smart features for mature drivers



Comfort, Safety and Value

Vehicle Features that Meet Your Needs

UF UNIVERSITY of FLORIDA

In cooperation with the National Older Driver Research & Training Center at the University of Florida



"Mature" is a Code Word for "Changing"

The fact is, we're all changing all the time. Our ability to drive encompasses our knowledge and experience, along with visual, physical and mental capabilities. While our knowledge and experience continue to expand, we have to adapt to changes in our vision, physical health and mental capabilities to remain safe, responsible drivers.

These changes may be so subtle we don't notice them happening, but they are predictable. 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.
- **At age 60:** Muscle strength and range of motion decrease by as much as 25 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 perception and behavior.

No matter your age, choosing a vehicle with the right features can help improve your safety and comfort behind the wheel.

So, which vehicle features should you look for? AAA worked with the University of Florida National Older Driver Research & Training Center's team of engineers, occupational therapists, researchers and public health professionals to help answer this question and identify vehicle features that optimize mature driver comfort and safety.

What should a mature driver look for in a vehicle?

When evaluating a vehicle, our expert team recommends you consider the following very important factors:

- Safety features, such as seat belts and the position of airbags.
- Ergonomics, defined as the efficiency and safety of design.
- Comfort, such as ease of entry and exit, leg room and size of control buttons.
- Value, defined by total cost of ownership including price, operation and maintenance costs, reliability and fuel economy, as well as resale value.

Based on these factors, all mature drivers should look for:

Proven crashworthiness. Check crash test and rollover ratings from 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.

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

Antilock brakes. An antilock braking system, or ABS, prevents wheels from locking during emergency braking. Drivers using ABS can stop the car and retain control without "pumping" the brakes, which can be challenging for older drivers.

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



The following pages recommend features that will help you cope with general mobility, vision and other health issues.

Consideration:

- hip or leg pain
- decreased leg strength
- limited knee range of motion

Recommendation	Benefit
Power seats that adjust six ways: forward, backward, up, down and seatback forward and backward	Easier to enter and exit vehicles and adjust seats for leg room.
Seat height and comfort	To help ease entry and exit, the ideal seat height is between mid-thigh and lower buttocks. For many, concave bucket seats make it difficult to exit a vehicle.
Low door threshold	Makes vehicle entry and exit easier.

Consideration:

- small-statured

Recommendation	Benefit
Adjustable foot pedals for the brake and accelerator	Help smaller drivers reach pedals, yet maintain a safe distance from the airbag mounted in the steering wheel hub.
Tilt and telescoping steering wheel	Helps ensure drivers can be positioned at least 10 inches from the front airbag.
Six-way adjustable seats	Upward adjustments help drivers obtain a line of sight above the steering wheel.

Consideration:

- arthritic hands
- painful or stiff fingers
- diminished fine motor skills

Recommendation	Benefit
Four-door models	Require less strength to open and close doors than two-door models, which have longer, heavier doors.
Thick steering wheel	Requires less hand and wrist strength to grip and handle.
Keyless entry and keyless ignition mounted on the dashboard	Help avoid pain or difficulty that can occur by turning a key in the lock or ignition.
Power mirrors and seats	Easier to adjust 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.



Consideration:

- limited range of motion — back/neck/shoulder/arm

Recommendation	Benefit
Tilt and telescoping steering wheel	Help the driver find a comfortable position, alleviating neck and shoulder pain.
Large, wide-angle mirrors	Help the driver compensate for limited range of motion or difficulties twisting to check for blind spots while merging or backing up.
Comfortable, heated seats with lumbar support	Can assist those with back pain.
Adjustable seat belts	Assist drivers in reaching for or buckling/unbuckling.

Consideration:

- vision affected by glaucoma, cataracts or other conditions
- problems with high-low vision contrast or depth perception
- diminished night vision • slow recovery from glare

Recommendation	Benefit
Visors and extendable sun visors	Help drivers adjust to and prevent glare.
Larger audio and climate controls with contrasting text	Easy-to-see controls make drivers more confident and less distracted.

Inexpensive assistive devices:
- individual needs

Recommendation	Benefit
Larger, angled rear and side mirrors	Minimize blind spots.
Pedal extenders	Help drivers obtain a safe distance from the steering wheel/airbag.
Steering wheel covers	Improve grip for drivers with arthritis in the upper extremities.
Cushions and seat pads	Improve line of sight and can help alleviate back or hip pain.

Vehicle adaptations by the manufacturer — such as lumbar supports, door openers, hand controls, lifts and steering devices — also can help. An occupational therapist or driving rehabilitation specialist may recommend vehicle modifications to adapt your vehicle to your individual needs.

To find driving rehabilitation specialists, visit the American Occupational Therapy Association Web site, www1.aota.org/olderdriver.

To find adaptations available from specific manufacturers, visit the Web site of the National Mobility Equipment Dealers Association, www.nmeda.org.

Some expensive, high-tech solutions marketed to mature drivers do not reliably deliver enough benefit to earn a place on our recommendations list.

Radar-based backing systems do provide a warning as the vehicle backs toward an object, but most cannot detect a child or object directly under the bumper. Many of these systems do not function when backing at speeds of 3 to 6 mph.

High-tech options to weigh carefully:

- Lane deviation prevention systems.
- Navigation screens.
- Head-up displays that project speed and other data onto the windshield.
- Adaptive cruise control that helps drivers maintain an established following distance.
- Rear camera/parking aid/collision avoidance systems.

Additional resources for mature drivers

CarFit® is a free, individualized safety check to help you increase vehicle control and comfort as a driver. Discover easy adjustments that may protect you behind the wheel. The CarFit program was developed by the American Society on Aging in partnership with AAA, AARP and AOTA.

Free educational brochures are available from your AAA club. Publications deal with vision and driving, the impact of prescription drugs on driving, tips on buying and maintaining vehicles and the CarFit program.

Driver improvement courses for mature drivers are available from AAA. Ask your local club about the AAA Safe Driving for Mature Operators Driver Improvement Program.

Roadwise Review® is an easy-to-use computer program that helps you identify age-related changes that could put you at risk. Test your driving abilities — confidentially, and in the comfort of your home.

AAA.com/Seniors is dedicated to areas of interest to mature drivers.

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