



**Defensive driving is driving to prevent incidents regardless of the driving conditions, actions of others and other hazards.** Defensive driving techniques are used to avoid incidents – anticipating and reacting to a situation is key to collision avoidance. By following these techniques, the defensive driver can react to any situation, whether it is another driver’s error, a pedestrian, or another scenario that could result in an incident. The defensive driver is constantly aware of their surroundings and is always on guard to respond to the situation. Training is necessary to develop the defensive driver. There are many defensive driver programs available through private organizations. Companies that succeed in creating a defensive driving culture in their organization achieve the best results in collision prevention, efficiency and profitability.

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AVOIDING INCIDENTS IS THE BEST WAY TO KEEP YOUR EXPENSES DOWN, PRODUCTIVITY UP AND YOUR BUSINESS ON TRACK.

An effective defensive driving program includes training modules on:

- The incident prevention formula
- Adverse conditions
- Specific driving situations

We have prepared a series of three loss prevention sections covering these topics. They can be used at safety meetings to educate your drivers and help them avoid collisions.

Each section includes a scenario for discussion to apply the concepts.

The guides are an introduction to defensive driving and are not intended to replace a comprehensive defensive driving training program.

#### **Collision prevention formula**

A defensive driver is prepared to react to any hazards while driving.

To predict the outcome of a driving situation and prevent a collision, the defensive driver applies the collision prevention formula:

- Recognize the hazard
- Understand the defence
- Act in time

#### **Recognize the hazard**

Recognizing the hazards involves knowing what the hazards are, anticipating or predicting the hazards and visually seeing them.

What is the weather like? How does the weather affect the roads you will be travelling on? Are you mentally prepared to drive? Is the vehicle in disrepair? All of these questions begin the process of understanding what hazards may be present while driving and should be asked prior to entering the vehicle.

Anticipating hazards involves taking the knowledge of possible hazards and visually seeing the signs of their appearance. To see the hazards, you must look in the right place for them. Utilizing the eye lead time, looking well ahead of the vehicle, focusing inward, checking mirrors from side to side, and starting the process over again. Fixed stares lead to mental lapses in which hazards can be missed.

## Understand the defence

Once a hazard is identified, you have three options to defend against it:

- Brake
- Steer
- Communicate your presence

Slowing down is the primary response to any hazard. Reducing speed is the best way to avoid a collision or minimize the impact. If a hazard is anticipated, you will be able to brake while retaining control of your vehicle.

Steering appropriately to avoid the hazard, such as an oncoming vehicle in your lane, is the next defence against collisions. Controlling steering to take the best path can sometimes mean colliding with the least harmful object, such as sideswiping a vehicle or running into a bush versus hitting an oncoming vehicle.

Sounding your horn is the primary way to communicate your presence to prevent a collision. Signals also alert other road users of your intentions so that an incident is avoided. Signal early and use your horn sparingly to ensure full effectiveness.

## Act in time

When you recognize the hazard and understand the defence, all that is left is for you to act appropriately in time. Never assume that a hazard will correct itself; the sooner you react, the more time you'll have to avoid an incident.

During your next safety meeting, discuss the collision prevention formula using the following scenario and questions:

You're driving down a two-lane highway, and there is a person walking in the same direction as you along the road.

- How does your formula change if, instead of an adult, it is a child riding a bike along the road?
- How does your formula change if there are construction barriers along the shoulder?
- How does your formula change if you notice an oncoming vehicle passing another and it looks like it will complete the pass in plenty of time?

In each of these situations, explore what the hazards are, what the defence is, and what the effect will be if the defence can be applied in time.

## Adverse conditions

A defensive driver is prepared with an appropriate reaction to handle any possible hazard that may confront him or her when a possible hazard develops.

Below are six conditions that create hazards and some tips to avoid them.

## 1. Light

### Night

- Vision – Your vision is reduced at night. Slowing down is the best defensive driving action to prevent an incident.

