

Are you aware that traffic crashes are the number one killer of young children in this country? This is a very serious issue.

In 2011, there were 216 passenger vehicle occupant fatalities among children under 4 years of age. An estimated 29% were unrestrained.⁽¹⁾

A child who is required to be secured in a child safety seat should always be secured in the rear seat of the vehicle.

A child is allowed to be secured in the front seat of the vehicle only if:

- There is no rear seat
- The rear seats are side facing jump seats
- The rear seats are rear-facing seats
- The restraint system cannot be installed properly in the rear seat
- All rear seats are occupied by children under the age of 12 years
- Medical reasons necessitate that the child not ride in the rear (proof of the child's medical condition may be required)

A child may not ride in the front seat of a motor vehicle with an active passenger air bag if they are under one year of age, weigh less than 20 pounds, or riding in a rear-facing child passenger restraint system. Remember, the back seat is generally the safest place in the car for all children 12 years of age or younger.



9.10.4.1 Child Restraint Use and Benefits

Research on the effectiveness of child safety seats has found them to reduce fatal injury by 71 percent for infants (less than 1 year old) and by 54 percent for toddlers (1-4 years old) in passenger cars. For infants and toddlers in light trucks, the corresponding reductions are 58 percent and 59 percent, respectively.⁽¹⁾

The most important safety feature on your vehicle is safety belts.

If the seat belt is broken or under the seat and not accessible to the passenger, then the driver may not take a passenger in the car. It is the driver's responsibility to insure when you have a passenger in the car that they have a seat belt available to them.

⁽¹⁾ [Traffic Safety Facts 2011 Data Occupant Protection. 14 June 2013.](http://www-nrd.nhtsa.dot.gov/Pubs/811729.pdf) National Highway Traffic Safety Administration. 4 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811729.pdf>.

9. 11. Why Should You Wear Your Seat Belt?

9.11.1 The Force of Impact

The force with which a moving car hits another object is called the "Force of Impact". Three factors affect the "Force of Impact".

9.11.1.1 Speed of the Car

The force of impact at 20 mph is four times that at 10 mph. And the force of impact at 30 mph is nine times greater than at 10 mph.

9.11.1.2 Weight of the Car

The heavier the car is, the harder it will hit any other object.

9.11.1.3 Impact Distance

The force of impact also depends on the distance a moving vehicle travels between first impact with an object and the point where the vehicle comes to a full stop. When the car hits an unmoving solid object, the impact distance is short. The object does not cave in at impact, and so kinetic energy is spent immediately on impact. The shorter the impact distance, the greater the damage.

9.11.2 Reducing the Force of Impact

Many newer model cars have features that help increase impact distance by absorbing the energy. These features include airbags; crumple zones; automatic seat belts; head restraints; energy absorbing bumpers, steering columns, and wheels; padded dashboards; safety glass windshields; and reinforced sides.

Did you know hitting your head at 15 mph has the same force of impact as being hit with a sledge hammer? The same force!

At 30 mph it's like your head is being shot out of a cannon. A cannonball goes 30 mph when it's first fired. Your head weighs almost as much as a cannonball. So, it's like your head is being shot out of a cannon right into your dashboard.

9.11.2 Force of Impact Crash Stories

Remember your great grandfather's car had a wooden dashboard, wooden steering wheel, wooden knobs, everything wooden. Do you know why they stopped doing that? Because if your great grandfather crashed he would go forward from the force of impact and hit his head on the dashboard or steering wheel and die.

Everything in your car today is collapsible. Vehicles are designed to collapse from the force of impact. Even with improved designs and new technology you still need to wear a safety belt. Have you ever seen those crash dummy films? They show the dummies crashing into a wall at just 15 mph. You wouldn't think this could happen, but the dummy hit the mirror and the impact took off half the side of the dummy's head. This is a story from a dentist who had a patient get hit from behind at 8 mph while not wearing their safety belt. The person didn't see it coming.

Their head snapped back and then forward hitting the steering wheel, knocking almost all of their teeth out of their mouth. The other driver didn't have insurance. It took three surgeries to get the rest of their teeth out. A total of \$10,000 in surgeries with no insurance to pay for it.

There's a famous case about a guy in Wisconsin who was coming around a curve and didn't see the ice on the road. There was hidden ice, black ice. He skidded on the ice and hit a little tree on the side of the road going 30 mph. He had his safety belt on, even a shoulder harness. The man was killed by a box of Kleenex from the back-dashboard of his vehicle. The point of the box severed his spine. If you took a box of Kleenex, and shot it out of a cannon into the back of somebody's head, it would kill them.

There was another case where a box of Sucrets killed a woman. The little cough medicine in the metal box: she was killed by that box hitting her in the head from the back-dashboard.



Anything you have on your back-dashboard, get rid of it! Those cans of soda, eyeglasses, bowling balls on your back-dash, get rid of it! Can you imagine getting killed by one of those bobbing head dogs that they sell in the store? Everybody at your funeral will be bobbin' their heads, and saying "That's how he died!" Police say that in crashes of 60 mph, an ink pen from the back-dashboard will go through the front windshield. If a pen can go through the front windshield, it will go through your head.

Have you ever been to a junkyard? The cars are mangled, but the front seat of the car is exactly where the manufacturer installed it, and in good condition. The entire car is destroyed, but the front seat is in perfect condition. That's why people walk away even from the worst crashes you could ever have imagined. When you're buckled-up you're tied to that front seat, it's the center of the car, and nothing moves.

So if you're tied to the front seat with a safety belt, you'll walk away. Many times a car is totally demolished, and then you see pictures and headlines in the newspaper, "Would you believe that this person survived and walked away without a scratch?" Yet you still have people saying, "I don't want to use my seat belt. I might be injured by the seat belt."

In our classroom course, we would take someone who said they didn't fasten their seat belt and blindfold them. The instructor would get them up in front of the group and spin them around ten times. Then tell them to walk as fast as they can. The person with the blindfold would say "No, I'm not walking." Do you know why? They were scared to walk into the wall. The instructor would say "You mean, you're afraid to walk into a wall, but yet you drive your car at 60 mph without a safety belt."

9.11.2.1 Excuses for not wearing your safety belt:

Here's what they tell us:

- It wrinkles my clothes.
- They're uncomfortable.
- I forgot to do the belt.
- They're broken.
- I can brace myself in a crash. I can brace myself because I'm a strong.

9.11.2.2 Wrinkles My Clothes

All you need to do is take a handkerchief or a small hand towel and keep it in your car. If you're wearing nice clothes put the handkerchief or towel between the seat belt and your clothes. It smoothes out that area and keeps it wrinkle free.

A man in our classroom course told us a story about his wife who sold real estate for a living and wore really nice clothes to work every day. He always wore his seat belt but, his wife never did.

She would say "I don't want to wrinkle my clothes." He received a call one day from the hospital saying "Your wife has been in a car crash." He rushed to the emergency room, walked into her room, saw her, and walked back out.

He asked the nurses, "Where's my wife?" They said, "She's in there." He replied, "That's not my wife." It was his wife; he didn't recognize his own wife. His wife had gone through the windshield face first, and the impact had made her face swell up three times the normal size.

She had no more teeth, and half of her tongue was cut out. It took years of plastic surgery to reconstruct her face and all because she didn't want to wrinkle her dress. Think about that the next time you don't want to wrinkle your clothes.

Some people think because their car is equipped with an airbag they don't have to wear their safety belt. Airbags will save your life, sometimes in a head-on collision. But, you still have to wear your safety belt with an airbag.

Two people in our classroom course got into a crash and their car went up on two of their side wheels. If you didn't have a seat belt on, your weight would shift you would move all over the compartment of your vehicle. Fortunately, they were wearing their seat belts and were able to recover up right again.

What if you're in a collision where you get hit from the side or from an angle that could cause the vehicle to spin? You could be ejected from the car. But, if you have your seat belt on, you stay behind the wheel, and you're controlling your vehicle, and you can get out of danger. Some people say, "I'd rather be thrown from the car." You're 25 times more likely to be killed if you are thrown from your car.

