

03 Increase Early Detection Through Comprehensive Eye Exams

Situation

In Japan, based on Japanese medical standards, 1.64 million people are visually impaired and 188,000 are blind. Of the total, 72 percent are aged 60 or over. According to a September 2009 study released by the Japan Ophthalmologists Association (JOA), vision problems result in estimated social costs and labor productivity losses of JPY8.8 trillion per year.¹ The JOA estimates that by 2030, the number of people with vision problems and the resulting social costs will have increased roughly 25 percent from the 2009 level.¹

Comprehensive eye exams by ophthalmologists are important for far more than just determining the prescription for vision correction. They are also important for the detection and diagnosis of eye diseases, including glaucoma, diabetic retinopathy, macular degeneration, and eye coordination problems that can cause a range of conditions from blurry vision to blindness.

Early detection and timely treatment are crucial to prevent visual impairment and progression of conditions leading to blindness, especially for children under the age of six and adults aged 40 and over. Comprehensive eye exams by ophthalmologists are also valuable for detecting signs of systemic health problems that show early warning signs in the tiny blood vessels and optic nerves in the eyes, including hypertension, diabetes, high cholesterol, stroke, and heart disease.

A national survey of 5,000 adults in 2011 showed that more than half had received an eye exam in the previous year, when buying glasses or contact lenses, at an annual health check, or when renewing their driver's license. However, 33 percent of adults in Japan had not had any type of eye exam in the previous year. Only 17.7 percent of people in the 70-79 age group had received a fundoscopic eye examination using pupil-dilating drops, with the percentage dropping to only 6.5 percent for people in

the 40-49 age group. Some 16.6 percent of parents with children aged four and up said their children had not received an eye exam before entering elementary school.²

In Japan, the School Health and Safety Act requires the boards of education of local governments to conduct health checkups at the time children begin elementary school, while related regulations prescribe that the vision strength of both eyes be checked, using a vision chart based on international standards, and that checks be conducted for potential abnormalities. A survey of local boards of education conducted by the JOA indicated that, while 172 of 190 boards (90.5 percent) were conducting the required eye exams, 17 cities and towns in Osaka, Kanagawa and Fukuoka prefectures were not. Only 46.8 percent of municipal governments were conducting the checkups by eye doctors.³

Although many countries around the world legally require patients purchasing contact lenses to have a prescription showing that they have had their eyes checked by a doctor, in Japan no such legal requirement exists. Thus, there are reports in Japan of serious eye damage, caused by inflammation of the cornea and corneal ulcers, resulting from improper care of contact lenses, the use of contact lenses for excessively long periods, and insufficient explanation of such risks to patients at the time of purchase.⁴

Current Policy

The Japanese government's Healthy Japan 21 policy goals do not include any goals specifically related to eyes or vision health.⁵ By contrast, the U.S. Department of Health and Human Services program, Healthy People 2020, comprising of 10-year goals and objectives for health promotion and disease prevention, includes eight categories related to eyes and vision.⁶ Although more than 60 percent of adults in Japan undergo an annual health checkup and many of them receive some kind of eye exam,

comprehensive eye exams including dilation by ophthalmologists are not currently mandatory in the annual special health screenings (*tokutei kenshin*).

Recommendations

- Increase the proportion of preschool children aged five years and under who receive vision screening to 100 percent.
- Ensure that contact lenses are sold based on the guidance of an eye doctor. Reduce potential eye health problems related to contact lenses by ensuring that users have periodic eye exams and are provided information about the risk of eye health problems resulting from improper use.
- Create a government program to promote adult eye health. Reduce visual impairment due to diabetic retinopathy, glaucoma, macular degeneration, refractive error, and cataracts by increasing the proportion of adults who have a comprehensive eye

examination including with dilation of the pupil conducted by an eye doctor every two years. In particular, make the provision of comprehensive eye exams mandatory for people aged 40 and over as a way to promote early detection of eye health problems related to diabetes, for which early warning signs can be detected in the tiny blood vessels and nerves visible in the eye.

