CarFit

Helping Mature Drivers Find Their Safest Fit

AOTA American Occupational Therapy Association

AAA

AARP®

Car-Fit.org

What Exactly Is CarFit?

CarFit is an educational program that provides a quick, yet comprehensive review of how well you and your vehicle work together. The program, which was developed by AAA, AARP and the American Occupational Therapy Association, also provides information and materials on community-specific resources that could enhance your driving safety and increase mobility.

Recognizing the Need

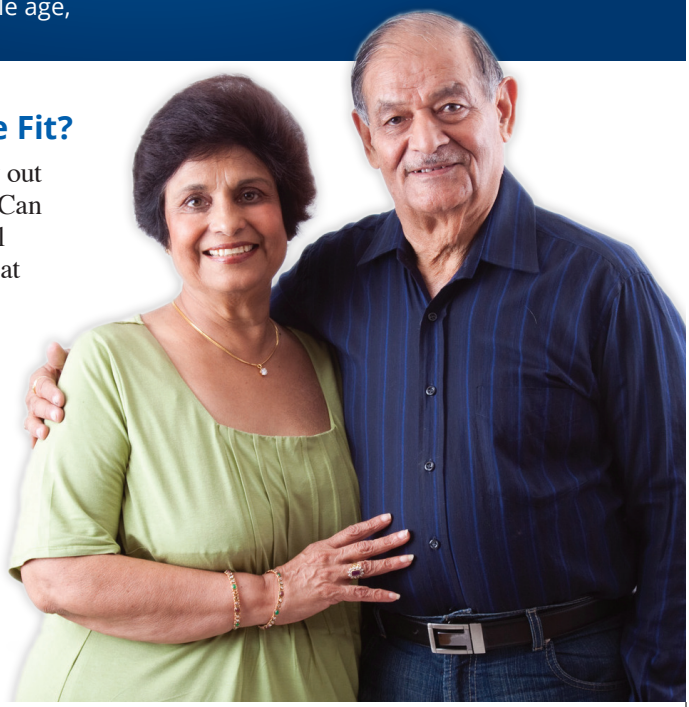
The number of older drivers is increasing. The U.S. Census Bureau has determined that by 2030, there will be an estimated 58.9 million people age 65 and older—that's 1 in 5 people and, in some communities translates to 1 in 4 drivers.

Driving today is more difficult than ever, because of increased traffic congestion, longer commute distances, new technology and faster speeds. Research suggests that older drivers are among the safest drivers, because they are more likely to wear seat belts and less likely to speed or drink and drive. However, as people age, they're more likely to suffer serious injuries or risk death in crashes, due to greater fragility.

Personal mobility is critical for healthy aging, but ill-fitting vehicles can make it uncomfortable and unsafe to drive. Today's vehicles have many safety features that offer enhanced restraint and protection, yet many drivers are unaware of those features or how to best use them. CarFit helps you explore vehicle adjustment and develop strategies to achieve your safest fit.

Does Your Vehicle Fit?

Do you have a clear view out your vehicle's windows? Can you reach and manage all controls and adjust the seat and seat belt so they are secure yet comfortable? Making adjustments can help you benefit from vehicle safety features by improving comfort, control and confidence behind the wheel.



What Can You Do?

Find out how the fit of your vehicle affects your driving and adjust your vehicle to your changing needs. Doing this could make a lifesaving difference.

And take advantage of a CarFit check to see how well you and your vehicle work together. A trained CarFit Technician will ask you several simple questions and complete a 12-point checklist. The entire process takes about 20 minutes, and you leave with recommended car adjustments and adaptations, a list of local resources in your area and greater peace of mind. Please note, CarFit checks are not available in all areas.

We Change as We Age

As we age, changes in vision, flexibility, strength, range of motion and height may make us less comfortable and reduce our control behind the wheel.

Older drivers may need to find ways to cope with physical changes that include:

- Reduced strength and physical endurance.
- Visual impairments, including problems with depth perception, high- and low-contrast vision, night vision and delayed recovery from glare.
- Reduced overall range of motion and flexibility.
- Stiff neck, limited head rotation or pain.
- Effects of medications.

Increasing exercise, improving nutrition and making sure you get regular eye exams and medical checkups may help. In addition, automakers are designing vehicles geared to the needs of older drivers. These newer models provide features such as more precise seating adjustments, clearer dashboard displays, wider doors, easier seat controls, night vision technology and adjustable gas and brake pedals.

Am I Comfortable and in Control Behind the Wheel?

Checking to see that you and your vehicle fit well together can be as important to your safety as a mechanical checkup. A good fit means you have:

- **A clear line of sight over the steering wheel.** Your line of sight should be at least three inches above the top of the steering wheel.
- **Plenty of room between your breastbone and the air bag in the steering wheel.** The distance should be at least 10 inches to allow adequate room for the air bag to safely deploy. In an emergency, the bag quickly fills with air and expands toward your chest like a large balloon. The device will deploy and start to deflate in less than to the blink of an eye. It only stays inflated for ¾ of a second and provides a cushion as it deflates.
- **A seat that fits you comfortably and safely.** Each time you drive, you should be able to adjust the seat for good visibility and easy access to vehicle controls.
- **A properly adjusted head restraint.** In the event of a crash, especially a rear-end collision, this can help prevent neck injuries like whiplash. When adjusting the head restraint, you may want to ask a friend to help you grasp the restraint and pull it up. The center of the restraint should be about three inches or less from the center of the back of your head, not against your neck. If it is too low, you could over-extend your neck and fail to properly support your head. Likewise, if the device is too high, it may not provide the proper protection.