People always have fantastic stories about not wearing their seat belt. "My cousin was thrown from his car, landed on a trampoline and lived!" There are freak crashes where people survive getting thrown from a car. Those are the ones you read about. When there's a freak crash, the media loves it. People love to talk about it. It's memorable! Someone always has an amazing story about people getting thrown out of their car. They say "I'm going to tell everybody about it. I landed in a mattress factory and survived."

Plane crashes rarely happen. Your chance of being in a plane crash is 1 out of 15 million but, some people are afraid to fly. If a plane were to crash, even if no one's injured or killed, it's on the top of the news. Car crashes occur all the time. There's a car crash every five seconds in this country, but you're not afraid to get in your car and drive. The chance of you being in a plane crash is low, but you're still afraid to fly, because you think it's going to crash. You should be more afraid of driving your car.

A guy was thrown from his car. He hit a tree and his own car pinned him up against the tree. So it's much worse to get thrown from your car than to stay in that cocoon tied to your front seat.



Some people think they might burn or drown in their car if they wear their seat belt. That's a rare thing. Your chance of being involved in a crash and your car catching on fire or landing in water is .04%. It's not going to happen! When you're driving over a bridge, you're extra careful. You do not want to fly off the bridge. There are restraining walls and rails to keep you from going off the bridge.

It happens in the movies all the time. A car flies off a bridge, and they say "I love you" and then the car blows up or catches fire in midair. How will that happen in the first place? You're a smart person. If you're involved in the crash that is so bad that your car is going to blow-up or catch fire, what kind of a chance would you have anyway if you don't have a seat belt on? You're going to get knocked out.

With your safety belt fastened, you're alive, you're awake and you could say to yourself "My car's smoking. Now there's a flame. Perhaps I should get out now! Maybe I should leave a note." "I can brace myself before the crash." You cannot brace yourself. A 30 mph crash is the same force of impact as falling off a four-story building. It's the same force as holding up an elephant with one arm. You can't do it! Imagine that you are on the fourth floor of a building where there's a balcony. Could you dive off the balcony and land on the sidewalk in the pushup position? You couldn't - it is impossible and so is the idea of bracing yourself before a crash.

Did you know most people only wear their safety belts on long road trips or in bad weather? They'll say, "Okay, we're going to grandma's house. Everybody buckle your seat belts." If the weather's bad, snowy or rainy they'll say "I'd better buckle my seat belt. I might get into a wreck today." All occupants should wear their safety belts no matter how short or long the trip may be.

How many times do you go back and forth from your house?

1. You go to work.
2. You come back home.
3. You go to the bank.
4. You come back home.
5. You go shopping.
6. You come back home.

That was six times in one day that you went to and from your house. Most of you are going to and from your house at least two times a day.

Near your home is when you're paying the least amount of attention to driving your car. You're thinking about what to get at the grocery store or at the bank. So, when making trips to and from your house, even in good conditions, remember to use your seat belt. As a matter of fact you should just fasten your seatbelt all the time. That's the safest way!



[Take the video quiz](#)

The following information could save your life... or that of a loved one:

The National Highway Traffic Safety Administration (NHTSA) was largely responsible for a new federal law in 2007 requiring all new cars being sold by dealers to have posted the pertinent government crash safety accident information next to the sticker price of any new automobile.

Five stars are the highest government collision rating while one star is the lowest. The government tests all major cars and ranks them in a few categories (i.e. front end or side end collisions). Spending a minute or two on the www.safercar.gov site will provide you and your loved ones with almost 15 years of car safety rating for almost all new and used cars. Please visit this wonderfully educational site. Your life (or that of a loved one) may depend on it.

9.11.3 Safety Belt Facts

- Safety belts can reduce the risk of fatal injury to front-seat passenger car occupants by 45%.
- In 2011, 31% of all passenger vehicle occupant fatalities were totally ejected from the vehicle. In fatal crashes in 2011, 77 percent of passenger vehicle occupants who were totally ejected from the vehicle were killed.⁽¹⁾
- In 2011, 1,140 children 14 years old or younger were killed in motor vehicle crashes. That is an average of 3 children killed per day.⁽²⁾
- In 2011, there were 216 passenger vehicle occupant fatalities among children under four years of age. Of those 201 fatalities for which restraint use was known, 59 (29%) were totally unrestrained.⁽¹⁾
- In 2011, 51 percent of passenger vehicle occupant fatalities occurred in vehicles that sustained frontal damage.⁽³⁾
- On average in 2011, 89 persons died each day in a motor vehicle collision one every 16 minutes.⁽³⁾

Some more important information to remember!

9.11.4.1 Children Unattended in Vehicles

Kaitlyn's Law prohibits parents or guardians from leaving a child six years old or under in a vehicle unattended when the vehicle's engine is running, the keys are in the ignition or there is significant risk to the child. The law was named for a child who died after being left for two hours in a vehicle in 100 degree heat.

On a hot summer day, the interior of a car can get dangerously hot. One study found that with the windows up and the temperature outside at 94 degrees, the inside of a car could be 122 degrees in just half an hour, or 132 degrees after an hour. Having the window down slightly will only cause a small drop in temperature inside the car - there is no safe way to leave the child in the car alone.

9.11.4.2 Some Alarming Statistics

- In 2012, 34 children died from being left inside a hot car.⁽⁴⁾
- Total number of deaths from children left in cars, 1998-2012: 562⁽⁴⁾
- Texas had the highest fatality rate with 86 children dying after being left in a car.⁽⁴⁾
- Penalties in Texas include up to a \$500 fine.⁽⁴⁾

Remember:

- Never leave a child in a vehicle when it is hot.
- Never leave your child unattended if they are under 6 years old.
- Take your keys with you.
- Turn off your engine.
- If your child is sleeping, wake him/her up, and take him/her with you.

9.11.5 Safety Helmet

Unlike motorists, All Terrain Vehicle (ATV) users and motorcyclists are not protected by a shell of steel and metal. In a serious collision they are very likely to be thrown off their motorcycle onto the pavement.

About the only protection that can be provided for a motorcyclist and ATV user is a crash helmet to protect the head. It is certainly a good idea to wear a safety helmet. It increases your chances of surviving a collision.

2011 NHTSA data shows that 40% of fatally injured motorcycle operators and 51% of fatally injured passengers were NOT wearing helmets at the time of the crash.⁽⁵⁾

It is estimated that safety helmets saved the lives of 1,617 motorcyclists in 2011. If all motorcyclists had worn safety helmets, an additional 703 lives could have been saved.⁽⁵⁾

Remember:

- Wear your seat belts every day.
- If it's uncomfortable purchase a covering.
- If it's broken get it repaired.
- All occupants must wear their seat belts.
- Most crashes occur within 5 miles of your home.
- BUCKLE-UP
- SAVE LIVES

(1) Traffic Safety Facts 2011 Data Occupant Protection. 14 June 2013. National Highway Traffic Safety Administration. 4 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811729.pdf>.

(2) Traffic Safety Facts 2011 Data Children. 6 July 2013. National Highway Traffic Safety Administration. 4 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811767.pdf>.

(3) Traffic Safety Facts 2011 Data Overview. 30 Apr. 2013. National Highway Traffic Safety Administration. 4 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf>.

(4) "Fact Sheet - Heatstroke Deaths of Children in Vehicles." Fact Sheet - Heatstroke Deaths of Children in Vehicles. 30 Oct. 2013. Department of Geosciences, San Francisco State University. 04 Nov. 2013 <http://www.qgweather.com/heat/>.

(5) Traffic Safety Facts 2011 Data Motorcycles. 17 July 2013. National Highway Traffic Safety Administration. 4 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811765.pdf>.

Now it's time for your eighth quiz. Click the button below to start. Thanks and good luck.



10. Driving While Intoxicated and Driving Under the Influence (DWI and DUI)

- Texas Zero Tolerance Law
- What Happens When You Drink?
- Synergism
- The Effect of Alcohol and Drugs
- Legal Consequences
- Implied Consent Law
- Open Container Law



This chapter looks in-depth at driving your motor vehicle while under the influence of alcohol or other drugs, the laws and the consequences.

Which of these would you consider impaired drivers?

