

# Investment in research saves lives and money



facts about:

## Vision & Blindness

*"If you think research is expensive, try disease."*  
— Mary Lasker 1901–1994

### Today:

- 3.6 million Americans age 40 and older are blind or have impaired vision that cannot be corrected by eyewear. The most common causes are macular degeneration, glaucoma, cataract and diabetic retinopathy.\*
- Americans age 80 and older are the fastest growing segment of our population and have the highest rate of blindness.\*\*
- Latinos have higher rates of age-related visual impairment and blindness than other ethnic groups. Visual impairment often goes undetected in Latinos because of limited access to adequate eye care services.†
- 5 million Americans age 50 and older suffer from dry eye, which can cause pain, permanently damage the eye and reduce productivity.††

SOURCE: \*PREVENT BLINDNESS AMERICA AND NATIONAL EYE INSTITUTE. VISION PROBLEMS IN THE U.S. 2008.  
 \*\*THE EYE DISEASES PREVALENCE RESEARCH GROUP. ARCHIVES OF OPHTHALMOLOGY 2004, 122(4): 477-485.  
 †VARMA, R. ET AL. OPHTHALMOLOGY 2004, 111(6): 1132-1140.  
 ††DRY EYE WORKSHOP REPORT (WWW.TEARFILM.ORG)

### The Cost:

- Eye disease and vision loss cost the U.S. \$68 billion annually.\*
- The average annual salary for visually impaired adults is nearly \$10,000 less than for those with normal vision. The visually impaired are also less likely to be employed—44% compared with 85% of adults with normal vision.\*\*

SOURCE: \*NATIONAL EYE INSTITUTE  
 \*\*REIN, D.B. ET AL. ARCHIVES OF OPHTHALMOLOGY 2006, 124: 1754-1760.

## survivor



**NAME:** HYMAN SHAPIRO  
**AGE:** 81  
**DISEASE:** MACULAR DEGENERATION

Hyman Shapiro of Rockville, Maryland, practiced law for 45 years until vision problems made it too difficult to read the law books. In 1988, he was diagnosed with age-related macular degeneration (AMD) and at the time was told there was no treatment.

Three years later, Hyman learned about the Age-Related Eye Disease Study (AREDS) sponsored by the National Eye Institute. He volunteered to be part of the study. AREDS successfully showed that high levels of antioxidants and zinc significantly reduce the risk of advanced AMD and help people keep their vision.

Since participating in AREDS, Hyman has kept up with the latest research, and today there are a number of methods to slow the progression of AMD. Hyman has had laser treatments to halt the leakage of blood vessels in his right eye, is undergoing photodynamic therapy and receives injections of the medicine ranibizumab, which blocks abnormal blood vessel growth and leakage in the retina.

"I try to be optimistic about the future of eye research. Someday the pall of blindness will be conquered and millions of people will be able to live useful, independent lives instead of needing leader dogs or caretakers."

Despite his visual impairment, Hyman keeps active, serving on the Montgomery County (Maryland) Property Review Board, which decides whether the state has offered just compensation for private land seized for public use. The self-described "baby" of that group, he emphasizes the importance of retirees serving their communities.

**SAVING LIVES**  
**SAVING MONEY**

### HOW RESEARCH SAVES LIVES:

- Glaucoma is the leading cause of blindness in African Americans. Half of these glaucoma cases could be delayed or prevented with prescription eye drops.\*
- Older drivers with cataracts are more likely to have automobile accidents. Cataract surgery cuts the number of crashes by these drivers in half.\*\*

SOURCE: \* HIGGINBOTHAM, E.J. ET AL. ARCHIVES OF OPHTHALMOLOGY 2004, 122(6): 813-820.  
 \*\*OWSLEY, C. ET AL. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 2002, 288(7): 841-849.

### HOW RESEARCH SAVES MONEY:

- Everyone with diabetes is at risk for developing diabetic retinopathy. NIH-funded researchers have developed new treatments that delay or prevent diabetic retinopathy, saving the U.S. \$1.6 billion a year.\*
- A treatment to delay the progression of glaucoma could reduce the economic burden of the disease since the average annual cost to treat an early stage patient is \$623 compared to \$2,511 for a late-stage patient.\*\*

SOURCE: \*NATIONAL EYE INSTITUTE, NATIONAL INSTITUTES OF HEALTH (WWW.NEI.NIH.GOV)  
 \*\*LEE, P.P. ET AL. ARCHIVES OF OPHTHALMOLOGY 2006, 124: 12-19.

