
COMPREHENSIVE EYE EXAMS

VITAL BUT UNDERUTILIZED PREVENTIVE HEALTHCARE TOOLS

A call to action to improve public understanding and increase healthcare provider and patient awareness about the importance of vision care and the overall health benefits of in-person, comprehensive eye exams

This report is the collaborative outcome of a roundtable discussion convened on August 5, 2015 and made possible by LensCrafters.

The following organizations participated in the roundtable and members of these organizations contributed to the development of this report:

1. The American Optometric Association
2. The Association of Schools and Colleges of Optometry
3. The National Council on Aging
4. The National Eye Institute
5. LensCrafters

PURPOSE

National public health organizations and leading medical societies recommend in-person comprehensive eye exams as an important part of preventive healthcare and health maintenance. Comprehensive eye exams are the best way to ensure good eye health by detecting eye diseases. These exams may also provide indications of underlying medical conditions, many of which do not have early warning signs or symptoms.

Unfortunately, the number of American children and adults who meet the recommendations set forth by public health organizations and medical societies to ensure proper eye care remains too low. The American Optometric Association estimates that 198 million people in the U.S. require a vision correction, yet data show that only 94 million eye exams are performed each year. That equates to an average interval of 25 months between eye exams.¹

Now is the time to make comprehensive eye exams the focus of attention for both the general public and healthcare professionals to ensure that eye and vision health are components of routine healthcare for all Americans.



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OVERVIEW

For children and adults, vision is critically important in day-to-day life. It impacts how people of all ages function in the world around them—whether at home, school, work, or within their community.²

The value of good eyesight cannot be underestimated. A 2010 national survey of adults commissioned by Lighthouse International showed that of all the five human senses, the ability to see was overwhelmingly the most important.³ In fact, 82 percent of people surveyed feared the loss of sight, compared to the loss of hearing (8%), smell (3%), touch (2%), or taste (2%).⁴ A 2005 national survey of adults co-sponsored by the National Eye Institute and the Lions Clubs International Foundation found that when asked to think about certain conditions that would affect their everyday living, 71 percent of people surveyed rated the loss of eyesight as a 10 on a scale of 1 to 10—with 10 indicating the greatest impact.⁵

Maintaining good eye health through proper vision care is essential for overall health and well-being.⁶ The school setting provides a public health environment for vision screening for children and it can serve as a platform for communicating about eye conditions. School nurses can also play an important role in communicating with parents about a student's eye health needs, and can affirm that there is no substitute for a comprehensive eye examination by an eye doctor.

Eye Health in Children

For children, the role of vision in the learning process is fundamental and it is often a central contributor to

academic success.⁷ Prevent Blindness®, a national volunteer eye health and safety organization, reports that one in four children has an undiagnosed vision problem.⁸ And, research shows that many children who experience problems in school may actually suffer from a visual dysfunction, but may be erroneously diagnosed with a learning disability or considered to have attention-deficit/hyperactivity disorder (ADHD).⁹ In some of these cases, a simple pair of glasses could help provide these children with the clear and comfortable vision they need to learn effectively.

The most prevalent disabling childhood conditions are vision disorders, including amblyopia (lazy eye), strabismus (crossed eyes), and significant refractive errors such as nearsightedness or farsightedness.¹⁰

Eye Health in Adults

More than 38 million adult Americans suffer from eye diseases and more than 10 million adult Americans have undiagnosed eye problems and conditions.^{11,12} The most common vision impairments among adults aged 19-40 years are caused by simple refractive errors, while the most common impairments among adults aged 40 years and older are caused by eye diseases.¹³

Many of the most common eye diseases, including diabetic retinopathy, glaucoma, cataracts, and age-related macular degeneration, typically do not have early warning signs.¹⁴ Of the more than 20 million adult Americans who suffer from cataracts, about 20 percent of cases are caused by extended ultraviolet light (UV light) exposure.¹⁵

THE INTEGRAL ROLE OF COMPREHENSIVE EYE EXAMS IN PREVENTIVE MEDICINE

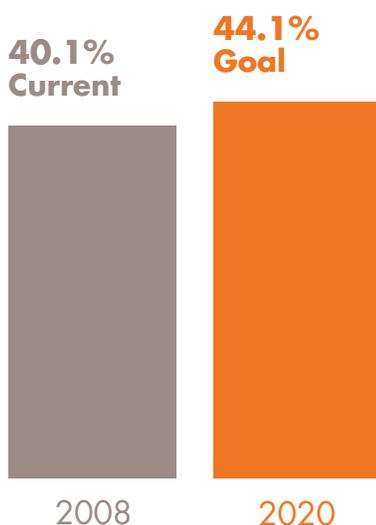
The U.S. Department of Health and Human Services (HHS) has made the improvement of the nation's visual health through prevention, early detection, timely treatment, and rehabilitation one of its goals for Healthy People 2020, a 10-year national objective-setting program for improving the health of all Americans.¹⁶

Comprehensive eye exams serve a vital function in preventive medicine. In addition to maintaining quality vision acuity and eye health, these examinations can provide insight into important markers of overall health. Eye exams can serve as early indicators of a number of underlying health conditions that can sometimes be serious.