- Any driver who has consumed any alcohol or other drug
- Angry drivers
- All of the above

There are physical and mental types of impairment, such as anger, fatigue, or use of alcohol or other drugs. You'll read about all of them during the next two chapters. One facet of impaired driving is driving under the influence of alcohol, other recreational drugs and/or prescribed medications.

According to the National Highway Traffic Safety Administration, 32,367 people died in the United States in 2011 on the roadways driving an automobile. Of those fatalities, 9,878 were alcohol related. That means that 31% of all the automobile fatalities in this country were alcohol related!(¹)

(¹) [Traffic Safety Facts 2011 Data Overview. 30 Apr. 2013. National Highway Traffic Safety Administration. 4 Nov. 2013](http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf)
<http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf>.

10. 1. Texas Zero Tolerance Law

[Take the video quiz](#)

Your car is like a loaded weapon. If you're driving under the influence of alcohol or other drugs, it makes you that much more dangerous. Would you want to be in the same room with an impaired person pointing a loaded gun in different directions?

The amount of alcohol that resides in your system is measured by your Blood Alcohol Concentration or "BAC." The laws of the State of Texas establish a BAC of .08 as the presumptive limit for driving under the influence. In other words, at .08 BAC, you are presumed to be too impaired by the alcohol in your system to drive safely.

Also Texas' "Zero Tolerance" Law makes it illegal for a minor to drive with any detectable amount of alcohol in his or her system. Fines, community service, alcohol awareness programs and loss of driving privileges are some of the possible consequences of breaking this law.

How many drinks does it take to give you a BAC of .08? Well, it varies from person to person, and depends on factors like your body weight, your gender, and the amount of time that passed since you had your last drink. It doesn't take much to reach that presumptive limit. The chances of being involved in a crash rise dramatically after your first drink. It's important to realize that, unless your Blood Alcohol Concentration is zero, your driving will be affected.

10. 2. What Happens When You Drink?



When a person drinks an alcoholic beverage, about 20 percent of the alcohol is absorbed in the stomach and about 80 percent is absorbed in the small intestine.

How fast the alcohol is absorbed depends upon several things:

- The concentration of alcohol in the beverage - The greater the concentration, the faster the absorption.
- The type of drink - Carbonated beverages tend to speed up the absorption of alcohol.
- Whether the stomach is empty or full - Food slows down alcohol absorption.

After absorption, the alcohol enters the bloodstream and dissolves in the water of the blood. The blood carries the alcohol throughout the body. The alcohol from the blood then enters and dissolves in the water inside each tissue of the body (except fat tissue, as alcohol cannot dissolve in fat). Once inside the tissues, alcohol exerts its effects on the body. The observed effects depend directly on the blood alcohol concentration (B.A.C.), which is related to the amount of alcohol consumed. The B.A.C. can rise significantly within 20 minutes after having a drink.

Once absorbed by the bloodstream, the alcohol leaves the body in three ways:

- The kidney eliminates 5 percent of alcohol in the urine.
- The lungs exhale 5 percent of alcohol, which can be detected by breathalyzer devices.
- The liver chemically breaks down the remaining alcohol into acetic acid.

Before you can even feel the effect of the alcohol on your system it is already in the bloodstream. You do not know when you have had too much to drink until it is too late. This is similar to sunburn, by the time you feel it, it is already too late. Alcohol is never actually digested as much as it is processed. It is absorbed directly through the lining of the stomach into the bloodstream. It does not have to go to the colon to be digested, which is why the body is feeling the effect so quickly.

Your car is like a loaded weapon, if you're driving under the influence of alcohol or other drugs, it makes you that much more dangerous. Would you want to be in the same room with an impaired person pointing a loaded gun in different directions? The amount of alcohol that resides in your system is measured by your Blood Alcohol Concentration or "BAC". The laws of the State of Texas establish a BAC of .08 as the presumptive limit for driving under the influence. In other words, at .08 BAC you are presumed to be too impaired by the alcohol in your system to drive safely.

If you take a shot of whiskey and hold it on your tongue, that whiskey passes through the walls of your tongue, your esophagus and then your stomach.

On an empty stomach, a shot of whiskey is in your arm in about seven seconds!

It touches every major part of your body within two minutes.

10.2.2 Alcohol is One of the Fastest Substances Absorbed by the Body

Alcohol is absorbed directly through the stomach lining into the blood stream and carried to the brain. After the alcohol circulates through the brain, a small percentage is removed in urine, perspiration and by breathing while the rest is carried to the liver to be broken down into carbon dioxide and water. The liver can only process 1/3 ounce of alcohol per hour.

This is a fixed rate so only time, not black coffee or a cold shower, will sober up a person who is impaired. Alcohol depletes the body of water so the morning after, you may have a headache, upset stomach and be dehydrated. Clearly, the drug alcohol, even after just a few drinks, is stressful for the body. Once alcohol gets into your bloodstream, you cannot kick it out. People think they can. Alcohol, because it is a poison, has to pass through your liver and your kidneys. It has to be cleaned, oxidized, and passed out through urine.

That process takes approximately one hour per drink, under ideal circumstances.

- 1 Drink = 1 Hour
- 2 Drinks = 2 Hours
- 3 Drinks = 3 Hours
- 4 Drinks = 4 Hours
- 5 Drinks = 5 Hours

About 20 percent of alcohol is absorbed through the stomach, and most of the rest is absorbed through the small intestine. Alcohol molecules are carried through the bloodstream and come into contact with the cells of virtually all the organs. When someone drinks on an empty stomach, the blood absorbs the alcohol rapidly. The body also absorbs higher concentrations of alcohol, such as mixed drinks or shots, very quickly.

10.2.3 Most People Do Not Understand Alcohol is a Drug

Many people don't realize alcohol is a poisonous substance. The American Medical Association classifies it as a poisonous drug. Alcohol, in your body, kills everything it touches. It kills your brain cells, stomach lining, liver, heart and your kidneys. Everything it touches it destroys. A brain surgeon will tell you if you put brain cells and add a droplet of alcohol under a microscope, the alcohol devours the brain cell.

It just eats it. That's what you are doing to body's organs each time you have a drink. Your brain cells and your nervous system are being affected by the alcohol.

You always hear of stories where people had ten drinks at a party and the next morning they got up thinking they were fine. They had a designated driver that got them home. The next morning they get a DWI on their way to work because they still have four or five drinks in their system. Alcohol goes extremely fast into your blood and is eliminated at one drink per hour.

It is against the law to drive with any drug in your bloodstream that affects your safe driving. This includes over-the-counter and prescribed medications including Xanax, muscle relaxants, cough medicine or tranquilizers. Just look at it this way, it impairs your driving ability and is classified as a DWI. By law, all prescription and over-the-counter drugs that can affect your driving must have a warning label on them. Always read the label before taking any medication.

You can get a DWI for taking cough medicine, because it contains alcohol. Do you know why they put alcohol in cough medicine? It gets it into your bloodstream fast. That's why they can promise instant relief with a cough syrup. It contains alcohol and it's in your blood in seven seconds. Two capfuls of a nighttime cough medicine could make you too impaired to drive. Just one of those little capfuls contains 20% alcohol. Any drug that affects your safe driving can mean a DWI.

10. 3. Synergism

Synergism is when you combine alcohol and other drugs. The combination of alcohol and another drug interacting with each other create a different effect, a synergistic effect. If you're taking a codeine prescription and drink a beer while the codeine is in your system, the effect will be magnified. The effect is much different than that one beer or one codeine pill separately. A synergism is like a volcano in your bloodstream. It's very unpredictable.

Two people can consume the same amounts of alcohol and another drug, and they will experience very different effects. It even varies widely in the same person from one time to another. You can take a beer with cocaine, marijuana, barbiturates, amphetamines, or just about any prescription drug, and you'd experience a synergistic effect. Then the next time you mix those same two substances the effect will be very different.

You can't predict what will happen, that's what makes it so dangerous. Never mix alcohol and other drugs.



