



## In-Vehicle Technology

There are many in-vehicle technologies available that can help increase your safety and comfort behind the wheel. As with any driving skill, it's important to take charge of learning about these features and how they work to support safe driving.

When used properly, these technologies can help:

- Extend safe driving abilities
- Reduce crash risk
- Improve the ease and comfort of driving

New in-vehicle technologies are designed to make driving safer, but they do not replace the important role each of us plays as drivers. None of the features included on this page should be relied on as replacements for safe driving behaviors.

### Be the Expert on Your Own Vehicle

If you're driving a newer vehicle, you may be surprised by the safety features it offers. Here are a few tips and resources to help you learn how these features work and how to get the most out of them.

- Before driving off the lot, ask if the dealership offers training on how to use your vehicle's technologies. You can also ask a friend or family member for help.
- Keep in mind that names, functions, and locations of these safety features may vary by manufacturer. Check your owner's manual or visit [MyCarDoesWhat.org](http://MyCarDoesWhat.org) to learn about the technologies in your vehicle's make and model
- Stay up to date on the latest advancements in vehicle technology and how they can keep you safer on the road by taking [AARP's Smart DriverTEK Workshop](#) or [AAA's Roadwise Driver Course](#). These are available online or in person.
- Use the information below as a quick reference guide.

The following technologies may help increase your safety and the safety of others on the road:



#### Back-Up Cameras

A back-up camera allows you to see what is behind the vehicle on a dashboard screen visible from the driver's seat. This can be helpful if you have a limited flexibility or range of motion when turning to look over your shoulder before backing up.

Always check over your shoulder and use your mirrors in addition to the camera when backing up.



### Back-Up Warning

When your vehicle is in Reverse, this feature uses rear-facing sensors to detect objects behind you and provides visual, sound and/or vibration alerts. Some systems may also assist with braking to avoid a crash. This feature can help when judging the distances needed to safely back out of parking spaces and driveways.

Back-Up Warning systems may not detect moving objects. Always check your surroundings using your mirrors and by looking over your shoulder. Stay alert for people biking or walking, as well as oncoming traffic, before backing up.



### Forward Collision Warning

Forward Collision Warning systems alert you to a potential crash with a vehicle or object ahead using visual, sound, and/or vibration warnings. These systems can be helpful in preventing crashes as we age and our reaction times become slower.

Forward Collision Warning is only designed to alert you when braking may be needed to avoid a crash. This feature does not apply the brakes automatically.



### Automatic Emergency Braking

Automatic Emergency Braking can apply the brakes if you do not respond to a Forward Collision Warning or Back-Up Warning. This may help prevent a crash or reduce its severity.

**Do not solely rely on this feature** to prevent a crash. Always stay alert and keep a safe following distance from traffic ahead.



### Blind Spot Warning

Blind Spot Warning systems use sensors and cameras to detect vehicles or objects in your "blind spots" that may be difficult to see. When a vehicle is detected, a visual alert—often a flashing light or icon on the side mirror or windshield frame—will appear.

Additional warnings may occur, such as sound and/or vibration, if you signal to change lanes while a vehicle is present.

These systems can help prevent crashes when merging or changing lanes.

Blind Spot Warning systems are intended for highway driving and might not work when traveling at slower speeds. **Always check your blind spots by looking over your shoulder** before changing lanes—this feature is not a replacement for safe driving behaviors.



### Lane Departure Warning & Lane Keeping Assist

Lane Departure Warning systems monitor the vehicle's position relative to lane markings on the roadway. When it detects that the vehicle is drifting out of its travel lane unintentionally, or without using a turn signal, the system will alert you with visual or sound warnings. In some systems, the steering wheel or driver's seat will vibrate.

Lane Keeping Assist may gently steer the vehicle back into the lane if no action is taken. In most vehicles, a slight nudge or pull on the steering wheel will override this feature.

## FACT

*When properly utilized, Advanced Driver Assistance System (ADAS) technologies have the potential to prevent 40 percent of all vehicle crashes and nearly 30 percent of traffic deaths. However, driver understanding, and proper use is crucial in reaping the full safety benefits of these systems."*

- Dr. David Yang, executive director of the AAA Foundation for Traffic Safety.

These systems work best on highways where roads are mostly straight and lane markings are clear and bright. They are not meant for low-speed, stop-and-go driving.



### Drowsiness Alert

This feature tracks how often you drift out of your travel lane and alerts you with a coffee cup or other dashboard symbol suggesting you may be drowsy and need to take a break. Drowsiness Alerts can help you monitor your attentiveness and stay focused on long trips by encouraging you to stop and rest every now and then.

It is important to be aware that this is just a warning. It will not assist with steering the vehicle back into its travel lane.



### Adaptive Cruise Control

Adaptive Cruise Control is now a common feature in many vehicles. It allows you to set a fixed speed and following distance, automatically adjusting your speed based on traffic ahead.

Drivers using Adaptive Cruise Control report changing lanes less frequently and experiencing lower levels of stress during longer drives.

When using this feature, it's important to keep the following in mind:

- It may not work under poor weather conditions, such as heavy rain or fog.
- Some Adaptive Cruise Control systems can bring the vehicle to a complete stop and then reaccelerate while others only work when traveling at highway speeds.
- Always follow the rules of the road and obey the speed limit.



### Adaptive Headlights

Due to natural changes in vision, seeing clearly at night can become more difficult as we age. Adaptive headlights can make nighttime driving safer by moving side-to-side as the steering wheel turns, improving our visibility of the road ahead by providing as much light as possible.

Adaptive headlights can help:

- Reduce nighttime crashes,
- Improve the detection of objects, and people walking and biking on the roadway, and
- Reduce the glare for oncoming traffic.

Adaptive headlights do not turn on automatically or switch from low beams to high beams when oncoming traffic is detected.



### Navigation Help

Navigation systems provide step-by-step directions to help you reach your destination, which can be especially helpful when driving in unfamiliar areas.

However, they have the potential to create unsafe distractions. To stay safe, it's important to:

- Avoid programming navigation while driving unless necessary, and
- Practice using voice commands and touchscreen features before hitting the road to become more comfortable with the system.



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