Cataracts

Definition:
A cataract is a clouding or loss of clarity of the lens in the eye. Cataracts are increasingly common with aging and can occur in one or both eyes, but does not spread from one eye to the other.

What causes cataracts?
Cataracts can occur with age, trauma, use of certain medications (notably steroids), and can be associated with disease (e.g., diabetes). Cataract progression may be exacerbated by social habits (e.g., smoking and alcohol use). Extensive sun exposure has been linked as well.

More importantly, what is an insignificant cataract in one eye or in one person's life may be more impacting to another.

How can cataracts affect my vision?
Cataracts can cause many visual effects:

- **Clouding of vision**
  - Cataracts typically start in a small part of the lens and may be noticeable to the ophthalmologist but not the patient. The vision may worsen so gradually that the patient is not even aware of it.
  - As the cataract advances, the vision may get duller or darker. Often the progression is slow enough that the patient does not notice.

- **Change in color perception**
  - As cataracts develop the lens transforms from clear to yellow and eventually to brown.
  - This change does not necessarily reduce vision, but color-sensitive people can misinterpret or incorrectly perceive colors.

- **Glare and/or sensitivity to light**
  - Some cataracts do not reduce acuity, such that patients can see the small letters on the chart, but are distracted by glare from lights.
  - This is particularly distressing when driving at night, crossing the street in bright daylight, or working at the computer.

What are the symptoms of a cataract?
Cataracts typically evolve gradually and the patient adjusts to their development. The ophthalmologist is often best qualified to identify the cataract and correlate its impact on the patient's vision.

Cataracts may cause:

- Blurred or cloudy vision
- Glare, and/or halos around lights
- Double images or 'second' images in one eye
- Color changes, or fading of color
- Reduced night vision
- Frequent, often frustrating, prescription changes to spectacles

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How is a cataract diagnosed?

Cataracts are usually diagnosed by the ophthalmologist during a comprehensive evaluation. As stated, the symptoms of a cataract can be elusive or misleading. When the vision is reduced, other causes for this compromise must be assessed as well.

The detection of a cataract does not necessarily imply the need for surgical intervention. The impact of a cataract must be assessed in the context of an individual’s life and needs.

How is a cataract treated?

Cataracts are treated surgically. The faulty lens of the eye is replaced with a synthetic lens.

Cataract Surgery:

Cataract surgery is performed as an outpatient in a hospital or at an ambulatory surgery center. Only one eye is operated on in a given day.

With the advent of newer technology, the lens is pulverized and removed as a semi-liquid (phacoemulsification). The older concept of a 'mature' or 'ripe' cataract is no longer as desirable. Therefore, cataract surgery usually requires only topical anesthesia (drops) and since stitches are not needed there are fewer restrictions afterward.

The recovery and return to activity should be relatively quick, but this depends on variables like the degree of surgical difficulty, the age of the patient and the severity of the cataract.

How is the cataract lens replaced?

The cataract lens is removed and a synthetic lens is inserted in its place. No stitches are needed and the lens will last the duration of a person's life time.

The Intraocular Lens (IOL) can be made of many materials and can have many different (refractive) qualities that can help to reduce or eliminate a person's dependency on glasses.

(For more information on PREMIUM LENSES please read the next page)

Is a LASER used in cataract surgery?

Until recently the answer was no. A Femtosecond Laser has been introduced into cataract surgery as an adjunct to the conventional procedure.

The Femtosecond Laser allows for 'bladeless' incisions, a more refined capsulotomy (incision into the front surface of the lens) and softening of the cataract (by making many laser incisions in the lens, thus converting a 'block' of ice into tinier ‘cubes’).

The application of this technology reduces the trauma of surgery, thereby reducing the surgical risk and speeding visual recovery. Of course, this technology also requires an out-of-pocket investment by the patient.

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PREMIUM INTRAOCULAR LENS IMPLANTS (IOL's)

Premium IOL's enjoy the name 'premium' for two very different reasons
1. They provide an additional refractive (glasses-related) advantage
2. They require that the patient pay a 'premium' over the usual cost of cataract surgery

Essentially, PREMIUM IOL's come in three categories. The choice of which type of IOL, and which specific IOL is correct for a given patient, is the amalgam of a patient's personal needs and preferences and the judgment of the surgeon.

ASTIGMATIC: Astigmatic implants, also known as TORIC LENSES, are intended to compensate a person's native astigmatism in order to reduce that individual's need for glasses that correct astigmatism. These lenses are not multifocal and cannot compensate far and near vision in the same eye.

Usually, when an astigmatic lens is used, the eye is measured again at the time of surgery after the cataract has been removed. The measuring device is incorporated into the microscope. In this way, the artifacts imposed by the cataract are eliminated and a maximally accurate reading of the eye's native prescription can be made. This same technology is used to assure that the placement of the lens is ideal.

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MULTIFOCAL: Multifocal lenses come in many varieties. In the correct patient, these lenses can supplant the need for glasses at all distances: far, intermediate (the computer) and near.

A patient's candidacy for these implants depends on the amount of astigmatism that the patient has, the pre-surgical refraction, history of prior ophthalmic procedures, binocularity (whether both eyes work well together), and if both eyes will be receiving the same lenses in near proximity. Other ophthalmic conditions may also override a person's eligibility for these lenses.

Multifocal lenses are NOT like progressive spectacles. Some patients will see halos around lights, especially at night. This diminishes over time for some, but not all patients.

ACCOMMODATING:

These lenses are somewhat flexible and help the person, by capitalizing on their native musculature, to bring near images into relative focus without glasses. The range of near vision with these lenses is not as extensive as with multifocal implants, but there is far less likelihood of halos or adverse visual effects.

Please note, with all implants, the ophthalmologist is central to helping the patient determine which is the best lens. Even after the preferred lens is determined, the ophthalmologist may have to alter that decision at the time of surgery based upon the intraoperative findings.

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