10.3.1 Blood Alcohol Concentration Chart

There is no safe way to drive after drinking. Even one drink can make you an unsafe driver. Drinking affects your Blood Alcohol Concentration (BAC). Remember in Texas it's illegal to drive with a blood alcohol level of .08 or greater. Even a BAC below .08% does not mean that it's safe or legal to drive. The chart shows the BAC zones for various numbers of drinks and time periods.

10.3.2 How to Use These Charts

Find your weight on the chart on the next slide. Look at the total number of drinks you have had and compare that to the time shown. You can quickly tell if you are at risk of being arrested. If your BAC level is in the yellow zone, your chances of having a crash are 5 times higher than if you had no drinks, and 25 times higher if your BAC level falls into the Red zone.

BAC ZONES	90 to 109 lbs.								110 to 129 lbs.								130 to 149 lbs.								150 to 169 lbs.								170 to 189 lbs.								190 to 209 lbs.								210 lbs. & UP							
TIME	TOTAL DRINKS								TOTAL DRINKS								TOTAL DRINKS								TOTAL DRINKS								TOTAL DRINKS								TOTAL DRINKS															
1 st DRINK	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1 Hour	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
2 Hours	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
3 Hours	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
4 Hours	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

TECHNICAL NOTE: This chart is intended to be a guide and is not legal evidence of the actual blood alcohol concentration. Although it is possible for anyone to exceed the designated limits, the chart has been constructed so that fewer than 5 persons in 100 will exceed these limits when drinking the stated amounts on an empty stomach. Actual values vary by body type, sex, health status and other factors.

Based on statistics, by the time you reach a .08 BAC, you are twenty-five times more likely to be in a collision. It's a risk you just don't want to take for your sake or for anyone else on the road.

The American Medical Association says that a BAC of .03 makes a person too impaired to drive a motor vehicle. That's about half a drink.

What represents one drink: 12OZ BEER = 5OZ WINE = 1 1/2 OZ OF 80 PROOF ALCOHOL. Whether you have a beer, a glass of wine or a shot of hard liquor, the effect will be the same.



Each of these constitutes one drink and will impair you about equally. Remember, the Blood Alcohol Concentration (BAC) limit in Texas, at which you are presumed impaired, is 0.08.



10.3.4 Alcohol Poisoning

Alcohol poisoning is serious business and occurs when someone has consumed more alcohol than their body can safely metabolize. It takes the body one to one and a half hours to process a single drink. The body is still affected even after someone quits drinking. Alcohol poisoning is a **MEDICAL EMERGENCY**. Do not wait for all symptoms to be present before calling 911. Even a person with only a few of these symptoms is at risk of death.

10.3.4.1 Signs of Alcohol Poisoning:

1. Unconscious or semiconscious (passed out).
2. No response to pinching.
3. Slow or irregular breathing - less than 8 breaths per minute, 8 - 10 seconds between breaths.
4. Low body temperature.
5. Slow heart rate.
6. Bluish or pale, cold clammy skin.
7. Vomiting while "sleeping" or passed out.

If someone won't wake up:

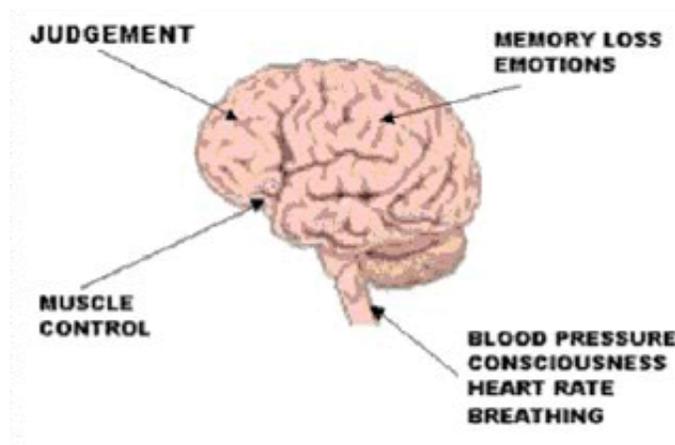
- Call 911 for help.
- Keep him/her on their side.
- Perform CPR until medical help arrives if their pulse is less than 40 beats per minute or their breathing is less than 8 breaths per minute.
- Do not panic.
- Do not leave them alone to "sleep it off".
- Do not give them food or coffee.
- Do not try to make them vomit.
- Do not put them in a cold shower.

10.3.4.2 911 Lifeline Law

The 2011 Texas Legislature amended Texas Alcohol Beverage Code [TABC 106.04] to address alcohol poisoning. Under the law, a person under 21 cannot be charged by the police for possessing or consuming alcohol if the person calls 911 because someone else might have alcohol poisoning. This limited immunity applies only to the first person to call for medical assistance. And the caller must remain on the scene until medical assistance arrives and must cooperate with EMS and law enforcement.

10. 4. The Effect of Alcohol and Drugs

If you are a drinker, try this experiment at home. Type a letter or remember a phone list. First do it sober, then try doing it after having one drink. YOU WILL SEE A DIFFERENCE!



10.4.1 Alcohol

Alcohol is a powerful depressant; just one drink will affect your judgment, your thinking, your motor skills, your vision and your reaction time.



10.4.1.1 Judgment

The first thing to be affected by alcohol is your judgment.

Both your thinking and your reasoning become impaired. You can tell just by the fact that once you have one drink, you're more likely to have another and then another. You become less likely to consider the consequences of your actions. You underestimate the risks of being on the road, and overestimate your ability to tolerate alcohol. Your judgment is affected and you're less likely to compensate for your other losses, vision and reaction time, by driving more carefully than usual.

10.4.1.2 Reaction Time

After your judgment, the next thing alcohol affects is your reaction time.

You become physically slower and less alert. It takes you longer to hit the brake but, because your judgment is impaired, you're not likely to increase your following distance in order to compensate. You process information slower which affects your perception of traffic situations.

10.4.1.3 Vision

Finally, alcohol affects your vision.

It relaxes the muscles that focus and move the eyes, causing your vision to become distorted. Your perception of distance is affected. You have a hard time judging how close you are to other vehicles, road signs or traffic signals. Your pupils take longer to adjust to changes in light, so you're more vulnerable to being blinded by the glare of headlights. Your eye muscles may even relax to the point that you can't focus and your vision becomes fuzzy and you see a double image.

When you drink, your bad driving habits become more pronounced. Imagine yourself on the road after having one drink. If a person runs out in front of your car can you stop in time? After one drink your motor skills have been affected. Your ability to think and see clearly have diminished. After two or three drinks, your decision making skills are seriously hampered, your attention span decreases and you take longer to think and longer to react. What if a child chases a ball out into the road? Will you be able to react and stop in time?

Can you afford to take the chance?

10.4.2 Other Drugs

Although alcohol may be the most common drug abused by motorists, there are many other drugs that can affect your ability to drive safely. One example is narcotics, which include morphine, heroin, and even over-the-counter medications, especially cough syrups with codeine. A single dose of this kind of drug will affect your reaction time and your vision and can make you drowsy and unable to concentrate.

Stimulants, like cocaine and amphetamines, affect your perception, your mood and your attention span, and can make you over-confident and more likely to take risks behind the wheel.

They can also make you irritable and easily startled, causing you to make sudden, unpredictable maneuvers. Hallucinogens, like marijuana and LSD, affect your judgment and distort your perceptions.

There are many prescription drugs that make driving dangerous. Antidepressants often have a sedative effect that greatly decreases your alertness and reaction time. Tranquilizers, like Valium, affect your judgment, vision and hand-eye coordination. Even over-the-counter medications, many cold medicines, allergy medicines and motion sickness drugs, can cause drowsiness, decreased attention span and lower reaction time.

10. 5. Legal Consequences

The biggest consequence of driving under the influence is that you might injure or kill an innocent person. You can be charged with DWI if you are found to be driving or in actual physical control of a motor vehicle while under the influence of an alcoholic beverage or controlled substance.

Controlled substances include:

- Narcotic drugs.
- Barbiturates.
- Model glue.
- Other stimulants, taken by swallowing, sniffing, smoking, or by injection or any other means.

10.5.1 DWI Consequences

The following are the consequences you may face if you are convicted of DWI.

