



SMART FEATURES for Older Drivers



MOBILITY, COMFORT, AND VALUE
Finding a vehicle to meet your needs



How does driving change as we age?

Our ability to drive requires not only knowledge and experience, but healthy visual, physical and cognitive capabilities. While our knowledge and experience expand with age, changes to and possible losses in vision, physical health and mental capabilities require adjustments to help us remain safe, responsible drivers.

Natural age-related changes occur so subtly that we don't notice them progressing. For example:

At age 40

Mental sharpness begins to diminish, thought processing slows, multitasking is more challenging, night vision worsens and recovery from glare is reduced.

At age 50

Nine in 10 people require bifocals, and reaction time slows.

Between ages 30 and 60

Muscle strength and range of motion can decrease up to 40 percent.

At age 70

Arthritic joints may make movement painful and restrict mobility, and conditions such as stroke, Parkinson's disease, hypertension and diabetes may affect how we interpret and react to the driving environment.

Choosing a vehicle with the right features can help us adapt to these changes and improve safety and comfort behind the wheel.

So, which features should you look for? AAA worked with the University of Florida Institute for Mobility, Activity and Participation to help answer this question and identify vehicle features that optimize older driver comfort and safety in three steps.

STEP 1

Understand How Vehicle Features Can Keep Drivers Safer

Our expert team recommends you consider the following factors when evaluating a vehicle:

Safety features such as seat belts and the positions and types of airbags.

Ergonomics or design features, that reduce operator fatigue and discomfort.

Comfort such as ease of entry and exit, leg room and size of control buttons.

Value which incorporates the total cost of ownership including price, operating and maintenance costs, as well as reliability, fuel economy and resale value.

Regardless of your age and overall health, any vehicle you purchase should include:



Proven crashworthiness. Vehicle crash test and rollover ratings are provided by the National Highway Traffic Safety Administration, www.safercar.gov, and the Insurance Institute for Highway Safety, www.iihs.org/ratings.



Side and dual-stage/threshold airbags. Side airbags protect the torso, pelvis and head. Dual-stage and dual-threshold airbags are recommended because senior drivers risk injury if airbags deploy with too much force. The force with which this type of airbag inflates depends on crash severity, distance from the driver and passenger and weight of the driver and passenger to ensure optimal protection for all vehicle occupants during a crash.



Head restraints and extra padding. Head restraints move forward to cushion the head and reduce the risk of neck injuries when a car is hit from behind. Interior crash protection, such as extra padding, also can minimize injuries.



Antilock brakes. An antilock braking system, or ABS, prevents wheels from locking and ensures better steering control during emergency braking. ABS automatically pumps the brakes, up to 18 times per second, to prevent the wheels from locking up.



Dynamic stability control. This feature helps prevent loss of control in a turn, especially on slippery roads, to enable drivers to compensate for slower reaction times and make quick corrections.

STEP 2

Tailor to Your Needs

The following pages recommend features that will help you adapt to changing visual, physical and cognitive needs. Features are listed in no particular order.

FEATURES TO LOOK FOR IF YOU EXPERIENCE:

Hip or leg pain

Decreased leg strength

Limited knee range of
motion

Diabetic neuropathy
(numbness or tingling)
in the legs, feet or toes

Six-way power adjustable seats

(Seats that adjust forward, backward, up, down and seatback forward and backward)

Eases entry and exit from vehicle and facilitate seat adjustment for leg room and reduction of hip or leg pain

Comfortable seats set between mid-thigh and lower buttocks

Eases vehicle entry and exit

Low door threshold

Eases vehicle entry and exit

Leather or faux leather seats

Eases vehicle entry and exit

Adjustable brake and accelerator foot pedals

Allow drivers to comfortably reach pedals without having to scoot down and compromise visibility

FEATURES TO LOOK FOR IF YOU ARE:

Small-statured

Overweight/obese

Adjustable brake and accelerator foot pedals

Help drivers reach pedals, yet maintain a safe distance from the steering wheel airbag

Tilt and telescoping steering wheel

Helps drivers maintain at least 10 inches between their chest and the front airbag

Six-way adjustable seats

Help drivers obtain a line of sight above the steering wheel and sit comfortably

Push-button ignition



Adjustable power leather seats



Thick, adjustable steering wheel



FEATURES TO LOOK FOR IF YOU EXPERIENCE:

