

DRIVER SAFETY TRAINING LESSON PLAN

Topic: Driver Safety; Defensive Driving; Avoiding Vehicular Accidents and Injuries

This presentation is designed to assist trainers conducting Driver Safety training for workers. Since workers are the target audience, this presentation emphasizes hazard identification, avoidance, and control – not standards. No attempt has been made to treat the topic exhaustively. It is essential that trainers tailor their presentations to the needs and understanding of their audience. This presentation is not a substitute for any of the provisions of the Occupational Safety and Health Act of 1970 or for any standards issued by the U.S. Department of Labor.

Overview

The Occupational Safety and Health Act requires employers to comply with hazard-specific safety and health standards. In addition, pursuant to Section 5(a)(1), the General Duty Clause of the Act, employers must provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. Employers can be cited for violating the General Duty Clause if there is a recognized hazard and they do not take reasonable steps to prevent or abate the hazard.

Every 12 minutes someone dies in a motor vehicle crash, every 10 seconds an injury occurs and every 5 seconds a crash occurs. Many of these incidents occur during the workday or during the commute to and from work. Employers bear the cost for injuries that occur both on and off the job. Whether you manage a fleet of vehicles, oversee a mobile sales force or simply employ commuters, by implementing a driver safety program in the workplace you can greatly reduce the risks faced by your employees and their families while protecting your company's bottom line.

Instructional Materials

1. PowerPoint presentation
2. Instructor notes.
3. Training participant roster
4. Teaching Outline
5. Additional references

Learning Objectives and Expected Outcomes

Upon completion of the lesson, participants should be able to:

1. Discuss the elements of a Driver Safety Program
2. Discuss each of the leading causes of vehicular accidents and injuries
3. Describe the elements of a pre-trip inspection
4. Explain the 5 habits of Defensive Driving
5. Understand the various Defensive Driving tactics

Teaching Outline

1. Opening Slide
2. Learning Objectives
 - a. Discuss the elements of a Driver Safety Program



- b. Discuss each of the leading causes of vehicular accidents and injuries
 - c. Describe the elements of a pre-trip inspection
 - d. Explain the 5 habits of Defensive Driving
 - e. Understand the various Defensive Driving tactics
3. Introduction - Why Driver Safety Training?
- a. Every 12 minutes someone dies in a motor vehicle crash, every 10 seconds an injury occurs and every 5 seconds a crash occurs
 - b. Motor vehicle crashes are a leading cause of death and injury for all ages
 - i. 40,000 people die each year
 - ii. 17,300 vehicle crashes PER DAY
 - iii. 8,300 injured motorist/passengers PER DAY
 - iv. 115 people who leave home today will never return because of a motor vehicle crash
 - c. On a day-to-day basis, driving is the most dangerous thing we do
 - d. Most accidents can be prevented!
4. Fatality and Injury Rates
- Chart: Fatality and Injury Rate 1989-2005 Per 100 Million Vehicle Miles Traveled
5. The Cost of Accidents
- a. The average motor vehicle crash costs a company \$16,500
 - b. When a worker has an on-the-job crash that results in an injury, the cost to the company is \$74,000
 - c. Costs can exceed \$500,000 when a fatality is involved
 - d. Off-the-job crashes are costly as well
 - i. Far-reaching financial and psychological effects on employees, their coworkers and families
6. What Causes Accidents?
- Table: What Causes Accidents?
7. Driver Safety Program Objectives
- a. Keep employees who drive and those with whom they share the road safe
 - b. To protect the Company's human and financial resources
 - c. To change employee driving attitudes, improve driving behavior, and increase driving skills to build a "be safe" driving culture
 - d. To build a *Defensive Driving* mind set at all times
8. Elements of a Driver Safety Program
- a. Written Policies and Procedures
 - i. Alcohol and drug policy
 - ii. Seat Belt Policy
 - b. Driver Agreements
 - i. Contract with all employees who drive for work purposes
 - c. Motor Vehicle Record (MVR) Checks
 - i. Check the driving records of all employees
 - d. Crash Reporting and Investigation
 - i. Establish and enforce crash reporting and investigation process
 - e. Vehicle Maintenance and Inspection
 - i. Routine, documented preventive maintenance schedule