Depending on the circumstances you can be charged with either a misdemeanor or a felony. The difference between a misdemeanor and a felony DWI charge is that the felony charge involves an injury or fatality. The terms of probation are mandatory. However, other appropriate terms and conditions may be added at the court's discretion. These are some of the examples of the fines and charges that you may incur if convicted of DWI.

As you will see these can literally ruin your life and cost a significant amount of money in fines. Keep in mind you can be arrested for driving under the influence of alcohol or drugs, or a combination of alcohol and drugs, or for driving with a BAC of .08 or higher, or any detectable amount of alcohol if the driver is a minor. You can also be arrested for less than .08 if the officer believes you to be impaired.

In all states, a person may be convicted of "driving while intoxicated" with a blood alcohol concentration of 0.08. The penalties include fines, imprisonment and loss of driving privileges.

You can be fined up to \$2,000...receive a jail sentence from 3 days to 180 days in jail...and have your driver's license suspended from 90 days to 1 year. Texas law increases the penalty for driving while intoxicated with a child passenger by adding jail time of 180 days up to two years. As of September 2011, driving with a BAC of .15 or higher is a Class A misdemeanor with a fine of \$4,000 and a jail term of up to one year. Texas law also closed a loophole so a person who commits an offense as a minor cannot circumvent the driver license penalty if the person turns 21 before their court date. Subsequent conviction can lead to much stiffer fines and jail terms. And if you injure someone causing traumatic brain injury, manslaughter is involved, and you could wind up in the penitentiary!

10.5.2 Financial Consequences of DWI, Personal and Societal

The financial burden a DWI conviction places on you can be as bad, if not worse, than the punishment.



Perfect Night on the Town

Here are some ideas of the perfect night on the town, with approximate total cost.



Some people would like a simple night at the movies and a late night snack afterwards.

MOVIE TICKETS	\$18.00
POPCORN/CANDY	\$12.00
SODA	\$11.00
FUEL/CAR COSTS (TO AND FROM THEATRE)	\$5.00
COFFEE/DESSERT	\$10.00
GRAND TOTAL	\$56.00

As you can see a simple night out can add up to a lot of cash! But it can get really expensive if you are looking at something more elaborate. Some people may go to a concert with dinner before and the full VIP treatment.

RENT A LIMO	\$250.00
ROMANTIC DINNER	\$120.00
CONCERT TICKETS	\$150.00
GRAND TOTAL	\$520.00

An evening like this would even be more expensive if it were a prom or homecoming. The cost of the dress, tuxedo and corsage would have to be factored in as well. This could add another several hundred dollars to this special event.

GRAND TOTAL FOR PROM/HOMECOMING \$820.00

Some other people might want to go the "Low Budget" route. Go to a convenience store buy a six pack of beer and drink it in the car. By doing something this way it will cost far less - right? Maybe not because you will get wasted, make a poor decision then get pulled over and get a DWI.



So let's look at savings:

BEER \$3.00

But also:

FINES	\$500.00
CHARGES	\$1,200.00
INSURANCE PREMIUMS INCREASED	\$3,000.00
ATTORNEY	\$1,500.00
DWI SCHOOL	\$400.00
TIME LOST FROM WORK	\$500.00
GRAND TOTAL	\$7,103.00
SAVINGS	\$6,283.00

HOPE YOU GET THE POINT!

Being convicted of a DWI carries a significant financial penalty. There are good reasons for having strong penalties for DWI offenders. Collisions caused by DWI result in significant costs, not to mention great personal suffering, for both the people involved in the crash and society as a whole.

The National Highway Traffic Safety Administration estimates that every injury in an alcohol-related crash costs an average of \$99,000. That's \$49,000 in monetary costs and \$50,000 from loss of quality of life. The average cost of a fatality from an alcohol related crash is \$3.5 million: \$1.1 million in monetary costs and \$2.4 million in quality of life losses.

Costs of An Injury In An Alcohol Related Crash

MONETARY COSTS	\$49,000.00
LOSS OF QUALITY OF LIFE	\$50,000.00
TOTAL COSTS	\$99,000.00

Costs of A Fatality In An Alcohol Related Crash

MONETARY COSTS	\$1,100,000.00
LOSS OF QUALITY OF LIFE	\$2,400,000.00
TOTAL COSTS	\$3,500,000.00

That number reflects everyone, impaired drivers as well as innocent people, who are involved in a crash and are killed, or seriously injured. It also reflects the suffering of their families. Obviously impaired driving affects not just the violator, but everyone else involved. In fact, over half of that \$114 billion cost is paid for by people other than the impaired driver.

And almost 20% of all U.S. auto insurance payments are a result of DWI.

Each year alcohol-related crashes cost the American public over \$114 billion.

About a third of that is monetary costs, and the other two-thirds is quality of life losses.⁽¹⁾

(1) "IMPAIRED DRIVING IN THE UNITED STATES." IMPAIRED DRIVING IN THE UNITED STATES. National Highway Traffic Safety Administration. 4 Nov. 2013 http://www.nhtsa.gov/people/injury/alcohol/impaired_driving_pg2/us.htm.

10. 6. Implied Consent Law

Under the implied consent law a driver could face an automatic 6-month suspension of his driver's license for refusing to submit to the breathalyzer test.

The law states that any person who drives a motor vehicle is deemed to have consented to chemical testing of blood, breath, or urine. In other words, the consent to testing is implied by virtue of the fact that you are driving.

The testing has to be a result of a lawful arrest by a peace officer. And there has to be reasonable cause to believe that the driver was under the influence of a chemical substance.

The driver has a choice of taking a breath test, a blood test or a urine test. If a person is too drunk or incapable of completing one test, they have the choice of taking any of the remaining tests.

The object is to make sure that a driver has the opportunity to have his or her blood alcohol level verified. If the driver refuses to take the test, or is incapable of completing it, that information can be used against him in court.

The driver does not have the right to have an attorney present before deciding to take the test or during the administration of the test. If you're arrested for driving under the influence of alcohol, you're better off submitting to the test. If you're not legally under the influence, the test will confirm it and you won't be charged with DWI.

Without test results, it'll be your word against the arresting officers'. Some police units use videotape to help build cases against suspected drunk drivers.

When you drive a motor vehicle in Texas, you have automatically given your consent to be tested under the Implied Consent Law.

10. 7. Open Container Law

Also a person commits an offense if they possess an open container in the passenger area of a motor vehicle that contains any amount of alcoholic beverage.

Other drugs, both legal and illegal, can affect the task of driving.

[Take the video quiz](#)

AVOID DRIVING WHILE IMPAIRED!

Often people ask how many drinks does it take to reach the presumptive limit?

ONE DRINK IS TOO MUCH IF YOU'RE DRIVING!

What if I go to a party? Can I ever have a drink? The answer is yes, you can have a drink. If you are an adult over 21 years of age you have a right to have a drink or even two or three. You just have to do it responsibly. There are many alternatives to driving that you can consider, including taking a cab, or sharing a ride with a designated driver.

10.7.1 Have a Plan

If you know you're going to be drinking, plan ahead! If you're going to a party or a bar with a group of friends, designate a driver. This person must abstain from drinking so that everyone else has a safe way of getting home. Carry extra money so you can pay for a cab ride home. Call a family member or friend and have them pick you up. There are also plenty of organizations set up to provide you with a designated driver when you don't have any other way of getting home.

Contact your local police department to find out about these groups. Make sure you have their phone numbers handy before you go out. If you're drinking at a friend's house, ask if you can sleep over. Any responsible friend would not hesitate to help you avoid driving while impaired. The bottom line is, don't drink and drive. Don't accept a ride from someone else who's been drinking. The more you plan ahead, the more you'll be ready for any situation where you find yourself unable to drive.

10.7.2 Designated Driver Program

The designated driver program is an anti-DWI effort that works. It has been saluted by its proponents as a program that takes a positive approach to averting the potential disaster of the drinking driver. The goal of the program is to encourage one individual to abstain from consuming alcoholic beverages for an outing so that they can be responsible for transporting the other members of the group safely.