- **Easy access to gas and brake pedals.** You should be able to easily reach the vehicle's pedals without having to stretch, and you should be able to completely depress the brake pedal. If a driver is straining to reach the pedals, it can be tiring and cause leg muscle fatigue. You also should be able to move your foot easily from the gas to the brake pedal.
- **A seat belt that holds you in the proper position and remains comfortable as you drive.** The proper way for an adult to wear a seat belt is for the lap belt to fit low and tight across the hips and pelvis, not on the stomach area that contains soft tissue. The shoulder belt should come over the collar bone, away from the neck, and cross over the breastbone, fitting snugly across the chest. The shoulder belt should never be behind the back or under the arm.

You also should be able to:

- Reach the shoulder belt and buckle and unbuckle the seat belt without difficulty.
- Get into and out of your vehicle easily.
- Sit comfortably, without knee, back, hip, neck or shoulder stiffness or pain.
- Turn your head to look over your shoulder when changing lanes and backing up. Many collisions related to lane-changing are the result of the driver's inability to check the vehicle's blind spots adequately.

Physical changes, such as arthritis and decreased range of motion, can make vehicle safety especially challenging for older drivers. That's why CarFit is committed to educating older drivers on how they can adjust and interact with their vehicles in ways that optimize comfort and safety.

Position Your Mirrors to Minimize Blind Spots

Many crashes involve merging and lane changing. Proper mirror use can give an older driver the side and rear vision that is required for safe driving, greatly reduce blind spots and increase confidence on the road.

Before starting your vehicle, make the following adjustments while in the driver's seat.

1. Adjust the interior rearview mirror so it shows as much of the rear window as possible.
2. Place your head near the left window and adjust the left side-view mirror so you can just see the side of your vehicle.
3. Position your head near the middle of the vehicle, above the center console, and adjust the right side-view mirror so you can just see the side of your vehicle.

Now you should have a better view of approaching and passing vehicles. Minor mirror adjustments may be needed to ensure an ideal view.

It may take time to get used to this view. That's why it is important to practice looking at objects at the side and rear of your car before driving with the new settings. In addition to using your side-view mirrors, you should confirm the way is clear by looking over your shoulder.

Adaptive Devices Can Help

If you find that your vehicle is not a perfect fit, you probably don't need to replace it. A variety of adaptive features can be added to help compensate for physical changes or simply to make the vehicle fit you more comfortably and safely.

Some of these devices are simple and readily available. Other devices and adaptations require the expert advice of an occupational therapy driver rehabilitation specialist who can help you continue driving with the control and

awareness you have been accustomed to. Consider consulting an occupational therapy practitioner in your area to see what services are recommended.

Simple adaptive devices that do not require special training are:

- Seat belt extenders to reduce distance to reach or rotate (available from vehicle manufacturer).
- Visor extenders for added protection from sun or glare.
- Steering wheel covers to ease grip or protect hands from extreme hot or cold.

Adaptive devices that may require an expert's advice and training to use include:

- Larger, panoramic rearview and side-view mirrors to help extend the view.
- Pedal extenders to reposition gas and brake pedals within reach.
- Leverage handles to assist in opening car doors.
- Hand controls to move brake and gas controls from non-functioning feet to hands.
- Seat lifts to ease getting out of a car.
- A device added to the steering wheel to aid in grabbing the wheel and making turns easier or more efficient.
- Chair lifts and carrying devices for managing larger mobility devices, such as wheelchairs or scooters.
- Seat and back support cushions to relieve back pain or improve line of sight.

Cushions must be considered with a degree of caution, as the added padding can affect the fit of the seat belt, the view outside of your vehicle when using mirrors and contact with the gas and brake pedals.

Before purchasing adaptive features, consult an occupational therapy practitioner to explore your options. You also might want to consider a comprehensive driving evaluation by a driver rehabilitation specialist. Many occupational therapy practitioners are highly trained to evaluate and provide solutions for drivers with physical and visual challenges or older drivers who use or need to transport mobility devices. These professionals can ensure you get the right equipment, have it properly installed and receive proper training before you take to the road.

Sharing a Drive to Protect Motorists

CarFit was developed by AAA, AARP and the American Occupational Therapy Association to improve driver safety and comfort behind the wheel. Contact your local AAA club, AARP state office or an occupational therapy practitioner, or visit www.Car-Fit.org, for more information on how to maintain and strengthen your driving health.

AAA is a not-for-profit organization serving more than 53 million members in the United States and Canada. AAA has been a leading safety advocate for more than a century.

SeniorDriving.AAA.com

AARP® is a nonprofit, nonpartisan membership organization dedicated to making life better for people ages 50 and older.

aarp.org/drive

American Occupational Therapy Association

The American Occupational Therapy Association represents more than 140,000 occupational therapists, assistants and students nationwide. Occupational therapy practitioners help people of all ages participate in daily activities, including driving, with independence and dignity.

aota.org/older-driver

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