

Cataracts and Surgery

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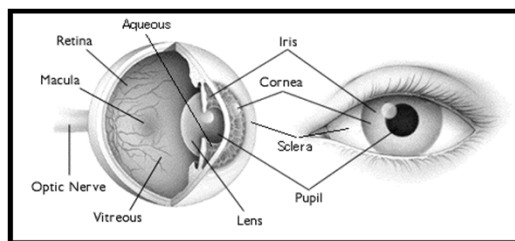
Epidemiology

- Leading cause of blindness in the world
- 17 million reversibly blind – expected to increase
- In US – 3 million patients undergo cataract surgery each year
- Medicare spends \$3.4 billion per year on cataract surgery

Impact of Decreased Vision

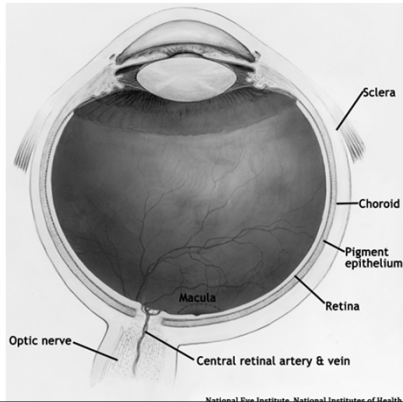
- Increasing difficulty with ADLs
- Decreased earning potential
- Limited Participation and Social Isolation
- Anxiety and Depression
- Increasing dependence on others
- Impacts on other members of the family – childcare, transportation, etc.

Anatomy



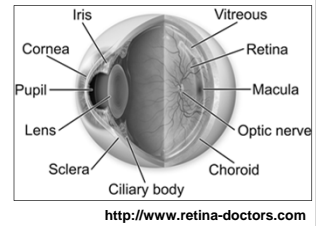
http://see.eyecarecontacts.com/eye_anatomy.gif

Anatomy



Anatomy

- **Crystalline Lens**
 - 9mm across
 - 5mm depth at center
- **No blood supply**
- **No innervation**
- **Refracts light**
- **Performs accommodation**

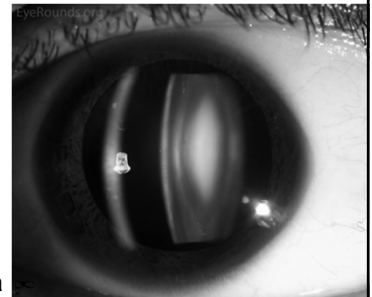


Aging Crystalline Lens

- **Increase in weight**
- **Increases in thickness**
- **Decrease in ability to accommodate**
- **Loss of clarity**

Types of Cataract

- **Nuclear**
 - Typical age related change
 - Slow, gradual
 - Overall decreased vision, color, contrast
 - Induced myopia



Types of Cataract

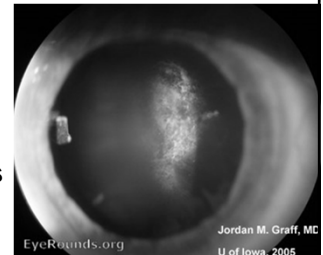
- **Cortical**
 - Asymmetric
 - Spokes
 - Glare
 - Double vision
 - Can become symptomatic quickly



<http://webeye.ophth.uiowa.edu/eyeforum/atlas/photos-earlier/immature-senile-cortical-cataract-OD.jpg>

Types of Cataract

- **Posterior Subcapsular**
 - Can grow quickly
 - Glare
 - Reading problems
 - Steroids
 - DM
 - Younger



http://webeye.ophth.uiowa.edu/eyeforum/atlas/photos-earlier/PSC_01242005zoom2.jpg

Changes in Vision

- **Blur**
- **Decreased contrast**
- **Decreased color**
- **Glare**
- **Halos**
- **Poor night vision**
- **Myopic shift**



<http://www.eyecounselantsde.com/images/cataracts-vision.jpg>

Improving Vision

- **Updating glasses**
- **Improved lighting for reading**
- **Magnification**
- **Anti-glare lenses / coatings**

When is the “Right” Time for Surgery?

- Vision is having negative impact on ADLs
 - Reading
 - Driving
 - Socializing
 - Living independently
- Often the input of a family member or loved one is very insightful

When is the “Right” Time for Surgery

- Benefits outweigh risks
- Almost never an emergency
- A decision to be made together with your eye care provider
- Need to monitor other eye diseases

Role of the Primary Care Provider

- Encourage regular eye exams
 - Birth / Infancy
 - Preschool
 - School Years
 - 20’s x 1; 30’s x 2
 - Baseline again at 40
 - Every 2-4 years until 54
 - Every 1-2 until 64, then yearly
 - More often at all ages if systemic disease

Role of the Primary Care Provider

- Encourage eye exams:
 - Systemic diseases (DM, HTN, medication toxicity)
 - Vision changes / complaints
- Discuss vision impact on ADLs at regular exams
- Pre-op testing
 - More evidence that little to no testing needed for routine patients
 - Some patients may require pre-operative clearance

Cataracts and Surgery

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Pre-Op Consultation

- Outpatient clinic visit
 - 1 hour

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- Full dilated eye exam
- Determine Lens Implant Strength
 - Measure Axial Length
 - Measure Corneal Curvature

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- Outpatient clinic visit
 - 1 hour
- Full dilated eye exam
- Determine Lens Implant Strength
 - Measure Axial Length
 - Measure Corneal Curvature
- Discuss Risks and Outcomes
 - 1/1000 significant complication risk
 - 50-75% will use no glasses for distance vision after (if no astigmatism)

Pre-Op Considerations

- **Anesthesia**
 - **Topical**
 - **MAC with Retrobulbar Block**

Pre-Op Considerations

- **Anesthesia**
 - **Topical**
 - **MAC with Retrobulbar Block**
- **Blood Thinners**
 - **Coumadin**
 - **Plavix, Aspirin etc...**

Cataract Surgery

- **Outpatient Surgery**
 - **Minimal MAC sedation**

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- **5 minutes to 1 hour in length**

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- “Out of balance” between the surgeries

Cataract Surgery



Post Op Surgery

- Follow up typically POD#1, POW#1 and POM#1
- Vision usually improved POD#1 or by POW#1
- Eyedrops for 1 month after the surgery
 - Antibiotic
 - Steroid
 - Optional NSAID
- Limitations for 1 week after surgery
 - No heavy lifting
 - No swimming
 - Wear eye patch when sleeping at night

Lens Implant Options

- **Monofocal lens**
 - Covered by insurance
 - Will improve vision at either distance or up close without glasses (not both)
 - 50-75% will not need glasses for distance or up close
 - If you have astigmatism, will still need glasses to correct it

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- **Premium Lens Implant**
 - Not covered by insurance (Out of pocket expense)
 - Lens implants to correct astigmatism
 - Lens implants to correct presbyopia
 - Accommodative lens
 - Multifocal lens