



KEEPING
OUR EYES ON
THE ROAD



A State-by-State
Analysis of Vision Screening
Requirements for Drivers

2006 SAFE DRIVING REPORT

INTRODUCTION

Vision provides 85 to 90 percent of the information needed to drive safely. Yet, according to a recent report by the National Eye Institute (NEI), millions of Americans have uncorrected visual impairments. This raises concerns about drivers who do not receive regular vision care.

In addition, as the risk of visual impairment typically begins to escalate at age 40, driving with poor vision is of particular concern for adults. In fact, NEI estimates that one in three Americans over the age of 40 has a vision problem. And, according to the *Journal of the American Medical Association*, drivers over 55 with an impaired field of vision are twice as likely to be in a car crash. By the year 2030, approximately one out of every five drivers on the road will be 65 or older and subsequently at increased risk for visual impairment.

According to AAA, drivers receive 98 percent of their visual information through peripheral vision, and drivers with a diminished field of vision have collision rates twice as high as those with normal peripheral vision. This relationship is important to note since glaucoma, a serious eye disease with no early symptoms, affects peripheral vision. Currently, there are 2.2 million Americans with glaucoma, and as many as two million more may be undiagnosed. In addition to having good peripheral vision, safe drivers must be able to identify and distinguish colors, be able to adjust their focus from near to far, recover quickly from glare and possess good depth perception (necessary to determine the relative speed of other vehicles on the road).



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Ironically, new technology and safety features may also cause additional risks for drivers of all ages. Auxiliary lights, high beams and fog lights are designed to help drivers see at night and in poor weather conditions. However, these lights (especially when improperly aligned) may adversely affect the vision of drivers in oncoming traffic. Vision correction surgery may also leave drivers more susceptible to this type of glare.

Because of these important links between road safety and healthy vision, the Vision Council of America (VCA) has conducted an audit of vision screening requirements when renewing licenses throughout the United States. **The focus of this report is to determine which states mandate vision screenings for drivers as part of license renewal procedures, thus ensuring a minimum level of vision care for all Americans on the road.** VCA further reviewed the potential correlation between vision screening requirements upon license renewal and fatal crash rate data among states.

The findings of this audit of vision screening renewal requirements show that states are varied in their approach to ensure that drivers have good vision for safe driving. Additional findings suggest that states with the most stringent vision screenings may have lower crash rates than those states that do not mandate vision screening as a part of licensing renewal requirements. While older drivers may be more susceptible to vision problems, drivers of all ages should receive regular eye exams from an eye doctor (ophthalmologist or optometrist) since visual impairments can affect Americans at any age.

KEY FINDINGS

- **Nine** states do not require *any* vision screening for drivers renewing their license. This means that in **Alabama, Connecticut, Kentucky, Mississippi, New Jersey, Oklahoma, Tennessee, Vermont** and **West Virginia**, drivers *never* have their vision checked after their initial license application.
- **Four** states, after initial driver's license application, only require vision screenings for drivers renewing their license after a specified age. Those states are **Maine** (beginning at age 40), **Oregon** and **Pennsylvania** (both beginning at age 45) and **Georgia** (beginning at age 65).
- **Eighteen** states require regularly scheduled vision screenings for *all* renewal applicants.

- **Twenty** states require regular vision screenings for *all* renewal applicants AND have additional provisions for adults beginning at age 40 and subsequently at increased risk of vision problems. States with additional provisions mandate more frequent vision screenings by either shortening drivers licensing periods or by limiting remote renewals.
- **Eight** of the top 10 states with the highest fatal crash rates have no vision screening requirements for renewing licenses OR require vision screenings at intervals of eight or more years. Those states are **Alabama, Arizona, Kentucky, Mississippi, Montana, New Mexico, South Carolina** and **West Virginia**.