- f. Disciplinary Action and Reward/Incentive Program
 - i. Positive and negative incentives for driving results
- g. Driver Training/Communication
 - i. Provide continuous driver safety training and communication
- 9. The Fatal Five - The 5 leading causes of motor vehicle accidents
 - a. State of Mind
 - b. Aggressive Driving
 - c. Distracted Driving
 - d. Drowsy Driving
 - e. Impaired Driving
- 10. State of Mind
 - a. Stress
 - b. Emotions
 - c. Attitudes
 - i. Increases the likelihood for distracted driving
 - ii. Increases the chance for road rage
- 11. Aggressive Driving
 - a. 6.8 million crashes are estimated to be caused by aggressive driving each year
 - b. Since 1970, the number of drivers has increased by 64% while the roadway system increased by only 6%
 - c. Aggressive driving includes:
 - i. Tailgating
 - ii. Making rude gestures
 - iii. Flashing high beams at the car in front of you
 - iv. Failing to yield to merging traffic
 - v. Passing on the shoulder
 - vi. Changing lanes without signaling
 - vii. Excessive honking the horn
- 12. Distracted Driving
 - a. Distracted driving is a factor in between 25 to 30% of all traffic crashes—that's 4,000 or more crashes a day
 - b. Distracted drivers react more slowly to traffic conditions, decreasing their "margin of safety"
 - c. Distracted driving includes:
 - i. Talking to passengers
 - ii. Adjusting vehicle climate/radio controls
 - iii. Eating a meal/snack
 - iv. Using a cell phone
 - v. Tending to children
 - vi. Reading a map/publication
 - vii. Grooming
 - viii. Preparing for work
- 13. Drowsy Driving
 - a. Drowsy driving causes more than 100,000 crashes each year, resulting in 40,000



injuries and 1,550 deaths

- b. Crashes caused by drowsy driving are often serious crashes and occur most often on high-speed rural highways
- c. Steps to avoid drowsy driving:
 - i. Get a full night of rest before driving
 - ii. If you become tired while driving, stop. A short nap (15 to 45 minutes) and consuming caffeine can help temporarily.
 - iii. When driving long distances get out of the car every 2 hours to stretch and walk briskly
 - iv. Avoid taking medications that cause drowsiness.

14. Impaired Driving

- a. Alcohol impaired driving accounts for approximately 40% of fatal crashes
- b. Alcohol is a contributing factor in 39% of all work-related traffic crashes.
- c. About three in every 10 Americans will be involved in an alcohol-related crash at some time in their lives
- d. Driving skills and judgment, are impaired long before people exhibit visible signs of drunkenness

15. Alcohol and Drug Policy

“Our Company has a vital interest in maintaining safe, healthy, and efficient working conditions for its employees. Therefore, consumption of alcohol or illegal drugs while performing company business or while in a company facility is prohibited.”

16. Seatbelt Facts

- a. Seat belts are the single most effective means of reducing deaths and serious injuries in traffic crashes.
- b. Reduces the risk of dying in a traffic crash by 45 percent in a car and by as much as 60 percent in a truck or SUV.
- c. Prevents more than 325,000 serious injuries in each year
- d. Legislation in many states and municipalities requires the wearing of seatbelts for the driver and the vehicles passengers

17. Seatbelt Policy

“All employees must wear seat belts when operating a company-owned vehicle, or on company business; and all occupants are to wear seat belts or, where appropriate, child restraints when riding in a company-owned vehicle, or in a personal vehicle being used for company business. All employees and their families are strongly encouraged to always use seat belts and the proper child restraints whenever they are driving or riding in any vehicle, in any seating position.”