Many licensed eating and drinking establishments participate in the program by providing complimentary non-alcoholic beverages or other incentives. To participate as a designated driver, an individual:

- Must possess a valid driver license.
- Must be part of a group of two or more persons.
- Must verbally identify themselves as the designated driver to the server.
- Must abstain from consuming alcoholic beverages for the duration of the outing.
- Must not be an otherwise impaired driver.
- Must understand that management reserves the right to refuse service to anyone at anytime.



10.7.3 Our Responsibility as a Host

If you're the host of a party it's your responsibility to insure that anyone who's been drinking doesn't drive. Here are some suggestions on how to keep people from leaving your party too impaired to drive. First take their keys at the door as they arrive to the party. Under no circumstances give the keys back if the person has been drinking.

The host of a party should do everything possible to make sure the guests drink responsibly. But, the ultimate responsibility is with the person drinking.

Before you take that first drink or you take some other drug, look ahead at the consequences. Will you have an alternate means of getting home at the end of the evening? Do you have ways to avoid driving while impaired? Most importantly, do you have a good sense of your own limits, your own self-control? Once alcohol or some other substance hits your system, you may get a false sense of security about your abilities. You may lose your good judgment, that same judgment that tells you when you've had enough.

You know the kind of people who are missing that good judgment, the ones who say, "Really, I'm okay to drive. Just help get me to the car." It's not worth it to drink and drive. You could hit a child on a tricycle or a pedestrian on the road. Almost 40% of all fatalities are caused by drinking and driving or doing other drugs and driving.

The good news is there has been a slight and gradual decline in the number of DWI deaths over the last several years. People are finally wising up. They're designating drivers instead of thinking they can make it home impaired. They're staying at home to indulge instead of taking a chance on driving. The next time you're out on the town, think about it.

10.7.4 The Facts

- 31% of fatal crashes involved alcohol in 2011.⁽¹⁾
- The 9,878 fatalities in alcohol-related crashes during 2011 represent an average of one alcohol-related fatality every 53 minutes.⁽¹⁾
- The rate of alcohol involvement in fatal crashes is more than 4.5 times as high at night as during the day (36% vs. 8%).⁽²⁾
- In 2011, the highest percentage of drivers with a BAC level of .08 or higher was for drivers ages 21-24 (32%).⁽²⁾
- 15% of all drivers involved in fatal crashes during the week are alcohol-impaired compared to 31% on weekends.⁽²⁾
- Alcohol-impaired-driving fatalities were highest in Texas (1,213).⁽²⁾

REMEMBER:

- Prescription and many non-prescription drugs such as cough, cold and allergy medicines can impair your driving ability and may be illegal to use while driving.
- Nothing but time - not food, or cold showers, or coffee can reduce the effects of alcohol or "sober up" an impaired driver.
- Alcohol interacts with other drugs in a synergistic way making the effects of both more powerful and deadly.

DON'T DRINK AND DRIVE!

10.7.5 Illegal Drugs

After alcohol, marijuana is the drug found most often in the blood of drivers in traffic collisions. Some immediate physical effects of marijuana include a faster heartbeat and pulse rate, bloodshot eyes, and a dry mouth and throat. Studies of marijuana's mental effects show that the drug can impair or reduce short-term memory, alter sense of time, and reduce ability to do things which require concentration, swift reactions, and coordination, such as driving a car or operating machinery. Considering all these facts and you tell me, why in the world would you ever want to drive high?

10.7.5.1 Cocaine

The use of cocaine can produce euphoria and pleasurable feelings, stimulation, excitement, restlessness, agitation, hyperactivity, and self confidence which could yield to risk taking and increase your chances of getting into a collision. Dilated pupils could produce blurred vision, sensitivity to light and difficulty in focusing. All these factors combined make cocaine a dangerous drug to use when driving.

10.7.5.2 Medication

Over-the-counter and prescription drugs can affect the way you drive. They are required by law to indicate on the label their suggested use as well as recommendations for operating machinery. These drugs can cause drowsiness, which may impair a drivers' reaction ability. Before taking these medications and driving, always read the label. If the medicine states not to operate machinery, then you should avoid driving.

If you're old enough to drive a motor vehicle, it's assumed that you're mature enough to make rational decisions. But when it comes to alcohol, rational thought seems to go right out the window especially when we're in a group where everybody else is drinking. The temptation is strong to go along with the crowd. Well, you can. You just don't have to get drunk in the process. Just follow a few common sense rules.

(1) Traffic Safety Facts 2011 Data Overview. 30 Apr. 2013. National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf>.

(2) Traffic Safety Facts 2011 Data Alcohol-Impaired Driving. 7 Dec. 2012. National Highway Traffic Safety Administration. 04 Nov. 2013 <http://www-nrd.nhtsa.dot.gov/Pubs/811700.pdf>.

Now it's time for your ninth quiz. Click the button below to start. Thanks and good luck.



11. Other Impairments

- Acknowledge, Witness, Modify
- Emotional Stress
- Fatigue
- Anger
- Attitude
- Control Your Emotions

This chapter looks at other impairments that may affect your driving abilities such as anger, fatigue and stress.



11. 1. Acknowledge, Witness, Modify

[Take the video quiz](#)

11.1.1 Attitude

Your attitude or state-of-mind affects your behavior when you drive. Have you ever been on the highway and the vehicle in front of you is weaving in and out of traffic? He doesn't realize his behavior and attitude is probably creating a lot of angry and aggressive reactions from other drivers. He's impaired and is unaware he has a problem.

Driving when impaired is a deadly choice, and denial may be the greatest impairment of all because it eliminates choices. People don't even realize how their actions are affecting the driving community? Most people don't care when they're driving impaired.

What is aggressive driving? It is the operation of a vehicle in a manner that endangers, or is likely to endanger, persons or property.

It's a dangerous habit that falls into three categories:

1. Lack of courtesy.
2. Breaking the rules.
3. Angry driving.

What makes you aggressive while driving?

- Someone slowing you down.
- Breaking the rules.
- Anger directed at you.
- Someone taking your parking space.
- Endangerment (cutting you off, tailgating, fender bender).

People you see weaving in and out of traffic, how impaired are they? Are they aggressive drivers? Do you like sharing the road with them? Well, they would probably deny they were driving impaired too, even if they crashed into you! Do you drive aggressively? At one time or another we all are aggressive drivers.

The first step in solving the problem is to realize you may be part of it.

Acknowledge, witness and modify your behavior.

11.1.2 What are Impairments?

Alcohol is one. Even small amounts of alcohol can affect your ability to react and respond. How about medication and other drugs? All kinds of medications can alter the chemistry of the brain and slow your reaction time and response time and when you're driving, a few seconds can make a life-changing, life-taking, difference! Even some over-the-counter medications can impair your ability to drive a car. That's why they come with warnings on the label. But, denial is the impaired kind of thinking that says, "This doesn't apply to me."

Every day life can have a negative effect on your driving abilities. Work, school, an argument with a friend, the kids, traffic: all these things at times can promote stress. When you're in that state of mind and you can't think clearly because you are STRESSED OUT it's dangerous to drive. It's as dangerous as getting behind the wheel when you're impaired from alcohol or other drugs. When emotions are running high think twice before getting behind the wheel of your car.

[Take the video quiz](#)

11. 2. Emotional Stress



There may be instances in your life where an event or something happens that totally consumes you. These traumatic events will have an adverse effect on your driving abilities.

11. 3. Fatigue

Many people are sleep-deprived and find their eyes closing, just a second here and there, on the road. Never you? All it takes is a second and you can't undo the crash once it happens. Sometimes, the only thing stronger than denial is regret!

Denying that you might have impairments of your own because you don't drive like the other person that you see on the road with an impaired attitude is a serious problem. You may need a wake-up call - because denial might be the greatest impairment of them all!

If you are sleepy, tired and physically worn-out, you know that you are not mentally on top of your game. Sleep deprivation is cumulative, so the less sleep you have over time, the more it adds up against your body and its ability to function.

