

THE VALUE OF CATARACT SURGERY & ADVANCED LENS TECHNOLOGY

Improving Quality of Life and Saving Costs

MEDICAL TECHNOLOGY

**life changing
innovation**

the disease

24.5 MILLION AMERICANS SUFFER FROM CATARACTS

Cataracts are a condition in which the eye's lens becomes cloudy, and if not treated, can lead to blindness.¹ Cataracts are a leading cause of visual impairment among aging Americans and a key quality of life issue.² Cataract surgery, the only known treatment, involves removal of the clouded lens and replacement with an intraocular lens (IOL), an artificial lens that requires no care and becomes a permanent part of the eye.³ Cataract surgery is one of the most common operations performed in the U.S., with more than 2 million performed annually.⁴

CATARACTS CAN SIGNIFICANTLY IMPAIR VISION AND QUALITY OF LIFE

Cataracts have been shown to affect vision in several ways. First, clumps of protein reduce the sharpness of the image reaching the retina. When the protein clumps and the lens becomes cloudy, less light reaches the retina. The clouding may become severe enough to cause blurred or dulled vision. Also, the clear lens slowly changes to a dark yellow or brown color, adding a brownish tint to vision. Advanced lens discoloration may make it hard to identify certain colors, and, over time, increased tinting and cloudiness may make it more difficult to read and perform other routine activities.⁵ Delaying treatment of cataracts can lead to blindness.⁶

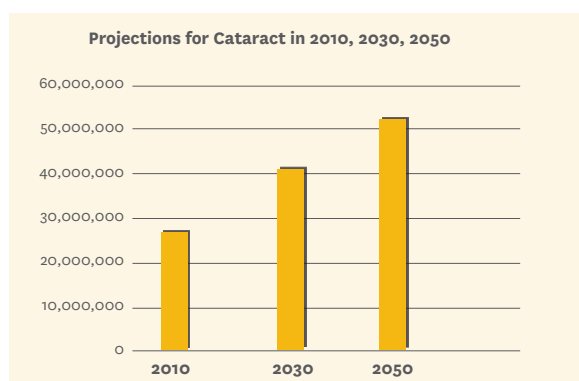
The effects of cataracts go beyond impaired vision. Patients often are unable to perform everyday tasks or participate in social activities leading to depression.⁷ In fact, vision loss is a substantial predictor of depression, even after age, gender, financial strain, and social support are controlled for.⁸ Vision loss can also increase feelings of anxiety, further preventing individuals from caring for themselves and others, and eye disease increases the likelihood of social withdrawal, isolation, falls and medication errors.⁹ Visual impairment is also likely to affect mobility and access to social contacts, leading to social isolation, disengagement, loneliness, and loss of social support.¹⁰

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CATARACTS DRIVES UP HEALTH COSTS

Major vision problems, including cataracts, cost the U.S. economy about \$35.4 billion a year including \$16.2 billion for direct medical costs.¹¹ In addition to direct medical costs, there are also indirect costs such as lost productivity

and caregiving. Cataracts are largely a disease of the aging population, thus the cost of cataracts to society will soar as the percentage of older Americans increases over the next 30 years. In fact, the cataract caseload is expected to rise to 38 million people by 2020 and to more than 50 million people by 2050.¹²



Source: www.nei.nih.gov/eyedata/cataract.asp

the treatment: medical technology

IOL SURGERY IMPROVES VISION

Cataract surgery requires a surgeon to make a small opening on the side of the cornea where a device that sends out ultrasound vibrations is inserted into the eye and breaks the natural lens into small pieces. The fragments are then removed by suction through the small cut in the eye. After the cataract is removed, the surgeon replaces it with an IOL.¹³



Recent advances in IOL technology offer new innovations and the potential for better results. Advanced technology intraocular lenses (ATIOLs) have the ability to correct conditions in addition to cataracts—like astigmatism (irregular shape of the cornea), spherical aberration (irregular shape of spherical lens) and presbyopia (blurred vision)—which help to minimize or even eliminate dependence on eye glasses after cataract surgery.¹⁴ For example, this technology has been shown to reduce or eliminate corneal astigmatism and significantly improve uncorrected distance vision. In one clinical study, 94% of patients achieved uncorrected distance of 20/40 or better.¹⁵

QUALITY OF LIFE BENEFITS

Cataract surgery has been shown to improve vision and overall quality of life, and help patients regain their independence. In fact, cataract surgery yields an overall 36.2% gain in quality-of-life when performed in both eyes and approximately 90% of cataract surgery patients report better vision following surgery.^{16,17} Patients who undergo cataract surgery are also more likely to regain their independence, such as being able to drive, read mail and administer medications.¹⁸ Importantly, research has shown that cataract surgery patients live longer—there is a 40% lower long-term mortality risk in people who have had cataract surgery.¹⁹

COST SAVINGS

“In 2012, cataract surgery was 34.4% less expensive than in 2000 and 85% less expensive than in 1985.”

Cataract surgery is cost-effective and provides great value to patients and the health care system. In 2012, cataract surgery was 34.4% less expensive than in 2000 and 85% less expensive than in 1985.^{*20} This is in part due to huge strides in technology over the last 15 years that have resulted in a procedure that now takes 10 minutes, is performed in out-patient surgery centers rather than hospitals and has a remarkably high success rate.²¹ It is also estimated that \$123.4 billion is saved over 13 years for cataract surgeries performed over one year.²² The majority of the savings are in patient cost savings and Medicare savings, which accounted for 39.4 percent and 29.5 percent, respectively.²³ Other gains included employment/productivity (20.6 percent), Medicaid (2.7 percent) and other insurers (7.8 percent).²⁴

Further, an estimated \$121,198 is saved for each cataract surgery performed on a single eye, which costs an average of \$2,653.²⁵ In total, that’s a 4,567% financial return on investment to society.²⁶

* Adjusted for medical inflation.

the challenges

ACCESS TO CATARACT SURGERY

An estimated 20.5 million Americans age 40 and older have a cataract in one or both eyes, however, only 6.1 million have had cataract surgery.²⁷ Although treatment for the removal of cataracts widely available, access barriers such as insurance coverage and lack of awareness prevent many people from receiving the proper treatment.²⁸

Further, there is a misperception that good vision is less important in old age and that impaired vision should be expected as part of the ageing process. This is simply not the case. Research has shown that cataract surgery has a far-reaching impact on quality of life, particularly for elderly patients.²⁹ One study found that nursing home residents who underwent cataract surgery because of functional problems experienced significant improvements in their quality of life, in addition to dramatically improved vision.³⁰

“Research has shown that cataract surgery has a far-reaching impact on quality of life, particularly for elderly patients.”

Additionally, socioeconomic disparities have a significant effect on adult access to appropriate vision treatment in the U.S. One study found that low-income individuals with age-related eye disease were significantly less likely than those who are better off to receive vision evaluation or care.³¹

the future

Tremendous technological progress has been made in cataract surgery and lens technology over the past few decades. What was once considered a risky procedure that required a lengthy hospital stay can now be performed in minutes and on an outpatient basis. The patient and economic benefits are many: Some patients now experience a quality of vision that is even better than before they developed cataracts and are living longer, more productive lives. And health care dollars are saved with each procedure performed. As we look to the future, from both a humanitarian and economic viewpoint, it is essential we pursue policies to ensure that all people, everywhere, suffering from cataracts have access to appropriate treatment.

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