

**NEW YORK UNIVERSITY SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY
EDUCATIONAL OBJECTIVES AND GOALS**

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The Department of Ophthalmology at the NYU Medical Center accepts seven residents each year for a three-year training period. The objective of our ophthalmology residency program is to produce excellent clinical ophthalmologists. This is accomplished in a milieu that prioritizes patient care, teamwork, scientific discovery, and enrichment of patient care abilities. Our specific goals include the acquisition of the following:

- 1) A comprehensive fund of knowledge for the diagnosis and management of common and rare clinical ophthalmologic problems.
- 2) Knowledge and interpretation of ophthalmologic pathology
- 3) Critical analytical skills for the acquisition of new medical information
- 4) Ophthalmologic surgery skills with expertise to manage complications

To accomplish this, a faculty dedicated to patient care, teaching, research, and intellectual curiosity will provide the infrastructure for the resident learning experience. The resident will be expected to be self-motivated, responsive to guidance, willing to invest the time and effort necessary for self-learning, and be dedicated to patient care.

The goal of the training program is to provide residents with the opportunity to gradually assume over a three-year period a progressively more independent role in the primary care of patients with diverse ophthalmologic diseases in order to produce excellent clinical ophthalmologists.

These objectives are achieved in a variety of ways. The didactic teaching exercises include the following:

- 1) Orientation lectures for incoming house staff
- 2) Basic Science Course for PGY 2 house staff
- 3) Grand Rounds with attending staff and guests
- 4) Lecture series by attending faculty (intramural and extramural)
- 5) Journal Club
- 6) Home Study Course sponsored by the American Academy of Ophthalmology with weekly Board Review

The objectives in the clinical aspects of the program are fulfilled by experience in general eye clinic in addition to well-structured subspecialty clinics with

close supervision by appropriate attending faculty. In addition to general eye clinic, the residents participate in the following subspecialty clinics:

- 1) Contact lens
- 2) Uveitis
- 3) Ocular tumors
- 4) Retina and Vitreous
- 5) Neuro-ophthalmology
- 6) Pediatric ophthalmology
- 7) Strabismus
- 8) External disease and ocular microbiology
- 9) Corneal disease
- 10) Glaucoma
- 11) Oculoplastics and orbital disease

Resident Clinical Skills

At the end of the first year the resident should be proficient at the following activities:

1. A complete understanding of the principles and practices of physiological optics and refraction, and perform routine refractions
2. Diagnose and treat acute and chronic anterior, intermediate and posterior uveitis
3. Identify common lid lesions
4. Examine the retina and vitreous using direct and indirect ophthalmoscopy (including scleral depression) and slit lamp biomicroscopy, understand the basic principles of fluorescein angiography, and ultrasonography. Be able to recognize the normal study from a pathological one.
5. Possess a basic understanding of the neuroanatomy pertaining to the field of neuro-ophthalmology and be familiar with the common neuro-ophthalmologic diseases.
6. Know the basic principles of extraocular muscle physiology and be able to perform a complete motility examination.
7. Be familiar with corneal physiology, slit lamp examination of the cornea and the common diseases of the cornea.
8. Have an understanding of aqueous physiology in healthy and diseased states.
9. Perform a complete glaucoma examination including: tonometry, stereoscopic biomicroscopic examination and evaluation of the angle, optic nerve, cup and nerve fiber layer; examination and evaluation of visual field perimetry; and the therapeutics and pharmacology of anti-glaucoma therapy.

10. Examination and evaluation of the lens.
11. Evaluation of the orbit, including exophthalmometry, tear function testing, and orbital anatomy, including interpretation of radiologic imaging.
12. Basic concepts of visual diagnostic testing including electrophysiological testing.

At the end of the second year the resident should be proficient at the following activities:

1. Fit cosmetic and therapeutic contact lenses for routine and complex patients.
2. The evaluation, testing and dispensing of low vision aids for the low vision patient.
3. Diagnosis and treatment of posterior uveitis, treating difficult patients with alternative methods, including an understanding of systemic uveitis therapy.
4. Identification of all tumors of the eye with an emphasis on diagnosis so as to differentiate benign from malignant lesions.
5. Use varied diagnostic modalities to diagnose retinal vascular disease, hereditary retinal disease, chorioretinal inflammations, macular diseases, retinal manifestations of systemic disease, retinopathy of prematurity, peripheral retinal disease, including retinal detachments and proliferative vitreoretinal disease.
6. Diagnose and treat optic nerve disorders, tumors and trauma of the central nervous, as well as inflammatory, vascular, degenerative, hereditary and systemic disease which affect the neuro-ophthalmologic system.
7. Examine comitant and incomitant strabismus, acquired motility disorders; evaluate nasolacrimal disease and congenital lid lesions in the pediatric patient population.
8. Diagnose corneal diseases (degenerations, dystrophies, trauma, inflammations, infections, hereditary, manifestations of systemic disease), and use bandage and therapeutic contact lenses.
9. Diagnose and treat primary open angle glaucoma, chronic angle closure glaucoma, acute angle closure glaucoma and secondary glaucoma.
10. Identify cataracts and determine potential visual outcome of cataract surgery.
11. Incisional and excisional biopsy of superficial lesions of the ocular adnexa and read pathology specimens.
12. Understand the abnormal visual function tests and how they illuminate the diagnosis of diseases.

