

About Ophthalmology & Eye M.D.s

What is Ophthalmology?

Ophthalmology is a branch of medicine specializing in the anatomy, function and diseases of the eye.

What is an Eye M.D. (Ophthalmologist)?

An Eye M.D. is an ophthalmologist, a medical doctor who specializes in eye and vision care. Eye M.D.s are specially trained to provide the full spectrum of eye care, from prescribing glasses and contact lenses to complex and delicate eye surgery. Many Eye M.D.s are also involved in scientific research into the causes and cures for eye diseases and vision problems.

Eye M.D.s are an essential part of the eye care team. Learn [tips for selecting the right eye care provider](#) and what you should know before making a choice.

Education & Training

In addition to four years of medical school and one year of internship, every Eye M.D. spends a minimum of three years of residency (hospital-based training) in ophthalmology. During residency, Eye M.D.s receive special training in all aspects of eye care, including prevention, diagnosis and medical and surgical treatment of eye conditions and diseases.

Often, an Eye M.D. spends an additional one to two years training in a subspecialty, that is, a specific area of eye care (for example, glaucoma or pediatric ophthalmology.)

Board Certification

Many (but not all) Eye M.D.s are board certified. A board certified Eye M.D. has passed a rigorous two-part examination given by the American Board of Ophthalmology designed to assess his/her knowledge, experience and skills.

Subspecialties in Ophthalmology

The following are subspecialties in ophthalmology:

- **Cornea and External Disease:** This subspecialty involves the diagnosis and management of diseases of the cornea, sclera, conjunctiva and eyelids, including corneal dystrophies, microbial infections, conjunctival and corneal tumors, inflammatory processes and anterior ocular manifestations of systemic diseases. Training in this area frequently includes corneal transplant surgery and corneal surgery to correct refractive errors.
- **Glaucoma:** This subspecialty includes the treatment of glaucoma and other disorders that may cause optic nerve damage by increasing intraocular pressure. This area involves the medical and surgical treatment of both pediatric and adult patients.
- **Neuro-Ophthalmology:** Involving the relationship between neurologic and ophthalmic diseases, neuro-ophthalmology also deals with local pathology affecting the optic nerve and visual pathways. Over 50 percent of all intracranial lesions involve the visual or oculomotor pathways. Neuro-ophthalmology is generally practiced as a nonsurgical subspecialty but can be combined with surgery of the eye and orbit.

- **Ophthalmic Pathology:** The ophthalmic pathologist has training in both ophthalmology and pathology, typically in that order. Because of the unique combination of skills involved in this subspecialty, it is usually the ophthalmic pathologist, rather than the general pathologist, who examines tissue specimens from the eye and adnexa.
- **Ophthalmic Plastic Surgery:** The specialty of ophthalmology includes oculofacial plastic surgery. This combines orbital and periocular surgery with facial plastic surgery and includes the clinical practice of aesthetic plastic and reconstructive surgery of the face, orbit, eyelid, and lacrimal system. With this unique combination of skills ophthalmologists perform facial plastic surgery, eyelid surgery, orbital surgery and lacrimal surgery.
- **Pediatric Ophthalmology:** The bulk of pediatric ophthalmic practice involves the medical and surgical management of strabismus, amblyopia, genetic and developmental abnormalities and a wide range of inflammatory, traumatic and neoplastic conditions occurring in the first two decades of life. This subspecialty also deals with the ocular manifestations of certain systemic disorders.
- **Vitreoretinal Diseases:** This subspecialty involves both the medical and surgical treatment of retinal and vitreoretinal disease. The types of diseases treated include manifestations of local, systemic and genetic diseases as they affect the retina and vitreous. Diagnosis involves the use and interpretation of ultrasound, fluorescein angiography and electrophysiology. Treatment methods include laser therapy, cryotherapy, retinal detachment surgery and vitrectomy (removal of the vitreous).

If you have any questions, please contact the Media Relations Department at 415.561.8534 or e-mail at media@aaio.org.