18. Vehicle Inspection

- a. Pre-trip inspection
 - i. Windows clean?
 - ii. Lights/signals clean & working?
 - iii. Tires properly inflated and checked for tread wear?
 - iv. Observe any fluid leaks on the ground.
 - v. Are your plates and all inspection tags current?
 - vi. Check and adjust all mirrors
 - vii. Adjust your headrest
 - viii. Assure doors fully closed and secured



- b. BUCKLE UP!
- 19. Vehicle Inspection
 - a. Carrying a load?
 - b. Tie down and secure all fire extinguishers
 - c. Nothing should be rolling around the rear or bed of the vehicle
 - d. No loose ladders, equipment, tools, etc.
- 20. Vehicle Inspection
 - Image: Apparently he forgot the pre-trip inspection!
- 21. Vehicle Inspection
 - Image: One of the dangers of an improperly secure load
- 22. Defensive Driving
 - Driving to save lives, time and money *in spite of* the conditions around you and the actions of others.
- 23. Defensive Driving - *The 5 to Survive* - Five defensive driving habits:
 - a. Look to the Horizon
 - b. Identify the Hazards
 - c. Scan, Don't Stare
 - d. Always Have an Escape Route
 - e. Be Visible
- 24. Defensive Driving - *The 5 to Survive*: 1. Look to the Horizon
 - a. Aim the vehicle at a target well down the road
 - b. Keep eyes up to the horizon when steering to stay on your path
- 25. Defensive Driving - *The 5 to Survive*: 2. Identify the Hazards
 - a. Awareness of what is around you
 - b. Goal is to identify possible hazards that may enter your travel path
- 26. Defensive Driving - *The 5 to Survive*: 3. Scan, Don't Stare
 - a. Most of your attention should be out front
 - b. Check, your "six"
 - c. Use the triangle method
- 27. The Triangle Method
 - a. Most of your attention should be out front
 - b. Check side mirror, rear mirror, speedometer and gages every few seconds
 - c. Always check out front between checking other areas; never go from mirror to speedometer or other gage
- 28. Defensive Driving - *The 5 to Survive*: 4. Always Have an Escape Route
 - a. Be Prepared!
 - b. Expect the unexpected
 - c. Don't get 'boxed in' by other traffic
 - d. Check your blind spot and don't drive in another vehicle's blind spot
 - e. Use the 2 second rule
- 29. Blind Spots
 - a. If you are behind a vehicle and can't see their rearview mirror through their rear window, you are probably in their blind spot
- 30. How long does it take to stop?



- a. Reaction time + stopping time = total stopping time
- b. On average, $\frac{3}{4}$ of a second transpires between your identification of a hazard and the need to stop, and getting your foot to the brake
- c. Stopping time will vary with road conditions, type of vehicle, and vehicle condition

31. Impact of Reaction Time

- a. At **30 mph** you will travel about **35 feet** in $\frac{3}{4}$ second
- b. At **65 mph** you will travel about **70 feet** in the same amount of time
- c. At **55 mph** a car travels 346 feet before it stops
- d. At **55 mph** a truck travels 477 feet before it completely stops; 131' longer stopping distance
 - i. 55 mph = 80.67 feet per second = 1.6 seconds to travel 131'

32. The Two Second Rule

- a. Provides a two second space cushion in front of your vehicle
- b. Count 'one thousand and one, one thousand and two' until the front of your vehicle passes the same stationary point that the rear bumper of vehicle in front of you passed when you began counting
- c. If you pass that point before finishing one thousand and two, you are too close
- d. Trucks or heavy vehicles should use 4-8 seconds versus two seconds

33. Two Second Rule:

Image: The dark truck is following too close...

34. Two Second Rule:

Image: They also ignored the two second rule!

35. Defensive Driving - *The 5 to Survive*: 5. Be Visible

- a. Communicate with Traffic
 - i. Eye Contact: eye contact with the other driver gives you some confidence that they see you and will wait for you to pass
 - ii. Headlights: two purposes, to see and be seen!
 - iii. Turn Signals: failure to signal forces others to guess what your actions might be
 - iv. Horn: gets attention and assures awareness of our approach
 - v. "Vehicle Body Language:" information about other driver's habits and intentions by the "vehicle's body language"
 - 1. Weaving in and out of traffic - aggressive driver
 - 2. Hugging the left side of the lane - potentially looking to pass
 - 3. Tires of a vehicle in the oncoming traffic lane turned in your direction - could turn in front of you