- Glare – Direct light into a driver's eye from sunlight, reflections or vehicle headlights can reduce vision for a short time. Use sunglasses or visors and avoid looking directly into an oncoming vehicle's headlights.

## Headlights

Headlights will illuminate the roadway for some distance, but it is important to manage your speed to keep your stopping distance within your sight distance. Keeping your headlights clean and in proper adjustment is important. Use high beams when appropriate and keep interior lights to a minimum.

## 2. Weather

### Precipitation

Traction is compromised with rain, sleet and snow. Reducing speed, increasing following distance, and properly using wipers and defrosters all assist the driver. Hydroplaning is a serious danger and can occur even at slow speeds. Regain control by releasing the accelerator. Wet brakes can cause loss of braking power, lockups or pulling to one side. Avoid driving through deep water, but if you do, immediately test the brakes and allow them to dry before proceeding to drive.

### Visibility

Heavy rain, snow and fog will impair your visibility. Avoid driving in these conditions as much as possible.

### Ice

Bridges and overpasses are susceptible to icing before the roadway freezes. Melting ice is more slippery than ice that is not wet. Reducing speed is the best defensive technique for icy conditions.

## 3. Road

### Skid control

Over-braking, over-steering, over-accelerating or driving too fast can result in a driver losing grip of the road. All of these situations occur because the driver didn't recognize the hazards present. Prior to driving, take note of any weather hazards and think about how they will affect the road conditions.

### Running off the road

Avoid swerving back onto the roadway if you run off it. Over-steering back toward the roadway can cause a rollover or steering into opposing traffic. Instead, release the accelerator to slow your speed and ease back onto the roadway. Specific locations: mountains, curves, highways, etc. Uphill and downhill grades require careful gear changing and braking management. Drivers should slow down prior to entering a curve to avoid skids.

Don't ever exceed the posted speed limit for a curve.

## 4. Traffic

### Sharing the roadway

Adequate following distance is crucial in avoiding rear-end collisions. Allow a four-second interval between you and the vehicle ahead. This allows for enough time to react to any hazards that you encounter. Allow faster vehicles to pass in the left lane. Shoulder check when making lane changes and right-hand turns to check the blind spot.

### Seeing ahead

Look well ahead to see hazards that occur. Look 20 seconds ahead of your vehicle or as far as you can see, then let your focus fall back on checking your following distance. Check a gauge before returning your attention ahead. You should be checking a different gauge each time you repeat this process to ensure you are observing the status of your vehicle. Complete checks on both of your mirrors; look at the left mirror, return to looking ahead, look at the right mirror, look ahead again, check the rearview mirror, and repeat this entire process constantly. Your pace should have you checking mirrors between five and ten second intervals, and not focusing on one spot for more than a couple of seconds to avoid staring.

### Communication

Communicating your presence and intentions is vital to letting other drivers and road users know what you are going to do. Headlights, hazard lights, signal lights, brake lights, and horns allow you to communicate. Communicate early to allow others to react in time.

## 5. Vehicle condition

### Maintenance

Your inspection program should identify all maintenance issues with your vehicle. Particular attention should be given to tires and brakes. Regular maintenance should be performed on your vehicle to ensure that mechanical breakdown does not occur, especially ones that can cause incidents.

### Tire pressure

Tire pressure is the most important factor in keeping your vehicle on the road. Over or under-inflated tires reduce stability, traction and fuel efficiency. Check your user manual for the proper tire pressure for your vehicle and ensure this pressure is maintained at all times.

## 6. Driver condition

Most incidents are caused by driver error. The mental and physical state of a driver determines whether errors are made. Alcohol and drugs have an obvious effect on a driver's mental state, but fatigue and distractions also affect the driver's ability to concentrate on the driving tasks. Implement a zero tolerance of alcohol and drugs. Limit driving shifts to combat fatigue. Provide drivers with education on the effects of fatigue on their driving. Deal with distractions by implementing policies on using handheld devices and radio controls, and prohibit non-employee passengers in company vehicles.