References

1. “JPY8.8 Trillion of Social Loss Induced by Vision Disorders,” report published by the Japan Ophthalmologist Association (*Shadan Hojin Nihon Ganka Ikai*), September 2009.
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3. “2008 Survey on the State of Health Checkups Conducted by Preschools and at the Time of Entering Elementary School,” *Ophthalmology Japan*, edition 80, issue 9, Japan Ophthalmologist Association School Health Section.
4. “Notice on Improving the Provision of Information about Proper Usage of Contact Lenses,” Japan Ministry of Health, Labour and Welfare, Pharmaceutical and Food Division, July 18, 2012 (*Yakushoku Hatsu 0718 Dai 15 Go*).
5. Healthy Japan 21. www.kenkounippon21.gr.jp/.
6. U.S. Healthy People 2020. <http://healthypeople.gov/2020/topicsobjectives2020/>.

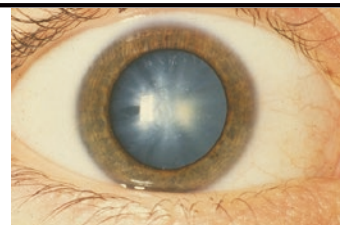
3. Value of Eye Exams for Health

Many diseases can be detected in a comprehensive eye exam by a doctor, even when patients cannot notice symptoms themselves.

Early detection and timely treatment are crucial to preventing visual impairment and progression of conditions leading to blindness.

Diseases of the Eye

- Early signs of eye coordination and focus problems need to be detected when children are 3 - 5 years old in order to treat them and prevent vision loss.
- Early detection of glaucoma, diabetic retinopathy and macular degeneration is key to preventing vision loss.
- Cataract surgery is effective in restoring vision.



Cataract

General Health Problems

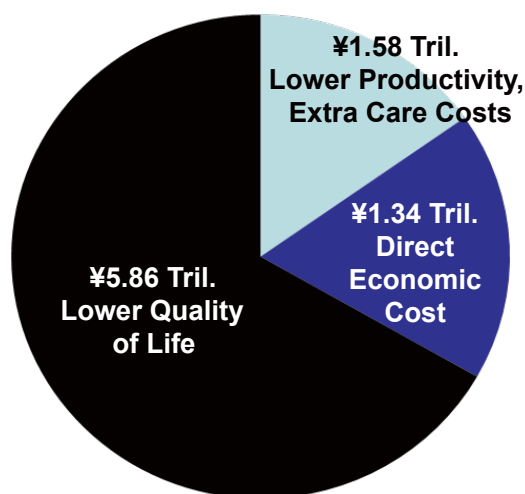
- Early signs of diseases like hypertension, diabetes, high cholesterol, stroke and heart disease show in tiny blood vessels and optic nerves at the back of the eye before patients can notice symptoms.
- Early detection gives the patient a chance to reduce risk factors through medication, exercise, or diet.



Leaking blood vessels in patient with diabetic eye disease

3. Growing Economic Cost of Vision Problems Could Be Reduced

- 1.64 million Japanese are visually impaired or blind, resulting in estimated social costs of 8.8 trillion yen per year.
- By 2030, the number of Japanese with vision problems and the resulting social costs are expected to increase by roughly 25%.

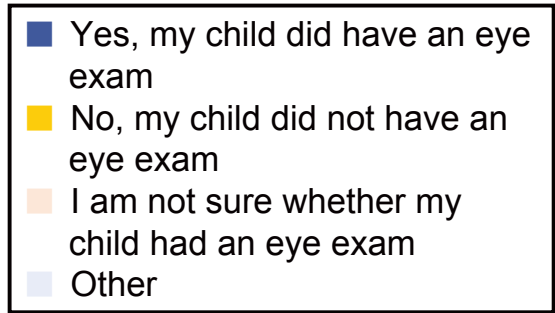
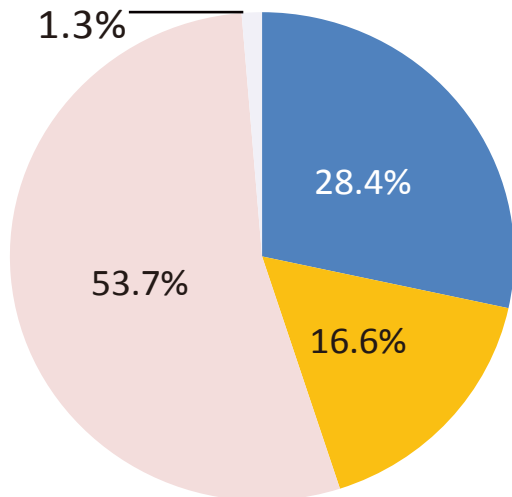