STATE VISION SCREENING REQUIREMENTS AT DRIVERS LICENSE RENEWAL:

Nine states have no vision test requirement at renewal:

Alabama, Connecticut, Kentucky, Mississippi, New Jersey, Oklahoma, Tennessee, Vermont, West Virginia

Four states have vision screening requirements, but only for older renewal applicants:

Georgia, Maine, Oregon, Pennsylvania

18 states have vision screening requirements for ALL renewal applicants:

Alaska, Arkansas, Delaware, District of Columbia, Massachusetts, Michigan, Minnesota, North Carolina, Nebraska, New Hampshire, New York, North Dakota, Ohio, South Dakota, Texas, Washington, Wisconsin, Wyoming

20 states have vision screening requirement for all renewal applicants AND more frequent screenings for older renewal applicants:

Arizona, California, Colorado, Hawaii, Idaho, Illinois, Indiana, Iowa, Florida, Kansas, Louisiana, Maryland, Missouri, Montana, New Mexico, Nevada, Rhode Island, South Carolina, Utah, Virginia

A LINK BETWEEN VISION AND SAFE DRIVING

A review of state-by-state **Fatality Analysis Reporting System (FARS)** data was also conducted to determine the states with the highest and lowest number of fatal crashes per 1,000 residents. Those states were then compared to states identified by this audit as having the most stringent and least stringent vision screening requirements to determine if perhaps vision is one potential factor contributing to crashes.¹

In comparing those states identified as having the highest fatal crash rates, four states have no vision screening requirements for renewing licenses (**Alabama, Kentucky, Mississippi, West Virginia**) and four states require vision screenings at interval of eight or more years (**Arizona, Montana, New Mexico, South Carolina**).

Of states that have the lowest crash rates, seven require regular vision screenings for all renewal applicants (**Hawaii, Massachusetts, New Hampshire, New York, Ohio, Rhode Island, Washington**) and three of those states mandate that drivers receive a vision screening at a minimum frequency of five years (**New Hampshire, Ohio, Rhode Island**). For a listing of all states and their associated fatal crash rates, see Appendix B.

FREQUENCY OF VISION SCREENINGS

While the Federal minimum vision standards do not vary by state, additional safeguards and the frequency of vision screenings is at the states' discretion. The chart below breaks out states by duration of time between vision screenings.

MAXIMUM YEARS BETWEEN VISION SCREENINGS

STATE

18 years	Florida
15 years	South Carolina
12 years	Arizona, Texas
10 years	California, Colorado, District of Columbia, Maryland, Massachusetts, Utah, Virginia, Washington
8 years	Arkansas, Idaho, Illinois, Louisiana, Michigan, Montana, Nevada, New Mexico, New York, Wisconsin
6 years	Hawaii, Indiana, Kansas, Missouri
5 years	Alaska, Delaware, Iowa, New Hampshire, Nebraska, North Carolina, Rhode Island, South Dakota
4 years	Minnesota, North Dakota, Ohio, Wyoming

¹ This analysis did not attempt to identify causal agents or establish a connection between fatal crash rates and vision requirements. Rather, it sought to determine if the two were correlated, suggesting a relationship. Many factors can contribute to vehicle crash fatality rates, and an audit of this type cannot determine the precise degree to which each contributes to the overall fatal crash rate.

YOUR EYES AS THEY AGE

People over the age of 40 are at an increased risk for age-related vision problems including glaucoma, diabetic retinopathy and cataracts. In addition, age also brings specific visual challenges for drivers:

- Field of vision typically narrows with age, making a side collision at an intersection more likely.
- Colors may be less bright, making signals and signs less obvious.
- The amount of light needed to see clearly increases with age. A 45 year-old requires four times as much light to see clearly as a 19 year-old, and a 60 year-old may require as much as 10 times the amount of light to achieve clear vision.
- Drivers over 40 take three seconds or more to adjust focus from near to far (such as looking from the road to the dashboard and back), while younger drivers need only two seconds. This reaction time continues to increase with age.
- Older eyes are more sensitive to light and glare as pupils shrink, muscles lose elasticity, and lenses thicken. A 55 year-old takes eight times longer to recover from glare than a 16 year-old.
- Depth perception may also decline with age, affecting a driver's ability to determine the relative speed of other vehicles on the road.