36. Defensive Driving - Backing Tactics

- a. Backing is the most common vehicle accident. Why?
 - i. Poor visibility as to what is behind you
 - ii. Unnecessary backing
 - iii. Unfamiliarity with vehicle
- b. Never back up if a good option exists to go forward
- c. In a parking lot, pull through the empty spaces to "face out" in your final parking spot to avoid having to back up
- d. Defensive Tactics:



- i. Look at your path, know what's behind you
- ii. Before moving check again behind you
- iii. Back slowly and lightly tap your horn
- iv. Use a spotter when possible
- v. Back to the driver's side whenever possible

37. Defensive Driving - Intersections

- a. 40 percent of all serious accidents occur at intersections
- b. Defensive Driving Tactics:
 - i. Remember: the right of way is not guaranteed!
 - ii. Beware of the 'stale green light' - a light that was green the first time you saw it so you don't know when it will change
 - iii. Determine a 'decision point' that allows you either to safely stop or clear the intersection before the light turns red
 - iv. Keep your eyes moving to watch for potential hazards, including pedestrians
 - v. Remember to 'communicate with traffic' and 'be seen'
 - vi. As you approach the intersections, look left, then right, then left again as you enter the intersections
 - vii. Continue scanning as you proceed

38. Defensive Driving - Intersections

Image: REMEMBER: The Right of Way is not Guaranteed!

39. Defensive Driving - Lane Changes

- a. Check to make sure there is enough room to safely change lanes
- b. Signal your intentions well in advance
- c. Check your blind spot and the space you will occupy again before changing lanes
- d. Make the lane change
- e. Remember to be seen!

40. Defensive Driving - Hazardous Conditions

- a. Rain
 - i. Hydroplaning - occurs at speeds as low as 30mph
 - ii. Oil-rain mixture - shortly after rain begins oil residue on street and water mixes to cause very slippery conditions
- b. Winter
 - i. Shaded Areas - Shady parts of the road will remain icy and slippery after open areas have melted
 - ii. Bridges - Bridges freeze before roads do
 - iii. Melting Ice - Slight melting will make ice wet
 - iv. Black Ice - If the temperature is below freezing and the road looks wet

41. Defensive Driving - Hazardous Conditions

- a. Defensive Driving Tactics:
- b. Slow Down! Speed limit may not be the speed that allows you to drive in a safe and controlled manner
- c. Increase the 2 second rule to 4 or even 8 seconds to allow for hazardous conditions
- d. If hydroplaning occurs, release the accelerator and do not apply the brake



- e. Remember to BE SEEN!
42. Defensive Driving - Construction Zones
- a. More than 10 billion vehicle miles of travel are estimated to occur through active road work zones in any given year
 - b. In 2003, 1,028 fatalities resulted from motor vehicle crashes in work zones a 48 percent increase since 1997
 - c. 85% of those killed were drivers or occupants
 - d. Slow Down! Use extra caution.
43. In the Event of an Accident
- a. NEVER leave the scene of an accident!
 - b. Report any accident immediately to your supervisors, and police, no matter how minor
 - c. Call emergency personnel as necessary
 - d. Do not attempt to move injured persons
 - e. Get police officer information, badge #, name, etc.
 - f. Obtain a police report whenever possible
44. Summary
- a. Motor vehicle crashes are a leading cause of death and injury for all ages
 - b. The 5 leading causes of vehicle accidents are state of mind, aggressive driving, distracted driving, drowsy driving and impaired driving
 - c. Seatbelts are the single most effective tool to reduce injuries and deaths
 - d. The five key defensive driving habits are:
 - i. Look to the Horizon
 - ii. Identify the Hazards
 - iii. Scan, Don't Stare
 - iv. Always Have an Escape Route
 - v. Be Visible
 - e. Report accidents immediately to your supervisor - no matter how minor
 - f. Never leave the scene of an accident!

References

1. Publications

- a. Guidelines for Employers to Reduce Motor Vehicle Crashes
http://www.osha.gov/Publications/motor_vehicle_guide.html
- b. National Transportation Safety Board Safety Alerts
<http://www.nts.gov/alerts/alerts.htm>

2. OSHA References/Resources

- a. NIOSH - Motor Vehicle Safety Guidelines
<http://www.cdc.gov/niosh/topics/motorvehicle/>