How much of an issue is it? The National Institute on Health estimates that in the United States approximately 70 million people have a sleep problem and of those 40-50 million suffer from a chronic sleep disorder. In addition, stress, anxiety and depression cause intermittent sleep-related problem for 20-30 million people. Other factors that increase drowsiness include illness, prescriptions and over the counter medications, and alcohol consumption. The National Sleep Foundation identifies these groups at high risk: young drivers (especially males aged 16-25 years), shift workers and people working long hours, commercial drivers, people with untreated sleep disorders, and business travelers.

For teens and college students, the need for consistent sleep as their bodies change increases to 8.5-9.5 hours of sleep per night. Add the increase in the physical need of sleep with the increase of class workload, after-school activities and busy social lives and the risk of sleep deprivation for these two groups increase. The National Highway Traffic Safety Administration (NHTSA) attributes drowsy driving as the cause of more than 100,000 crashes a year, resulting in 40,000 injuries and 1,550 deaths. NHTSA cautions that the figures are most likely much greater due to being under reported and not including incidents caused by driver inattention. (1)

When you are physically or mentally tired how does it impact your ability to drive safely? A drowsy driver can:

- Be slower to recognize and respond to situations.
- Have difficulty in processing information and noticing subtle changes.
- Experience less than a second sleep episode called micro-sleeps without noticing.
- Become more agitated and moody in their driving behavior.
- Experience impaired judgment and vision.

Some drivers drift in their lanes, miss an exit they planned to take, drive significantly slower than the speed limit, brake suddenly or fail to slow down in advance for stop signs and signals.

(1) "Facts and Stats." Drowsy Driving Stay Alert Arrive Alive RSS. National Sleep Foundation. 4 Nov. 2013 <http://drowsydriving.org/about/facts-and-stats/>.

11. 4. Anger

Driving while angry, irritated or upset can impact your driving abilities. Anger may lower your trigger to react, and when mixed with these other impairments, it's a deadly combination. But, if you're angry and you know it you can take responsibility and control it! Acknowledge, witness, modify, it's the way to drive.

Have you heard about how a car has blind spots? Places where you can't see other cars, people, or objects? Well, denial is your own attitudinal and behavioral blind spot. Look at some of the other drivers on the road. They just don't get it. They may have the coolest, most compassionate driving conscience, but under the influence of any impairment, it's out of commission. It's like driving a sports car without a transmission.

Acknowledge, witness, modify, it's the way to drive.

11. 5. Attitude

Your attitude plays a big role, as to whether you're going to get into a collision or not. About 90 percent of all collisions are caused by driver's attitude.



If you're a "mature driver" do you think because you're older with lots of driving experience that you'd never act as irresponsibly behind the wheel of a vehicle? Have you been acknowledging and witnessing your own driving lately? Making modifications to compensate for some of the physical realities of getting older? Eyesight might need more current corrections? Hearing loss possibility?

These are impairments that can affect everyone young or old and can often be corrected. If you're in denial about your own impairments, you're just like a driver weaving in and out of traffic; almost blind and deaf to the extreme that you could be endangering yourself and others.

If you're a new, inexperienced driver, do you laugh at other driver's mistakes? Do you watch other drivers and think no one but you really knows how to drive? Having faster reflexes doesn't mean you drive better. In fact, you might be in denial. Your inexperience on the road leaves you unprepared for things that happen.

Acknowledge, witness, modify, it's the way to drive.

Three factors that contribute to crashes:

1. Driver's attitude.
2. Condition of the car.
3. Driver's physical condition.

Which one causes the most crashes?

Driver's Attitude? The driver's attitude would be if you choose to drink or take drugs and drive. Or you were stressed out, angry, selfish, and aggressive.

Car's condition? If your brakes or clutch give out while you were driving. That would cause the crash.

Physical condition? You're going down the road and have a heart attack or stroke behind the wheel.

The answer is your attitude...

Your attitude plays a big role as to whether you're going to get into the crash or not.

Many people drive aggressively, are late constantly or think the law doesn't apply to them. The only time they change their attitude is if something really bad happens to them. There are many people that are selfish and drive tired. For instance, they say "I can make it to Montana today because I'm me. I have to get there. I can make it because it's so important to me."

Me, me, me... Let's face it, there's no denying, people are all very self-centered and self-serving. Too often, people do only what's best for them. It's especially true when we're behind the wheel. If you don't allow enough time to get somewhere, what do you do? We rush, tailgate, weave in and out of traffic, speed up at a yellow light and don't let others in our lane.

It's all about me, me, me. I've got to get somewhere fast and who cares about anyone else. Hopefully this course will teach you how to become less self-centered and aggressive and identify more with the needs of the driving community. Some consequences of aggressive driving you probably already know. You mess up while driving and you could be looking at tickets, fines, driving school, criminal charges, jail, injury, or worse.

You realize all these things can happen to you, but don't believe it. After all, the world revolves around you, right? Me, me, me... nothing is going to happen to me. Well let's just say you're right, it's NOT going to happen to you. Still everyone else's aggressive self-centered attitude and the crashes that follow, do impact the driving community and ultimately your own life.

Let's review some more anger management techniques.

Rank what happens to you on a scale of one to ten. Each of us has a one and a ten in our life. Let's say at work you get a paper cut that would be a one. If somebody called you at work, and said your parents just died in a plane crash -that would be a ten. The next time somebody cuts you off on the road, doesn't signal, or makes you angry, rank it. Put it on a scale of one to ten. Is it worse than a paper cut?

They almost hit me. Is it as bad as my parents dying in a plane crash? Not really. Psychologists say if you put things in perspective, you're more likely to become less angry. If you stop and think about it, you probably can forgive them on the spot.

Pretend you know the other person. When someone cuts you off and makes you angry, tell yourself that's my priest or my pastor or my second grade teacher that I like so much or my friend that helped me in school. If you say this to yourself, and you think of them in a good light, you will get less angry.

Listen to soft music, relax. Don't add more stress to the situation by listening to loud music. You will get more stressed out because the beat makes you want to go faster.



Story from a student:

I was driving with my best friend. Two people cut her off back-to-back. I asked her, "don't you get mad at these people?" She said, "No. I always pretend that they are not aware of what they did wrong."

That was an amazing revelation to me because she's not getting mad at these people. After that day, I took notice of people that cut me off the road. I realized they are not aware of what they had just done. They're looking the other way or they're on their cell phone. Now, it's not safe what they're doing but, at least, they didn't do this just to harm me.

Everyone has tendencies to think that this person did something to me. I'm very angry. They did something to me. It's not you, they don't even know you.

REMEMBER:

1. Relax.
2. Breathe.
3. Rank them from one to ten.
4. Pretend you know them.
5. Or realize they don't know you.

11. 6. Control Your Emotions

Strong emotions can impair you just the same as alcohol or a controlled substance. Any condition that interferes with your judgment or reasoning abilities makes you an unsafe driver. Emotional distress of any kind - anger, sadness, depression, anxiety - any of these emotions can affect your concentration and your ability to make clear decisions. Just like when you take alcohol or another drug, it's up to you to take responsibility for your own behavior and your own judgment. You have to recognize when you are not in the proper condition to be behind the wheel.

Anger is a very dangerous emotional state. As a driving community, we're only now beginning to address the subject of road rage, letting other drivers' bad habits provoke you to become hostile. You might be feeling anger even before you get into your vehicle, and that's when you have to take a good look at yourself and decide whether you can calm yourself down.

Maybe you just had a fight with someone you love or something happened at work to make you upset. Can you let go of those feelings before you start driving? If you can't, you are driving impaired. You become impulsive, taking unnecessary risks and reacting irrationally to other drivers.

If you can't control your anger, stay off the road.

Take a walk or do breathing exercises until you can calm yourself down. Besides anger, other emotions can impair your ability to drive such as sadness, depression or anxiety. You're less alert and you're not giving your full concentration to driving safely. These kinds of emotions can last a long time, and it's important for you to recognize when you're not capable of driving your best.

If you have to, find someone else to drive during the time that you are recovering from strong emotions. Don't risk being behind the wheel when you're preoccupied with other problems. Even happiness can be a dangerous emotional state. If you're daydreaming or too busy thinking about some good news you've received to focus on safe driving, you could be creating an unsafe situation.