Arthritis in the hands

Finger pain or stiffness

Diminished fine motor skills, such as the ability to manipulate small objects

Four-door models

Require less strength to open and close doors than two-door models

Thick steering wheel

Requires less hand and wrist strength to grip and handle

Keyless entry

Eliminates pain or difficulty associated with turning a key

Power mirrors and seats

Ease adjustment for drivers with limited strength or arthritis

Larger dashboard controls with buttons

Easier to manipulate than knobs, especially as drivers age and fine motor skills diminish

Dashboard-mounted push-button ignition

Reduces pain or difficulty associated with turning a key

Automatic tailgate closer

Requires no strength to open and close trunk or rear door

Automatic side door openers

Require no strength to open and close doors

Heated side mirrors

Eliminate need to scrape ice

Sliding channel gear selector

Eliminates need to press selector button when changing gears

Rain sensor

Eliminates need to manually turn wipers on and off

FEATURES TO LOOK FOR IF YOU EXPERIENCE:

Limited range of motion in your upper body

Back, neck, arm or shoulder pain or stiffness

Decreased or limited balance

Tilt and telescoping steering wheel

Helps drivers find a comfortable position to alleviate neck and shoulder pain

Large, wide-angle mirrors

Compensate for limited range of motion or difficulties turning to check for blind spots while merging or backing up

Comfortable, heated seats with lumbar support

Alleviate back pain

Adjustable seat belts

Assist drivers in reaching for buckling/unbuckling

Automatic tailgate closer

Requires no strength or balance to open and close trunk or rear door

Automatic side door openers

Require no strength or balance to open and close doors

Heated side mirrors

Eliminate the need to scrape ice

Large rear window

Increases overall visibility and reduces turning required for backing up

Rear backup camera*

Increases visibility of objects behind the vehicle and reduces turning required for backing up

Active parallel park assistance*

Requires less twisting of the upper body

Front and rear sensors and warning systems*

Monitor immediate space ahead of and behind vehicle to minimize driver twisting and upper body rotation

Foot-engaged emergency brake

Easier to engage than a hand-operated brake

*These systems are intended to supplement a driver's visual checks. They are NOT replacements for mirrors and should not be used as such.



Large dashboard controls with buttons



Active parallel park assistance

© Ford Motor Company



Automatic tailgate closer



Rear backup camera



Glare-reducing side mirrors



Large rear window

© Ford Motor Company



Keyless entry

FEATURES TO LOOK FOR IF YOU EXPERIENCE:

Diminished night vision due to glaucoma, cataracts or other conditions

Problems with visual contrast or depth perception

Slow recovery from glare

Visors, including extendable sun visors

Help drivers adjust to and prevent glare from the sun

Larger audio and climate controls with contrasting text

Easier to see and make drivers more confident and less distracted

High-contrast instrument panel with large number and letter displays

Allows for better visibility with quick glances

Auto-dimming rearview mirror and glare-reducing side mirrors

Reduce blinding glare from headlights of other vehicles

FEATURES TO LOOK FOR IF YOU EXPERIENCE:

Cognitive decline or reduced mental capabilities

“Classic Car” designs – limited technology or added features

Lessen distractions and improve familiarity with controls

High-contrast instrument panel with large number and letter displays

Allows for better visibility with quick glances

Rain sensor

Turns wipers on and off automatically and lessens driver distraction



STEP 3

Make Additions (optional)

Inexpensive assistive devices can be added to your car to further address your specific needs.

Larger, angled rear and side mirrors
Improve visibility and minimize blind spots

Leveraging devices
Allow driver to use upper body to ease vehicle entry and exit

Pedal extenders
Help drivers obtain a safe distance from the steering wheel/airbag and optimize visibility

Seat belt adjuster
Improves seat belt positioning

Steering wheel covers
Improve grip for drivers with arthritic hand joints

Seat belt pull
Reduces distance in reaching for the seat belt and improves ease of grasping seat belt

Cushions and seat pads
Improve line of sight and can help alleviate back or hip pain

Shear seat covers
Decrease resistance when adjusting seated position

Key extenders
Offer more leverage for turning keys in locks or the ignition and reduce stress on finger joints

Flat swivel seat
Eases vehicle entry and exit

Leg lift straps
Allow the driver to use upper body strength to lift legs into and out of the vehicle

Rain-repelling glass treatment
Sheds water on exterior glass and improves visibility

Hand controls
Allow the driver to perform all vehicle maneuvers and functions without the use of lower extremities

Anti-glare film for side mirrors
Reduces glare from other vehicle headlights

Aftermarket vehicle adaptations or those offered by manufacturers—such as lumbar supports, door openers, hand controls, lifts and steering devices—also can help.

