

Module 11 – Reducing Collision Consequences

The goal of every driver is to safely get to their destination. Unfortunately, this goal is not always obtained. Plan to address dangerous situations before they arise. Good driving habits are your responsibility. Unfortunately, bad driving behaviors continue and they cause unnecessary injury and death.

This module contains information about how to be a defensive driver and how to reduce the consequences of a crash if one is unavoidable. These driving habits and practices are designed to help you minimize the negative results of a collision. Topics addressed in this module to help reduce the consequences of a collision include:

- Safety belts and air bags for all occupants;
- Child passenger protection;
- Locking doors and securing loose articles;
- Minimizing the first collision;
- Preparing for a driving emergency; and
- Deciding when to stop driving.

Over the last two years the number of traffic crashes, injuries, and deaths has declined. NHTSA estimates that from 1975 through 2009, safety belts saved 267,890 lives, including 12,713 lives saved in 2009. Frontal air bags have saved 30,232 lives since 1987.

Motor vehicle manufacturers continue to make safety belt and air bag design improvements--adding safety belts that self-tighten and air bags that deploy from the sides. Using safety belts and air bags is definitely in your best interest. Safety belts and air bags are so valuable and effective that every new passenger car sold in the U.S. must have them as standard equipment.

Primary seat belt laws allow law enforcement officers to ticket a driver for not wearing a seat belt, without any other traffic offense taking place. Florida's safety belt law is primary for all front seat passengers and all rear seat passengers under the age of 18. Florida's safety belt law is primary for all front seat passengers and all rear seat passengers under the age of 18.

Research has found that lap/shoulder safety belts, when used properly, reduce the risk of fatal injury to front seat passenger car occupants by 45% and the risk of moderate-to-critical injury by 50%. Air bags, combined with lap/shoulder safety belts, offer the most effective safety protection available today for passenger vehicle occupants.

How much protection do safety belts and air bags provide? It may surprise you to know that your chance of serious injury in a crash nearly doubles when you do not buckle up or use air bags. You can reduce your chance of being killed by about 50% when you use a lap and shoulder belt combination. Using a lap and shoulder belt combination with air bags reduces your chances of being killed by 66% to 75%. Use these devices if you want to substantially reduce the chance of serious injury if you are involved in a crash.

Make buckling up a safe driving practice and part of your pre-drive routine. There is no time to buckle up after an emergency begins. In order for safety belts to protect you, you have to buckle

them before you start the engine! Fasten the lap belt securely but comfortably across your hip bones. Adjust the shoulder harness so the belt lies across your chest. Properly worn and adjusted safety belts provide comfort and maximum protection.

Nationwide, about 85% of drivers and passengers wear safety belts, over 87% in Florida. Some believe safety belts and air bags do not work or are not worth the trouble. However, safety belts do save lives. If safety belts had been used 100% of the time since 1975 through 2009 363,552 lives would have been saved in this country.

Motor vehicle crashes are the number one cause of death for people ages 3-33. Set a good example for children by buckling up every time you drive or ride in a vehicle. You help them develop a life-long habit when you insist they wear belts also.

Did you know 8 out of 10 children's car seats are installed incorrectly? All 50 states and the District of Columbia have child restraint laws that require children, generally up to age four, to be secured in a federally-approved child safety seat. The benefits of these laws are huge when you consider that the average person will be in at least two motor vehicle crashes during their lifetime.

Select a car seat based on your child's age and size, and choose a seat that fits in your vehicle and use it every time. Always refer to your specific car seat manufacturer's instructions; read the vehicle owner's manual on how to install the car seat using the seat belt or LATCH system; and check height and weight limits. To maximize safety, keep your child in the car seat for as long as possible, as long as the child fits within the manufacturer's height and weight requirements. Keep your child in the back seat at least through age 12.

During March 2011 the National Highway Traffic Safety Administration released new child seat guidelines: Let's take a look at the list of the new guidelines.

Birth – 12 months

Your child under age 1 should always ride in a rear-facing car seat. There are a wide variety of rear-facing car seats; take your time and select the proper seat.

1-3 years

Keep your child rear-facing as long as possible. It's the best way to keep him or her safe. Your child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by your car seat's manufacturer.

4-7 years

Keep your child in a forward-facing car seat with a harness until he or she reaches the top height or weight limit allowed by your car seat's manufacturer. Once your child outgrows the forward-facing car seat with a harness, it's time to travel in a booster seat, but still in the back seat.

8-12 years

Keep your child in a booster seat until he or she is big enough to fit in a safety belt properly. For a safety belt to fit properly the lap belt must lie snugly across the upper thighs, not the stomach.

The shoulder belt should lie snug across the shoulder and chest and not cross the neck or face. Remember: your child should still ride in the back seat because it is safer there.

The safest place for all children to be is properly restrained in the back seat. Children should never ride in the front seat of a vehicle equipped with a passenger-side air bag, unless the air bag can be deactivated by a safety switch. Research has shown that young children can sustain serious injuries from an air bag which deploys in low-speed crashes.

Purchase only new child passenger restraints. Used restraints may have cracks and may have experienced structural stress that you cannot see as a result of being in a crash. It is a good idea to replace seats every five to six years or after a moderate to severe crash.

If you are involved in a rollover or side collision, locked doors are less likely to open, thereby decreasing the chance of the occupants being ejected. Studies show that people are less likely to sustain serious injury if they are restrained inside the vehicle than when they are thrown clear.

People are not the only things that need to be restrained in a collision. For example, in a head-on collision, items on the rear window shelf will fly off becoming lethal projectiles. Objects in the vehicle will continue to move with a high rate of momentum. Articles that have been placed on the backseat can be just as hazardous as those on the shelf. The best place to secure valuables and larger items is out of sight in the trunk. This will lessen your chance of injury as well as deterring break-ins and theft. You can place small items on the floor behind the front seat.