# facts about: } Vision & Blindness

## Hope for the Future:

- NEI-funded research suggests that increasing omega-3 fatty acids in the diet of premature infants could prevent or decrease severity of retinopathy of prematurity by protecting against abnormal blood vessel growth.\*
- Breakthroughs in identifying gene variations in age-related macular degeneration could result in new screening tests and preventive therapies for the leading cause of blindness in older Americans.\*\*

SOURCE: \*CONNOR, K.M. ET AL. NATURE MEDICINE 2007, 13: 868-873.  
 \*\*NATIONAL EYE INSTITUTE

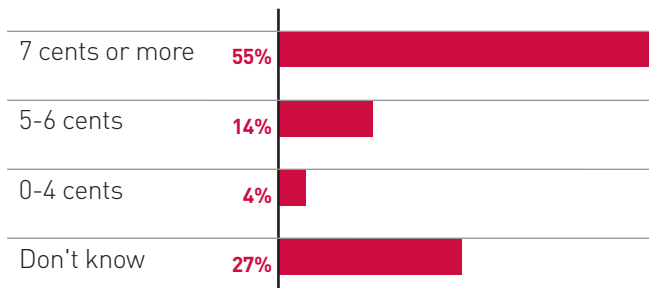
## The Bottom Line:

More than 38 million Americans age 40 and older are blind, visually impaired or have an age-related eye disease, and the number is only expected to grow as the population ages.\* Increased investment in eye and vision research is needed now to help reduce the number of visually impaired Americans and the costs associated with treating and caring for them.

SOURCE: \*THE EYE DISEASES PREVALENCE RESEARCH GROUP. ARCHIVES OF OPHTHALMOLOGY 2004, 122(4).

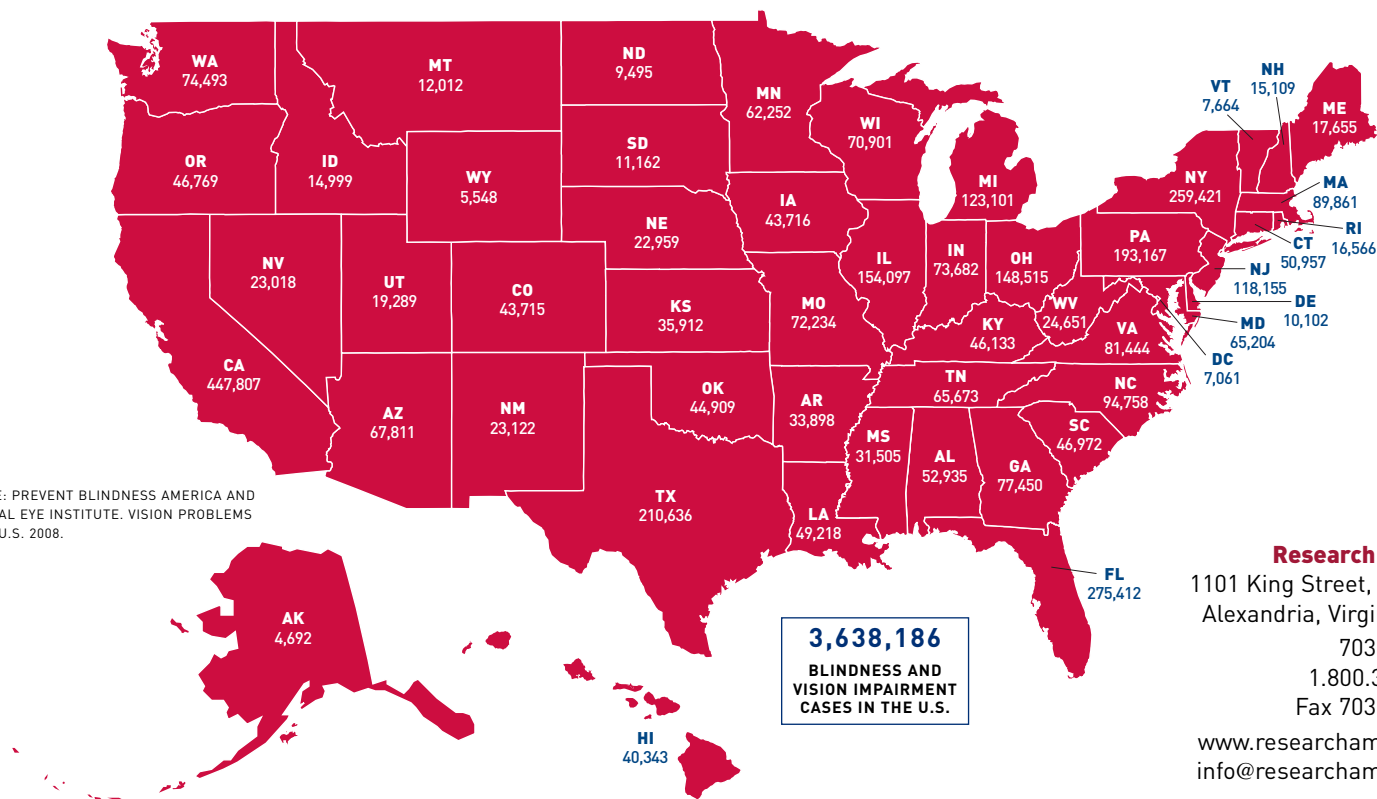
## Americans Want More Spent on Medical and Health Research

Currently, about 6 cents of each health dollar spent in the U.S. is spent on medical and health research. How many cents of each health dollar do you think we SHOULD spend?



SOURCE: TRANSFORMING HEALTH POLL, 2007  
 CHARLTON RESEARCH COMPANY FOR RESEARCH!AMERICA

## Cases of blindness and vision impairment in Americans 40 and older



SOURCE: PREVENT BLINDNESS AMERICA AND NATIONAL EYE INSTITUTE. VISION PROBLEMS IN THE U.S. 2008.

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