Unfortunately, preventative eye health utilization for children and adults does not meet the recommendations established by public health organizations and medical societies.

A 2008 National Health Interview Survey conducted by the Centers for Disease Control and Prevention (CDC) showed that only 40.1 percent of preschool-aged children received vision screening; the goal of Healthy People 2020 is to increase that percentage to at least 44.1 percent.

PRESCHOOL-AGED CHILDREN RECEIVING VISION SCREENING

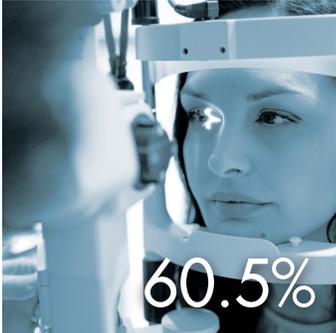


These low rates of screening in pre-school children and comprehensive eye exams not only highlight the need to improve public understanding and stimulate healthcare provider discussion about vision health and proper eye care, but they also illustrate the gap between public health recommendations and actual health behavior.¹⁷

This gap indicates that the critical link between regular eye exams and overall well-being is not fully understood by the general public and is not emphasized enough to patients by their primary healthcare providers.

The lack of knowledge and communication about the connection between eye health and overall health represents a missed opportunity for strengthening preventive health strategies and working toward better overall medical outcomes.

Data from the survey also showed that only 55 percent of adults aged 18-64 years reported having a comprehensive dilated eye exam within the past two years; **The goal of Healthy People 2020 is to increase that percentage to at least 60.5 percent.**



A LOOK INTO THE DIFFERENT TYPES OF EYE ASSESSMENTS

	Comprehensive Eye Exam*	Screening^	Other Vision Tests†
Patient History	X		
Visual Acuity	X	X	X (tests such as DMV vision screening)
Refraction	X		X (online eye exam)
Eye Function	X		
Tonometry	X		
Visual Field	X		
Slit Lamp Biomicroscopy	X		
Dilation	X		

Patient History: An assessment of factors such as patient history, symptoms, general health problems, and current medications.¹⁸

Visual Acuity: A test that gauges how well a person sees at various distances.¹⁹

Refraction: A test that measures a person's prescription for eyeglasses or contact lenses.²⁰

Eye Function: A measurement of the ability of the eyes to focus and work well together.²¹

Tonometry: A test that measures eye pressure, which, if elevated, signals an increased risk for glaucoma.²²

Visual Field: A test that measures a person's side (peripheral) vision. A loss of peripheral vision may be a sign of glaucoma.²³

Slit Lamp Biomicroscopy: A thorough evaluation of the health of the front of the eye and its surrounding tissues.²⁴

Dilation: An examination of the health of tissues at the back of the eye, including the retina, the macula, and the optic nerve. A dilation can help detect conditions such as diabetic retinopathy, age-related macular degeneration, and glaucoma.²⁵

*Comprehensive eye exams typically include the following: patient history, visual acuity, refraction, eye function, tonometry, visual field, slit lamp biomicroscopy and dilation.²⁶

^Vision screenings are usually limited to patient history and visual acuity.²⁷

†Online eye exams only measure vision and refraction, but do nothing to assess eye health.²⁸

EYE HEALTH AND ITS ROLE IN SUSTAINING OVERALL HEALTH

Eye health can often signal the presence and state of serious medical conditions, such as diabetes and hypertension, as well as the predisposition for age-related eye conditions.²⁹ The state of a person's eyes can help identify risks for stroke, heart attack, or eye disease—before they occur.³⁰

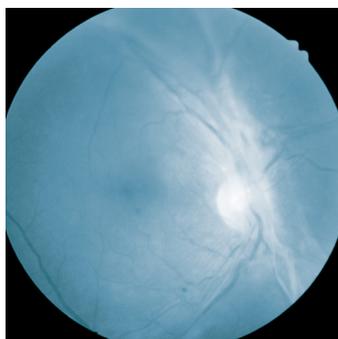
Health Snapshots

Diabetes (types 1 and 2) affects more than 29 million people in the U.S.³¹ Many more individuals are considered pre-diabetic, and will likely go on to develop diabetes unless they make changes to their lifestyle. Diabetic retinopathy, a common complication of diabetes, is a leading cause of blindness among adults in the U.S.³² Early diagnosis of this complication can reduce the risk of vision loss. Yet as many as 50 percent of patients with this disease do not get their eyes examined or they are diagnosed too late for treatment to be effective.³³ Optometrists often see indicators of diabetes in the eyes before the disease is formally diagnosed. Early detection—via a comprehensive eye exam—is critical for early disease treatment.³⁴