At the end of the third year the resident should be proficient at the following activities:

1. Difficult refractions including keratoconus, and irregular astigmatism. Understand the fundamentals of refractive surgery.
2. Preoperative and postoperative evaluation of patients undergoing the full range of surgical procedures that third year residents will perform, including:
 - a. Anterior chamber paracentesis, diagnostic and therapeutic vitrectomy, surgical biopsies and enucleation
 - b. Vitreoretinal surgery, laser and cryotherapy, and retinal detachment surgery
 - c. Orbital exploration and biopsy
 - d. Laser and surgery for retinopathy of prematurity
 - e. Penetrating keratoplasty
 - f. Trabeculectomy and shunt procedures
 - g. Intracapsular and extracapsular cataract surgery, ultrasound phacoemulsification, insertion of intraocular lenses, combined cataract surgery and glaucoma filtration surgery and combined cataract surgery and penetrating keratoplasty.
 - h. Dacryocystorhinostomy, ptosis repair, orbital floor repair, lid grafts and orbitotomy.

Resident surgical skills

Over the course of the three year Ophthalmology Residency Training Program, a resident is expected to be able to perform an increasing level complexity of surgical procedures.

By the end of the first year (end of PGY-2), the resident should be proficient at the following surgical procedures:

1. Simple eyelid laceration repair (not involving the canalicular system)
2. Tarsorrhaphy
3. Corneal and conjunctival foreign body removal
4. Chalazion and minor lid lesion excision and repair

By the end of the second year (end of PGY-3), the resident should be proficient at the following surgical procedures:

1. Strabismus surgery
2. Non-phacoemulsification extracapsular cataract extraction
3. YAG laser capsulotomy
4. Pterygium excision (with and without conjunctival graft)
5. Temporal artery biopsy
6. Retinal laser photocoagulation
7. Laser trabeculectomy

8. Laser iridotomy
9. Cyclodestructive procedures

By the end of the third year (end of PGY-4), the resident should be proficient at the following surgical procedures:

1. Ultrasound phacoemulsification cataract extraction
2. Non-phacoemulsification extracapsular cataract extraction
3. Intraocular lens implantation and explantation
4. Anterior vitrectomy
5. Penetrating keratoplasty
6. Enucleation and implant
7. Lacrimal surgery
8. Other orbital surgery
9. Complex eyelid laceration/canalicular repair
10. Ptosis repair
11. Entropion/ectropion repair
12. Blepharoplasty/eyelid reconstruction
13. Corneoscleral laceration and ruptured globe repair
14. Glaucoma filtering procedures

By the end of the third year (end of PGY-4), the resident should be familiar with the following surgical procedures:

1. Intraocular foreign body removal
2. Glaucoma shunting procedures
3. Rhegmatogenous retinal detachment repair
4. Posterior vitrectomy
5. Vitreous tap/injection

SUMMARY OF GOALS & OBJECTIVES

At the end of the three-year training program, it is expected that the graduating resident will have acquired the following knowledge and skills:

- (1) A detailed comprehensive and organized method of history taking of ophthalmologic disorders.
- (2) Familiarity with all aspects of a complete ophthalmologic examination.
- (3) An ability to acquire the appropriate laboratory tests and an understanding of the test results.
- (4) The ability to formulate a differential diagnosis for complex ocular disorders and the ability to pursue the means to arrive at the correct diagnosis.
- (5) Confidence to initially treat or appropriately refer all types of ocular emergencies.
- (6) Development of judgment regarding the care of the surgical patient, including pre-surgical evaluation and post surgical management.

- (7) The manual skills and anatomic knowledge to perform ocular and orbital surgery.
- (8) The interdisciplinary knowledge to provide ophthalmologic consultations referred from medical colleagues.
- (9) A desire to read and be current in ophthalmic literature as a regular habit with a critical eye.