Note: 1.44 million Japanese have “low vision” and 188,000 are blind. Of the total, 72% are 60 or older. Source: Shadan Hojin Nihon Ganka Ikai, Sept. 2009.

3. Low Eye Exam Rates for Children

Q. Did your children have an eye exam before entering elementary school? (2,934 respondents with children aged 4 or older)

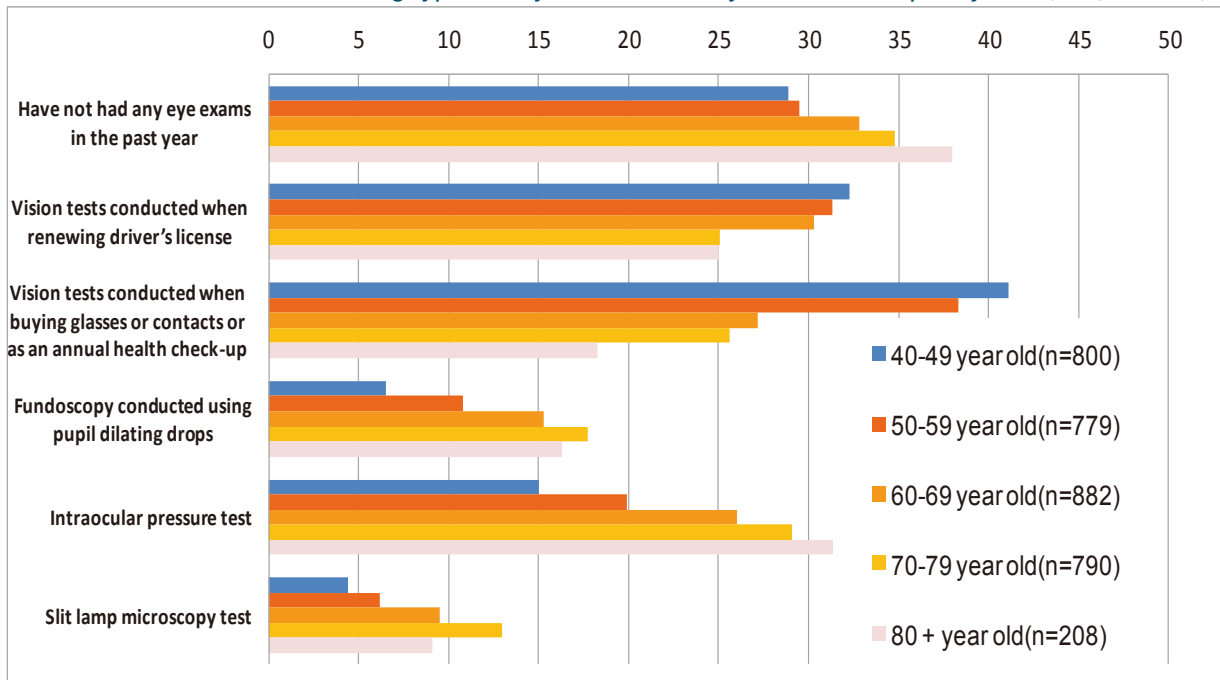
- 16.6% of parents said their child did not have an eye exam before entering elementary school.
- 53.7% of parents were not sure if their child had an eye exam before entering elementary school.



Source: ACCJ National Opinion Survey on Prevention and Wellness in Japan, November 2011.

3. Eye Tests Received by People Aged 40+

Question: Which of the following types of eye exams have you had in the past year? (Multiple Answer)



Source: ACCJ National Opinion Survey on Prevention and Wellness in Japan, November 2011.