To address driving safety and vision, some states have special provisions in place for drivers age 40 and older. For a listing of all states and their age-related provisions (if any), see Appendix C.

DISCUSSION

Whether or not states mandate vision screenings at driver's license renewal, VCA guidelines call for drivers to get regular eye exams performed by an eyecare professional (ophthalmologist or optometrist). Unlike a vision screening which only measures visual field and acuity, an eye exam is a more comprehensive evaluation that measures overall eye health, plus the eye's ability to focus as it moves across an image or its ability to see clearly as it shifts focus from near to far.

A vision screening is not a substitute for an eye exam, since it cannot detect all vision problems. It's important to have

regular eye exams to diagnose any vision problems that can affect your ability to drive.

Eye exams are especially important for drivers over the age of 40. Even though vision may be clear, eye exams can uncover changes in the eye caused by glaucoma, age-related macular degeneration or diabetic retinopathy. Some of these diseases have no symptoms in the early stages. Eye exams can also lead to the detection of other serious health problems—including diabetes or hypertension (high blood pressure).

Vision correction, if needed, should always be worn when driving and should be updated regularly. See the additional vision and driving tips that follow for more specific recommendations.

VISION TIPS FOR SAFE DRIVING

- Always wear your prescription eyewear and be sure that your glasses are clean.
- Use sunglasses with at least 99% UV protection when appropriate.
- Investigate anti-reflective or polarized lenses to allow more light to enter the eye and to minimize glare.
- If you have trouble driving at night because of difficulty seeing, talk to your eyecare professional.
- Do not wear tinted lenses when driving at night; even lightly tinted lenses can lower the visual quality at night.
- Get the big picture when driving. Watch the road ahead and check either side for vehicles, children, animals or hazards.
- Take breaks when driving long distances to reduce eye strain and fatigue.
- Keep headlights, taillights and windshield (both inside and outside) clean.
- Receive regular eye exams by an eyecare professional to ensure that your eyes stay healthy and your prescription remains current.

A TYPICAL TRIP TO THE DMV

All states require first time applicants to appear in person and submit to a written driving knowledge test, a driving road test, and meet a minimum standard of vision. These vision standards address both **visual acuity** (the ability to distinguish object details and shape at a specific distance) and **visual field** (the full extent of the area visible to an eye that is focused straight ahead).

If a driver's license applicant fails the Department of Motor Vehicles (DMV) issued vision screening, the applicant is then referred to see an eyecare professional (ophthalmologist or optometrist) for further exam, diagnosis and treatment. Generally, a diagnosis of a vision disorder will result in the applicant receiving a restricted license requiring them to wear corrective lenses when driving, or restricting their driving to daytime hours. Progressive vision diseases often require mandatory follow-up exams by an eyecare professional and the submission of regular vision reports to the DMV.

Licensing periods vary in duration from state to state with most states offering one or more of the following ways to renew your driver's license—by mail, via the Internet or in-person. States that offer renewal by mail or Internet require an applicant to only appear in-person every other renewal period to update their photograph, and sometimes to take a new vision test. **Depending on the state, a driver may go without a DMV vision screening their entire adult life, at a minimum of every 4 years or as long as every eighteen years.** Generally, license renewal procedures do not include a road test or written exam unless the applicant has excessive moving violations or is renewing a license that has been expired for a significant amount of time.

A REVIEW OF U.S. STATE VISION REQUIREMENTS

Currently, all states require that applicants obtaining new licenses meet minimum vision standards set out by the Federal government.

