

# CATARACTS

## Background

- A cataract is a clouding of the lens in the eye that affects vision. (NEI, 2007)
  - The lens is a clear part of the eye that helps to focus light, or an image, on the retina
  - In a normal eye light passes through the transparent lens to the retina.
  - The lens must be clear for the retina to receive a sharp image
  - If the lens is cloudy from a cataract, the image you see will be blurred.
- Cataracts are very common in older people. (NEI, 2007)
- By age 80 more than half of all Americans either have a cataract or have had cataract surgery. (NEI, 2007)
- There are 4 types of cataracts: (NEI, 2007)
  1. **Secondary Cataracts**- Cataracts can form after surgery for other eye problems, such as glaucoma. Cataracts also can develop in people who have other health problems, such as diabetes. (NEI, 2007)
  2. **Traumatic cataracts**- Cataracts can develop after an eye injury, sometimes years later. (NEI, 2007)
  3. **Congenital cataracts**- some babies are born with cataracts or develop them in childhood. These cataracts may be so small that they do not affect vision. (NEI, 2007)

4. **Radiation cataract-** Cataracts can develop after exposure to some types of radiation. (NEI, 2007)
- Clumps of protein reduce the sharpness of the image reaching the retina. When the protein clumps p, it clouds the lens and reduces the light that reaches the retina. (NEI, 2007)
  - Cataracts tend to “grow” slowly, so vision gets worse gradually. (NEI, 2007)
  - The clear lens slowly changes to a yellowish/brown color, adding a brownish tint to vision. (NEI, 2007)
  - **Symptoms and Detection of Cataracts (NEI, 2007)**
    1. Cloudy or blurry vision.
    2. Colors seem faded.
    3. Glare. Headlights, lamps, or sunlight may appear too bright. A halo may appear around lights.
    4. Poor night vision.
    5. Double vision or multiple images in one eye.
    6. Frequent prescription changes in your eyeglasses or contact lenses.



Normal vision



The same scene as viewed by a person with cataract (NEI, 2007)

## **Statement of the Issue**

- The 2002 National Health Interview Survey (NHIS) provided baseline data for seven of these objectives: dilated eye examinations (28-1), vision screening for children aged 5 years and under (28-2), impairment due to diabetic retinopathy (28-5), impairment due to glaucoma (28-6), impairment due to cataracts (28-7), protective eyewear (28-9), and vision rehabilitation services and devices (28-10). Baseline data for impairment due to refractive errors (28-3) were obtained from the 1999–2000 National Health and Nutrition Examination Survey (NHANES). (Healthyvision 2010)
- According to the American Academy of Ophthalmology about 20.5 million Americans age 40 and older have cataracts. (AAO, 2007)
- More than half of all Americans develop by age 80. (AAO, 2007)
- Although cataracts usually develop as part of the aging process, they can also

result from, eye injuries, certain diseases, such as diabetes, genetic inheritance, certain medications, frequent unprotected exposure to UV-A and UV-B rays, and smoking. (AAO, 2007)

## **Epidemiologic Picture**

- Cataracts are the leading cause of blindness among adults in the United States.  
(Preventblindness, 2007)
- More than 20 million Americans age 40 and older have cataracts.  
(Preventblindness, 2007)
- Cataracts can sometimes be found in young people or even newborns  
(Preventblindness, 2007)

## **Solutions**

**Prevent Blindness America** states that you can be more at risk for cataracts if you have long-term exposure to UV rays from the sun, certain diseases, such as diabetes. Also, events before birth such as German measles in the mother, long term steroid use, eye injuries, eye diseases, and smoking. So, if you want to help to help reduce the risk for cataracts you should avoid these things that I have just listed from Prevent Blindness America. (preventblindness.org, 2007)

### **American Academy of Ophthalmology**

Cataracts are detected through a comprehensive eye exam. Early treatment may save your sight, according to the AAO. Having a regular eye exam every year when you

are dilated, so your eye MD can see into the back of your eye is the best way to keep your eyes safe and healthy. (AAO, 2007)

### **National Eye Institute**

Cataracts can be treated with eyeglasses, but surgery is the only effective way. Surgery involves removing the cloudy lens and replacing it with an artificial lens. A cataract only needs to be removed only when vision loss interferes with your everyday activity, such as driving, reading, or watching TV. Sometimes a cataract should be removed even if it does not cause problems with you vision. For example, a cataract should be removed if it prevents examination or treatment of another eye problem, such as age-related macular degeneration or diabetic retinopathy.

(NEI, 2007)

### **Internet Resources**

[WWW.eyecareamerica.org](http://www.eyecareamerica.org)

[WWW.lighthouse.org](http://www.lighthouse.org)

[WWW.nei.nih.org](http://www.nei.nih.org)

### **Bibliography**

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National Eye Institute. *Cataract defined*. Retrieved April 2, 2007 from [www.nei.nih.gov/health/cataract/cataract\\_facts.asp](http://www.nei.nih.gov/health/cataract/cataract_facts.asp)

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## **CATARACTS (Class Handout)**

- A cataract is a clouding of the lens in the eye that affects vision. (NEI, 2007)
  - The lens is a clear part of the eye that helps to focus light, or an image, on the retina
  - In a normal eye light passes through the transparent lens to the retina.
  - The lens must be clear for the retina to receive a sharp image
  - If the lens is cloudy from a cataract, the image you see will be blurred.
- Cataracts are the leading cause of blindness among adults in the United States. (Preventblindness, 2007)
- More than 20 million Americans age 40 and older have cataracts. (Preventblindness, 2007)
- Cataracts can sometimes be found in young people or even newborns (Preventblindness, 2007)

### **Symptoms and Detection of Cataracts (NEI, 2007)**

1. Cloudy or blurry vision.
2. Colors seem faded.
3. Glare. Headlights, lamps, or sunlight may appear too bright. A halo may appear around lights.
4. Poor night vision.
5. Double vision or multiple images in one eye.
6. Frequent prescription changes in your eyeglasses or contact lenses.

## **Treatment - Cataract Surgery**

Cataracts can be treated with eyeglasses, but surgery is the only effective way. Surgery involves removing the cloudy lens and replacing it with an artificial lens. A cataract only needs to be removed when vision loss interferes with your everyday activity, such as driving, reading, or watching TV. Sometimes a cataract should be removed even if it does not cause problems with your vision. For example, a cataract should be removed if it prevents examination or treatment of another eye problem, such as age-related macular degeneration or diabetic retinopathy. (NEI, 2007)