Never purchase or install these features without first consulting an occupational therapy-driver rehabilitation specialist (OT-DRS). Some aftermarket products can alter the effectiveness of seat belts, airbags or other safety features. Along with properly installing new features in your vehicle and providing training for proper use if needed, an OT-DRS can recommend vehicle modifications to adapt your vehicle to individual needs.



To find an OT-DRS, visit the American Occupational Therapy Association online at www.aota.org/olderdriver.

To find adaptive devices offered by specific manufacturers, visit the National Mobility Equipment Dealers Association online at www.nmeda.com.

Some expensive, high-tech solutions marketed to mature drivers do not have enough current research support to earn a place on our recommendations list.

High-tech options to weigh carefully:

Lane deviation prevention systems

Navigation systems

Head-up displays that project speed and other data onto the windshield

Adaptive cruise control to help drivers maintain a consistent following distance

Collision warning systems that signal the potential for a crash

Lane change assist that signals to drivers when it is unsafe to make a lane change

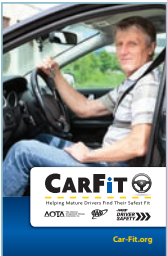
Want help selecting a vehicle that fits your needs?

Visit the interactive SeniorDriving.AAA.com/SmartFeatures website, where you can find a vehicle that meets your mobility, comfort and financial needs.

Additional resources for mature drivers



AAA's **SeniorDriving.AAA.com** website provides expert advice, science-based resources and interactive tools to help older drivers assess their skills and keep them driving as long as safely possible.



CarFit is a free, individualized safety check to help drivers increase vehicle control and comfort. Discover easy adjustments that can protect you behind the wheel.

The CarFit program was developed by the American Society on Aging in partnership with AAA, AARP and American Occupational Therapy Association.



Roadwise Review is an easy-to-use computer program that helps identify age-related changes that could put drivers at risk behind the wheel. Test your

driving abilities—confidentially, and in the comfort of your home.

Roadwise

Roadwise Rx, developed by the AAA Foundation for Traffic safety, is a free online tool that enables you to check how prescription and over-the-counter medications can affect driving. Your confidential results can be saved to your computer and printed to share with your health care provider or pharmacist.



AAA's Safe Driving for Mature Operators Driver Improvement Program

is packed with up-to-date safe driving techniques that can

help sharpen your skills to make you as safe as possible behind the wheel. Courses may be offered through the classroom, online or both. Contact your local AAA club for more information.

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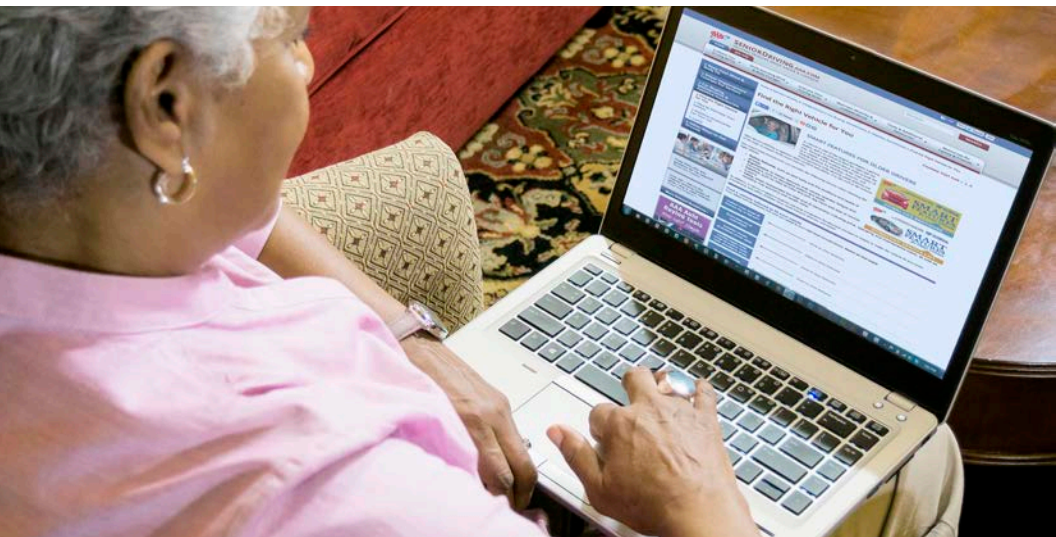
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The Fitness-to-Drive Screening Measure, available at <http://fitnesstodrive.php.ufl.edu>, is a free tool developed by the University of Florida to help caregivers or loved ones to assess an older adult's driving fitness.



SeniorDriving.AAA.com/SmartFeatures



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