The current Federal minimum vision standards for drivers are:

- 20/40 vision or better in each eye
- 70 degree field of vision from center of each eye
- Ability to distinguish traffic signal colors

APPENDIX A

METHODOLOGY

The Vision Council of America collected regulations pertaining to vision requirements from state Department of Motor Vehicles (DMV) offices and the Fatality Analysis Reporting System (FARS). Data was collected during April and May of 2006, by auditing each state's DMV Web site, reviewing state driving manuals and placing phone calls to each state DMV to speak with officials to confirm the data collected. The data was then analyzed and grouped according to general and age-related vision requirements.

To determine the presence and strength of vision requirements for American drivers, 50 states and the District of Columbia were reviewed and grouped into four categories of license renewal procedures:

- States that do not require vision tests of any drivers
- States that require vision tests only for drivers above a certain age
- States that require regular vision testing for all drivers
- States that require regular testing for all drivers as well as impose additional screenings on drivers above a certain age

APPENDIX B

FATAL CRASH RATE BY STATE*

STATE	Fatal Crash Rank	Crash Fatalities Per Thousand
Wyoming	51	0.3287
Mississippi	50	0.3026
Montana	49	0.2854
South Dakota	48	0.2654
Arkansas	47	0.2347
South Carolina	46	0.2336
New Mexico	45	0.2336
Kentucky	44	0.2254
Alabama	43	0.2230
West Virginia	42	0.2176
Missouri	41	0.2154
Idaho	40	0.2141
Louisiana	39	0.2093
Tennessee	38	0.2042
Arizona	37	0.2004
Oklahoma	36	0.1914
Florida	35	0.1864
North Carolina	34	0.1843
Georgia	33	0.1832
Delaware	32	0.1736
Texas	31	0.1729
Kansas	30	0.1721
Nebraska	29	0.1685
North Dakota	28	0.1658
Nevada	27	0.1641
Maine	26	0.1582

STATE	Fatal Crash Rank	Crash Fatalities Per Thousand
Wisconsin	25	0.1549
Alaska	24	0.1511
Iowa	23	0.1506
Oregon	22	0.1437
Colorado	21	0.1411
Indiana	20	0.1344
Utah	19	0.1299
Minnesota	18	0.1294
Virginia	17	0.1277
Pennsylvania	16	0.1275
Michigan	15	0.1273
Washington, DC	14	0.1201
California	13	0.1191
Maryland	12	0.1179
Illinois	11	0.1149
Vermont	10	0.1114
Ohio	9	0.1114
Hawaii	8	0.1065
New Hampshire	7	0.0986
Washington	6	0.0978
Rhode Island	5	0.0966
Connecticut	4	0.0854
New Jersey	3	0.0848
New York	2	0.0776
Massachusetts	1	0.0719

* High rank correlates to high rate of crash fatalities per thousand.

APPENDIX C

VISION REQUIREMENTS BY AGE

STATE	NONE	40-49	50-59	60-64	65-69	70-74	75-79	80+
Alabama	■							
Alaska	■							
Arizona					■			
Arkansas	■							
California						■		
Colorado				■				
Connecticut	■							
Delaware	■							
DC	■							
Florida								■
Georgia				■				
Hawaii						■		
Idaho				■				
Illinois								■
Indiana							■	
Iowa							■	
Kansas					■			
Kentucky	■							
Louisiana						■		
Maine		■						
Maryland		■						
Massachusetts	■							
Michigan	■							
Minnesota	■							
Mississippi	■							
Missouri						■		
Montana	■							
Nebraska	■							
Nevada						■		
New Hampshire	■							
New Jersey	■							
New Mexico							■	
New York	■							
North Carolina	■							
North Dakota	■							
Ohio	■							
Oklahoma	■							
Oregon			■					
Pennsylvania		■						
Rhode Island						■		
South Carolina					■			
South Dakota	■							
Tennessee	■							
Texas	■							
Utah					■			
Vermont	■							
Virginia								■
Washington					■			
Wisconsin	■							
West Virginia	■							
Wyoming	■							

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