Always be aware of your state of mind. Any kind of distress or strong emotion can interfere with your driving abilities making you an impaired driver, one who is endangering others and violating the law by being on the road. Look at yourself objectively and decide if you really have the focus and alertness you need to safely use a motor vehicle. If you have any doubt, wait. Give yourself time to calm down and concentrate on safe driving.

Do you know what aggressive driving is?

Aggressive driving is driving in a way that shows a lack of courtesy to other drivers and creates dangerous situations. At one time or another we all catch ourselves driving aggressively. The most important way to prevent aggressive driving is to be aware of our own behavior.

Try to increase your awareness right now by taking this quick self-assessment test. Using the guide below click on the number that best describes you while driving and facing certain circumstances.

- 1 = If you never have negative thoughts
- 2 = If you sometimes have negative thoughts
- 3 = If it happens frequently
- 4 = If you feel negative all the time while you're driving

Be honest with yourself, and take a minute to think about your answers.

First we're going to look at your level of road annoyance.

When you become annoyed with another driver, how often do you find yourself cursing out loud or muttering to yourself?

1 2 3 4

When someone cuts you off, how annoyed do you generally become?

1 2 3 4

When someone in front of you is going too slow, how annoyed do you become?

1 2 3 4

How annoyed are you when someone tailgates you?

1 2 3 4

If you are involved in a fender bender, how annoyed do you become?

1 2 3 4

If other drivers make obscene gestures at you for what they perceive to be your mistakes, how annoyed do you become?

1 2 3 4

If other drivers beep their horns at you for what they perceived to be your mistakes, how much does that annoy you?

1 2 3 4

When you are stuck in traffic, how annoyed do you become?

1 2 3 4

If someone takes your parking space, how much does that annoy you?

1 2 3 4

When you get annoyed while driving, do you find that it affects your life after you get out of the car?

1 2 3 4

Your average score is:

If you tended to be a four or even a three most of the time, then you are at risk of becoming excessively angry and your health is being impacted.

The next quiz looks at how your driving is influenced by different moods.

- 1 = Never
- 2 = Sometimes
- 3 = Frequently
- 4 = All of the time

When you are very tired how inclined are you to be more irritable and angry?

- 1 2 3 4

When you're already angry, how much more likely are you to express your anger while driving?

- 1 2 3 4

If you have had anything to drink, how much more likely are you to express your anger while driving?

- 1 2 3 4

If you are feeling ill, how much more likely are you to express your anger while driving?

- 1 2 3 4

If you have children arguing in the car, how much more likely are you to express your anger while driving?

- 1 2 3 4

If you are hungry, how much more likely are you to express your anger while driving?

- 1 2 3 4

If you have passengers, how much more will this add to your anger if you feel disrespected by another driver?

- 1 2 3 4

How much of a release of tension is angry driving for you?

- 1 2 3 4

Your average score is:

If you tended to be a four or even a three most of the time, then you are at risk of becoming excessively angry and your health is being impacted.

Pay close attention to the answers, and be aware when you are likely to be angrier and driving more dangerously than you may realize. You may have to take special precautions to insure that you don't let yourself become an aggressive driver.

Another dangerous impairment is fatigue.

If you're ever driving and you get very tired, the best thing you could do for everybody is to get off the road. Go to a 7-Eleven or a Shell station because they're well lit and you're protected, and rest for a while. It's amazing how five minutes of rest can help you when you're fatigued. Before you get back behind the wheel again, do some exercise: jump up and down, do some jumping-jacks, jog down the block and back.

Get your blood circulating and your heart pumping. You will feel and see so much better. Drink coffee. Go ahead and have one if it's going to keep you alive behind the wheel.

Truck drivers will sometimes mix a chocolate milkshake and coffee together when they take long trips. The chocolate and caffeine will give you a boost.

So, get off the side of the road, get some coffee, relax a little bit, rest, lie down and close your eyes. Then do some high-energy exercises before you get back behind the wheel.

Other suggestions for staying awake:

1. Turn on the air conditioning.
2. Roll down the window.
3. Turn the radio on.
4. Sing with the radio.

The next time you're going to take a long road trip:

1. Get at least seven hours of sleep consistently.
2. Plan to drive when you are normally awake.
3. Enlist the help of passengers to stay awake and alert.
4. Plan rest stops before you leave.
5. Pull over every three hours and rest for 20 minutes.
6. Stop and get something to eat.
7. Exercise before getting back behind the wheel.
8. Continuously move your eyes, it will keep you more alert.

Too many times we take driving for granted as an auto pilot event. But driving is never really a routine activity. Each time we start the ignition, we are going to encounter a different set of circumstances behind the wheel than we did the day before based on how we feel physically, mentally and emotionally, the weather, the conditions of the roadway and vehicle, the other drivers traveling, pedestrians we may encounter and distractions that may be present. Sometimes these changes are subtle and at times more apparent. Driving is a complex task that requires constant focus and attention to changing stimuli.

Final Advice

People are not afraid to drive a car. People are afraid to fly in a plane, and lately, to ride on a train. Answer this question. Your chances of being involved in a car crash are?

1 in 3

1 in 25

1 in 1,000

1 in 100,000

Your chance of being in a plane crash is: 1 in 15,000,000

Your chance of being involved in a train crash when you are on a train is: 1 in 1,000,000

Your chance of being involved in an automobile crash once a year is: 1 in 25

Your chance of being in a collision, sometime during your life, in which someone is injured or killed is: 1 in 75

Not really good odds. But we're afraid to fly and sometimes to ride a train, but not afraid to drive an automobile. You should be afraid to drive. You should take precautionary steps to avoid becoming just another statistic. You have to realize that your car is a loaded weapon. It is like a gun you are shooting at a crowded freeway or roadway. You should take the steps to learn how not to become a statistic by being a safer driver.

There are over 200 million drivers on the road today in this country. There were over 5.3 million collisions on the road in 2011; 29 percent of these crashes resulted in an injury or death.⁽¹⁾

It's too bad we don't all have our own little private road to drive on. We wouldn't have to watch out for so many things that might cause a crash. Don't you see many people out there who believe they own the road? Common courtesy is missing out there and sometimes you have to lead the way by saying, "Today, I'm going to be the one to be nice to somebody out there on the road."

It does come back to you. So maybe wave at a pedestrian. Let someone have the space in front of you. Thank somebody for letting you in. Smile behind the wheel.



Here's our very own version of the Top 10 List of Driving Offenses:

Number Ten

Getting into a fight, throwing something or using a weapon!

Number Nine

Using high beams to retaliate!

Number Eight

Braking suddenly to punish a tailgater!

Number Seven

Yelling out the window at another driver or honking to protest!

Number Six

Making obscene gestures at other drivers!

Number Five

Speeding!

Number Four

Tailgating or following too closely!

Number Three

Going through red lights!

Number Two

Changing lanes without signaling or crossing several lanes at once!

Number One

Drinking and Driving!

Review some of the major points made during this course. Carry these points with you throughout your driving:

1. Losses from traffic crashes are staggering.
2. A positive attitude is your key to survival.
3. Traffic laws and regulations are designed to help you and your community.
4. Most crashes can be avoided.
5. If you are in a crash, a properly used safety device will significantly reduce your chances of injury or death.
6. Driving under the influence of alcohol or other drugs is like playing a game of Russian roulette with your own life and the lives of others.
7. Stress, anger, fatigue and other impairments can be just as dangerous and deadly as alcohol and other drugs.

If done right, driving can be fun. Take your responsibility seriously when you drive. It's the most important thing you are doing. You should respect that idea every time you get behind the wheel.

Remember:

1. Drive safely.
2. Be courteous.
3. Control your emotions.
4. Don't drink and drive.

Acknowledge, witness, modify, it's the way to drive.

(1) [Traffic Safety Facts 2011 Overview, 30 April 2013.](http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf) National Highway Traffic Safety Administration. 4 Nov. 2013
<http://www-nrd.nhtsa.dot.gov/Pubs/811753.pdf>.

Now it's time for your tenth quiz. Click the button below to start. Thanks and good luck.



12. Conclusion

Thank you for taking our course!

You've completed the course material successfully and can now get your certificate!