Hypertension (high blood pressure) has been diagnosed in 80 million adults in the U.S.³⁵ Retinopathy is also a significant eye health risk for people with hypertension. Hypertension-related retinopathy (hypertensive retinopathy) is strongly correlated with other serious health conditions and events, including cardiovascular disease (CVD) and stroke.³⁶ Eye doctors are often the first healthcare professionals to detect high blood pressure via a comprehensive eye exam. The information obtained through an eye exam, including the identification of the degree of retinopathy,

can help healthcare providers best treat patients preventively to decrease the risks of CVD and CVD-related death.^{37,38} *Many other chronic health conditions can affect the eyes or manifest symptoms in the eyes.* For example, there are associations between obesity, and eye diseases such as cataracts, glaucoma, age-related maculopathy and retinopathy.³⁹ There are also detectable manifestations of other diseases, such as Parkinson's disease and rheumatoid arthritis, which can be identified with a comprehensive eye exam.^{40,41} In addition, the eye and its surrounding tissues are one of the most common areas of the body where skin cancer is first diagnosed.⁴²

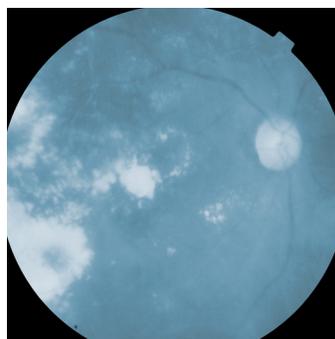
For older adults, there is also a strong correlation between vision problems and falls. Impaired vision is a critical risk factor for falls among older adults; as a person ages, less light reaches the retina of the eye, which can make edges, obstacles, and trip hazards more difficult to see.⁴³ Falls are the leading cause of fatal and non-fatal injuries for older Americans.⁴⁴ Every 13 seconds, an older adult is treated in the emergency room for a fall; every 20 minutes, an older adult dies from a fall.⁴⁵ Routine vision exams are an effective measure to prevent falls among older adults.



Retina Scan Showing Diabetes



Eye Showing Hypertension



Retina Scan Showing Glaucoma

THE BENEFITS OF COMPREHENSIVE EYE EXAMS

It is predicted that the number of Americans who suffer from eye diseases and eye-related conditions is going to increase in the decades to come.

The National Eye Institute estimates that by the year 2030, 56 million Americans—an increase of nearly 20 million people— will suffer from eye diseases.⁴⁶

Increasing availability and heightened urgency for comprehensive eye exams will broaden the platform for preventive screening for chronic and life-threatening diseases. For diabetes (type 2) and hypertension, the rates of incidence for these diseases are expected to continue to increase.⁴⁷ And, in the case of diabetes, it is projected that by the year 2050, as many as one in three adults in the U.S. may have this disease.⁴⁸ Eye exams provide critical information that can support better management for diseases such as diabetes and hypertension, and help to maintain and sustain quality-of-life in aging Americans.

A comprehensive eye exam offers health benefits beyond the eyes—benefits that may impact the general health and well-being of an adult or child. However, both consumers and healthcare providers need to see eye health as a big-picture preventive

medicine imperative. In the same way that people routinely visit their primary healthcare providers and dentists, so too must they regularly visit their eye doctor. And, healthcare providers can support this initiative by talking about the importance of eye health during office visits.

There are many government agencies, professional healthcare associations, nonprofit organizations, and commercial businesses that are already championing this profoundly important public health mandate.

Taking steps to improve eye health via regular comprehensive eye exams is a critical component in preventive healthcare. It holds the possibility of benefiting adults, children, families and those who take care of them—their healthcare providers. Finding the points of entry for more Americans to access comprehensive eye exams and using these opportunities to catalyze the frequency of exams may help to improve overall health and well-being.

CALL TO ACTION

To ensure the best eye health and preventive health outcomes, we must consider the following imperatives:

- Education to help change the mindset among consumers and healthcare providers to include eye health as an essential part of overall health—sharing the same urgency as regular physical or dental exams.
- Targeted communications, disseminated on all levels, including federal, state, and locally within communities, to stimulate dialogue and influence behavior on the part of both consumers and healthcare providers.
- Support for uptake of care by communicating about existing eye health coverage and creating a supportive environment to increase access to vision care.

The time has come to make comprehensive eye exams the focus of attention and demonstrate commitment to ensuring that vision health is an inseparable component of routine healthcare for all Americans.

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