Remember, unbelted occupants in a vehicle can also become lethal projectiles. Be responsible as a driver or occupant and enforce the use of safety belts. An unsecured passenger can become a projectile and be ejected or cause severe injuries to others in the vehicle.

Collisions can occur at points all around your vehicle - from the sides, rear and in the front. You can collide with stationary obstacles or moving objects, or be involved in a multiple vehicle collision. Your vehicle could possibly malfunction or you could be the cause.

Sometimes collisions are unavoidable. For example, when driving, you have little control over what is happening behind you. Often, when you are stopped, a rear-end collision can occur because the driver behind you is not paying attention.

Side-impact collisions are extremely dangerous and often cause serious injury because the passenger compartment takes a direct hit. A head-on collision is the worst type of collision in which to be involved, because this type of crash generates extreme collision forces during impact. Serious injury and death are much more likely to occur in head-on collisions compared to the other types previously mentioned.

There is usually more than one collision in a motor vehicle crash. Vehicles involved in crashes decelerate or come to a stop very rapidly--usually in a matter of seconds! However, unsecured occupants continue to move.

The first collision occurs when one vehicle strikes another vehicle, rolls over, or strikes a pole, tree, or some other object. A fraction of a second later the second collision occurs when the occupants collide with some part of the vehicle's interior. The third collision generally occurs a fraction of a second later, when the body's internal organs strike other body parts such as the ribs or skull. Vehicular and property damage results from the first collision. Occupant injury and death may result from the second and third collisions.

To minimize consequences associated with the first collision requires you to be constantly alert to the environment and focused on driving. In many cases, you can change the nature and results of a crash if you use the vehicle's maneuverability to control it.

In wet weather, you may be able to find a place to practice controlling and recovering from skids. In addition, if you drive a vehicle equipped with an anti-lock brake system (ABS), find a safe place to apply hard brake pressure when traveling 25-30 mph so that you can experience the pulsation of the brake pedal that occurs when the brakes are suddenly applied hard in an emergency.

When you cannot actually practice things physically, you can practice them mentally. When you are driving along, practice "what-if" scenarios in your mind. What would you do if you suddenly had a blowout? What if an oncoming car suddenly pulls into your lane or your brakes fail?

Mental practice can help you to react correctly and quickly when a real emergency happens. Be prepared for the unexpected, plan ahead, and you should arrive at your destination safely.

No one wants to give up the freedom and convenience of driving. Mature drivers by a huge margin prefer private vehicles over all other forms of transportation. Statistics show that drivers 65 and older take more than 80 percent of trips in their own vehicles. If you are not sure you are able to properly and safely handle your vehicle, talk about it with a trusted friend or family member. You can also get a referral to a driver rehabilitation specialist who can assess your ability to drive. The decision to stop driving is very hard, but you must make the responsible decision. In the recent past, have you or someone you know or love:

- Noticed diminished eyesight?
- Experienced difficulty in negotiating sharp turns and intersections?
- Hesitated over right of way decisions or situations you once took for granted?
- Been surprised by the sudden presence of other vehicles or pedestrians?
- Received negative feedback from others?
- Become lost on familiar routes?
- Felt nervous or exhausted after driving?
- Been cited for traffic violations or found at fault in crashes?

If the answer to any of these questions is yes, it may be time to consider other options.

If you look for alternative transportation, you may not need to go any further than your Local County or city. The majority of older people who stop driving outlive their decision by more than a decade. One of the fastest growing segments of senior services includes transportation.

Many metropolitan areas are set up to assist seniors in their transportation needs. A call to your county Social Services should get you on the right track to finding these services if they are available in your area. Check the links tab for websites that will give you more information on available alternative transportation in Florida.

The number of vehicles on our roadways is continuing to increase, consequently so are the number of crashes and injuries. Be responsible and use the safety equipment installed in your vehicle.

Let's see if we can remember some important points. You will now be asked some review questions based on this CBT. You may select your answer by choosing the corresponding button or by pressing the corresponding letter on your keyboard.

1. The decision to stop driving is difficult however if one of the following is occurring that decision may need to be considered:
 - a. noticed diminished eyesight
 - b. experienced difficulty in negotiating sharp turns and intersections
 - c. hesitated over right of way decisions or situations once taken for granted
 - d. All the answers are correct
 - e.

The answer is d. All the answers are correct.

2. The best place to secure loose objects in a vehicle is:
 - a. the shelf under the rear window
 - b. behind the front seat
 - c. in the trunk
 - d. on the back seat

The answer is c. in the trunk.

3. If you are involved in a rollover or side collision, locked doors:
 - a. are less likely to open
 - b. decrease occupant ejection
 - c. less likely to sustain serious injury
 - d. All of the answers is correct

The answer is d. All of the answers is correct.

And now let's review the lesson.

Buckle up yourself and your passengers before putting the vehicle in motion. Ensure all children are properly secured:

- Secure them with a car seat or by a safety belt in the back seat.
- Do not put a small child in the front seat of a vehicle equipped with passenger side air bags unless the vehicle has a safety switch to deactivate the bag.

- Make sure you secure all loose objects inside a vehicle. Collisions can occur at points all around your vehicle - from the sides, rear and in the front.
- There are three collisions that can occur when you are involved in a crash. There are ways to minimize the consequences of a vehicular collision such as being alert at all times, preparing to maneuver, and taking the brunt of the collision on the rear portion of your vehicle.
- Be prepared for the unexpected, plan ahead, and you should arrive at your destination safely.

This concludes the module on reducing collision consequences. You are now ready to take the exam.