Awareness is one of the key components of defensive driving. Educating your drivers on the hazards is a good way to promote awareness.

### Exercise

Scenario: Analyze what your defensive driving techniques are under the following scenarios:

1. Your work shift begins
  - at 6 am, and you didn't sleep well.
  - during a heavy snowstorm.
  - during a heavy rainstorm.
  - during fog.
2. During your shift, inclement weather strikes.
3. Road conditions dictate that you must travel through a city in rush hour rather than around the city.
4. One of your headlights burns out prior to the end of your shift.
5. One tire loses some of its pressure.

### Driving situations

Some driving situations present higher risks and require greater attention:

- Intersections and turning
- Stopping
- High-risk behaviour
- Emergency situations

### Intersections and turning

Intersections and turning account for many collisions. Vehicles crossing paths, pedestrians using the roadway, distractions, and false assumptions all contribute to incidents. As a defensive driver, you need to know the right-of-way rules but never assume that you have it. Always be alert to what others are doing and be prepared to yield the right of way.

Proper preparation, such as getting into the correct lane to turn, will give yourself and others ample opportunity to see the hazards and avoid them. Proper signalling can help ensure collisions are avoided. Covering your brake at an intersection allows you to react quickly to any sudden hazards. Taking precautions and anticipating reactions all assist the driver in avoiding incidents.

### Stopping

Stopping collisions are a result of not adhering to the correct following distance and/or failing to stop at all mandatory stops. Adequate following distance is four seconds. In the time it takes you to react to a hazard and begin to apply your brake, you will have travelled a far distance, especially at high speed. Therefore, allowing four seconds between you and the vehicle in front should provide enough time to react and avoid collisions.

Mandatory stops are more common than you think. Parking lots and back lanes all require you to stop prior to the sidewalk to watch for pedestrians and vehicles. Many times, these locations have blind exits where fences or buildings block the vision of the traffic. Be cautious in these locations, especially during icy conditions.

### High-risk behaviour

High-risk behaviour includes tailgating, running amber lights, aggressive driving and distracted driving. These high-risk behaviours cause many collisions, and your drivers should avoid these behaviours. Aggressive driving can be a result of pressures for drivers to move from job site to job site in tight time frames. Management plays a big role in preventing incidents that result from aggressive driving by setting realistic timelines for jobs and encouraging defensive driving.

Distracted driving results from doing other things while driving, including using a mobile phone, eating, or operating the radio. Incidents can also result from distractions outside the vehicle, such as pedestrians, billboards, or other visual distractions. It is important for your drivers to remain focused on driving.

Creating a culture of defensive driving and stressing its importance as part of the job can provide the necessary guidance your employees need to avoid incidents. Ensure your company has a policy on handheld device use while driving. Ideally, your driver should pull over to the side of the road when it's safe to answer the mobile phone. Alternatively, allow voicemail to answer the call and return it only when you can pull off the road to a safe location.

### Emergency situations

Emergency situations require you to react very quickly. An oncoming vehicle approaching in your lane or a vehicle darting into your path from a blind intersection are examples of emergency situations. A defensive driver is already aware of these hazards, has anticipated them, and is ready to apply a defence in time. Sometimes the best defence is to sideswipe a vehicle instead of hitting the oncoming vehicle or running off the road. Utilizing proper eye lead-time, anticipating hazards, and reacting appropriately will help you avoid incidents.

### Exercise

- Discuss with your employees what the company policy is on handheld device use while driving.
- Get a commitment from each driver pledging that they will not drive aggressively, will respect other drivers, and represent the logo on the company vehicle properly.
- Discuss any close calls that have occurred at intersections or while turning.

For more information on making your business safer, contact our Risk Services team at **1.833.692.4111** or visit us at **[www.northbridgeinsurance.ca](http://www.northbridgeinsurance.ca)**.

